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Initial Coin Offerings: risk opportunity?

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Outline

What We'll Be Covering

01. **Introduction**
02. **Blockchain**
03. **ICOs**
04. **Telegram - cloud-based messaging**
05. **Downsides of ICOs**
06. **Fraud detection**
07. **Closing Remarks**

Introduction

- What is blockchain?
- What is ICO?
- Is Blockchain secure?
- Blockchain vs. Banks
- Advantages/disadvantages of ICO
- Transparency
- How is Blockchain used?

What future holds





The future of money is
digital currency.

— Bill Gates

Blockchain

- When we say cryptocurrency, we refer to a digital currency, a new means of exchange, the most popular examples of which are Bitcoin and Ethereum
- Blockchain (chain of blocks) is the technology at the basis of a cryptocurrency
- Bitcoin is currently the largest blockchain network followed by, Ethereum, XRP, Litecoin, EOS and Bitcoin Cash
- Blockchain is a specific type of database.
- It differs from a typical database in the way it stores information; blockchains store data in blocks that are then chained together. As new data comes in it is entered into a fresh block. Once the block is filled with data it is chained onto the previous block, which makes the data chained together in chronological order.
- Different types of information can be stored on a blockchain but the most common use so far has been as a ledger for transactions. In Bitcoin's case, blockchain is used in a decentralized way so that no single person or group has control—rather, all users collectively retain control





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- 17/12/2020 – Coinbase Global – confidentially submitted a draft registration statement on Form S-1 (Files For IPO) with SEC

CEO Brian Armstrong:

- „Like all asset classes, crypto markets **will rise and fall over time**. And, as we witnessed in 2017, we'll occasionally see strong market rallies where prices will rise quickly and aggressively. It is not only a time of **high volumes**, but also **price volatility**.”
- We believe that crypto is a truly game-changing innovation and we take a **long-term view** of the market. While it's great to see market rallies and see news organizations turn attention to this emerging asset class in a new way, **we cannot emphasize enough how important it is to understand that investing in crypto is not without risk**.
- Crypto can be a volatile asset class — often more so than the **types of traditional financial instruments** that most investors are used to. We caution investors who may be focusing on short-term speculation and encourage customers to seek out resources and consult financial advisors to better understand the risks.

ICOs

- Initial Coin Offerings (ICOs) can be considered as an innovative way of obtaining funding, promoted by entrepreneurial companies that base their business projects on a new technology known as the blockchain
- Up to the present date, more than 1700 cryptocurrencies have been created but not all of them are successful or characterized by a significant impact
- ICOs issue “tokens”, i.e. the unit of a chosen cryptocurrency, in exchange of a flat cryptocurrency, in order to participate in the crowd-funding of the company
- The portal Tokendata.io has estimated that until 2017 ICOs raised as much as \$5.3 billion around the world; if we consider venture capitalist, in 2016, they invested \$71.8 billion in the United States and \$4.3 billion in Europe
- The most common sectors in which ICOs operate are: high tech services, financial services, smart contract, gambling platforms, marketplaces and exchanges





Most of the ICOs projects are related to the development of a blockchain, the issuance of new cryptocurrencies or somehow related fintech services

ICOs tokens grant contributors the right to access platform services in 68.0% of the cases, governance powers in 24.9% of the cases and profit rights in 26.1% of the cases

The secondary market for ICOs tokens is quite liquid on the first day of trading, and the initial return is large (mean value +919.9% compared to the offer price, median value +24.7%).

ICOs - secondary market

- secondary market - works without the commitment and the control of a central authority: the blockchain
- secondary market - works without the commitment and the control of a central authority: the blockchain is a Peer-to-Peer technology
- A ^Peer-to-Peer (P2P) system represents a way of structuring distributed applications such that the individual nodes can act as both a client and a server.
- A key concept for P2P systems is to allow any two peers to communicate with each other in such a way that either ought to be able to initiate the contact





The more a P2P network is distributed, scalable, autonomous and secure, the more is valuable.

enabling the fast growth of cryptocurrencies not just per se but also as a tool for crow-funding purposes, giving birth to the so-called Initial Coin Offerings

ICOs

in numbers

- In the first 6 months of 2018, there have been 440 ICOs, with a peak in May (125) raising more than 10 billion US, where Telegram ICO (Pre-sale 1 2) is by far the most reworded one with 1.7 billion US
- In 2017, the total amount raised by 210 ICOs **was about 4 billion US** and overcame venture capital funneled toward high tech initiatives in the same period. The first token sale was held by Mastercoin in July 2013 but one of the **most successful and still operative is Ethereum** which raised **3,700 BTC** in its first 12 hours in 2014, equal to approximately **2.3 million US** at that time.





Telegram

Cloud-based instant messaging

- Telegram Messenger founded by the Russian entrepreneur Pavel Durov. In March 2018, Telegram stated that it has 200 million monthly active users
- Telegram is completely free and has no ads, users can send any kind of media or documents and can program messages to self-destruct after a certain period of time
- As of October 2017, Telegram was by far the most popular official discussion platform for current and upcoming ICOs, with 75%+ of these projects employing it
- This means that retrieving Telegram discussions associated with each and every ICO would produce a huge amount of textual information potentially useful for understanding the chance of success and more interestingly possible signs of fraudulent activities.

Downsides of ICOs

- despite the interest that has been peaked by ICOs and the constantly growing trends, it is worth mentioning that **almost half of ICOs sold in 2017 failed by February 2018**
- consistent presence of scam activities only devoted to raising money in a fraudulent way
- the Ethereum network has experienced considerable phishing, Ponzi schemes, and other scam events, accounting for about 10% of ICOs
- financial risk aspects of ICOs
- the lack of regulatory structure
- As all ICO provides only utility tokens for investors , ICO is considered as less security in recent days. This is because of the invention of security tokens in the crypto world





Fraud Detection

- ICOs analysis can be considered a very particular type of fraud detection activity
- Typical fraud detection approaches aim at discovering almost in real time, fraudulent financial activities based on transactional data that ideally should be blocked as soon as possible.
- ICOs instead are characterized by a slow process of engagement of the prospect clients and establishment of consensus that goes through Telegram chats (if available), white paper and website
- The possibility to raise vast amounts of money in an anonymized and unregulated market also attracts criminals who cause substantial damage to investors
- Early fraud detection will help investors to reduce the investment risk and thus not lose their funds

Empirical evidence

Explanatory variables

class0	f=failed, sc=scam su=success
class1	0=scam, 1=failed+success
class2	0=failed, 1= success
w_site	Website (dummy)
tm	Telegram (dummy)
w_paper	White paper (dummy)
usd	presale price in USD
tw	Twitter (dummy)
fb	Facebook (dummy)
ln	Linkedin (dummy)
yt	Youtube (dummy)
gith	Github (dummy)
slack	Slack (dummy)
reddit	Reddit (dummy)
btalk	Bitcointalk (dummy)
mm	Medium (dummy)
nr_team	Number of Team members (quantitative)
adv	Existence of advisors (dummy)
nr_adv	Number of advisors (quantitative)
project	Official name of the ICO (categorical)
nr_tm	Number of users in Telegram (quantitative)
tot_token	Number of Total Tokens (quantitative)
Pos_Bing	Standardized nr. of positive words for BL list (quantitative)
Neg_Bing	Standardized nr. of negative words for BL list (quantitative)
Sent_Bing	Standardized sentiment for BL list (quantitative)
Pos_NRC	Standardized nr. of positive words for NRC list (quantitative)
Neg_NRC	Standardized nr. of negative words for NRC list (quantitative)
Sent_NRC	Standardized sentiment for NRC list (quantitative)

Logistic regression results

	<i>Dependent variable:</i>
tw	class2 2.481* (1.381)
Paper_du	1.351** (0.635)
nr_adv	0.461*** (0.135)
nr_team	0.233*** (0.088)
Sent_NRC_sc	2.187*** (0.595)
Constant	−3.601** (1.458)
Observations	196
Akaike Inf. Crit.	89.41
McFadden pseudo R ²	0.63
McFadden Adj. pseudo R ²	0.57
Cox & Snell pseudo R ²	0.49

Note:

*p<0.1; **p<0.05; ***p<0.01



Empirical evidence

- only two relevant dummy variables are: presence of a white paper (w_paper) and of a Twitter account (tw).
- Both **POSITIVE** coeffs – increasing the prob of ICO success.
- Twitter is more important than WP – 12x higher compared to not having it and 4x higher compared to just WP
- Number of elements of the team (Nrteam), number of advisors (Nradv) and scaled sentiment score based on NRC lexicon (SentNRCsc) are **POSITIVE** & highly significant
- Sentiment -> Telegram – highly **POSITIVE**

Multilogit regression – failure and scam vs success

	<i>Dependent variable:</i>	
	sc	f
	(1)	(2)
Oweb_dum	-1.962** (0.977)	0.093 (0.773)
adv_dum	-0.899 (0.809)	-1.707*** (0.571)
Paper_du	-0.728 (0.915)	-2.158*** (0.657)
Sent_NRC_sc	-1.390* (0.731)	-2.606*** (0.703)
Constant	-0.628 (0.997)	-0.572 (0.925)
Akaike Inf. Crit.	166.339	166.339
<i>Pseudo R square</i>	McFadden 0.43 - McFadden Adj. 0.36- Cox & Snell 0.44	
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01	

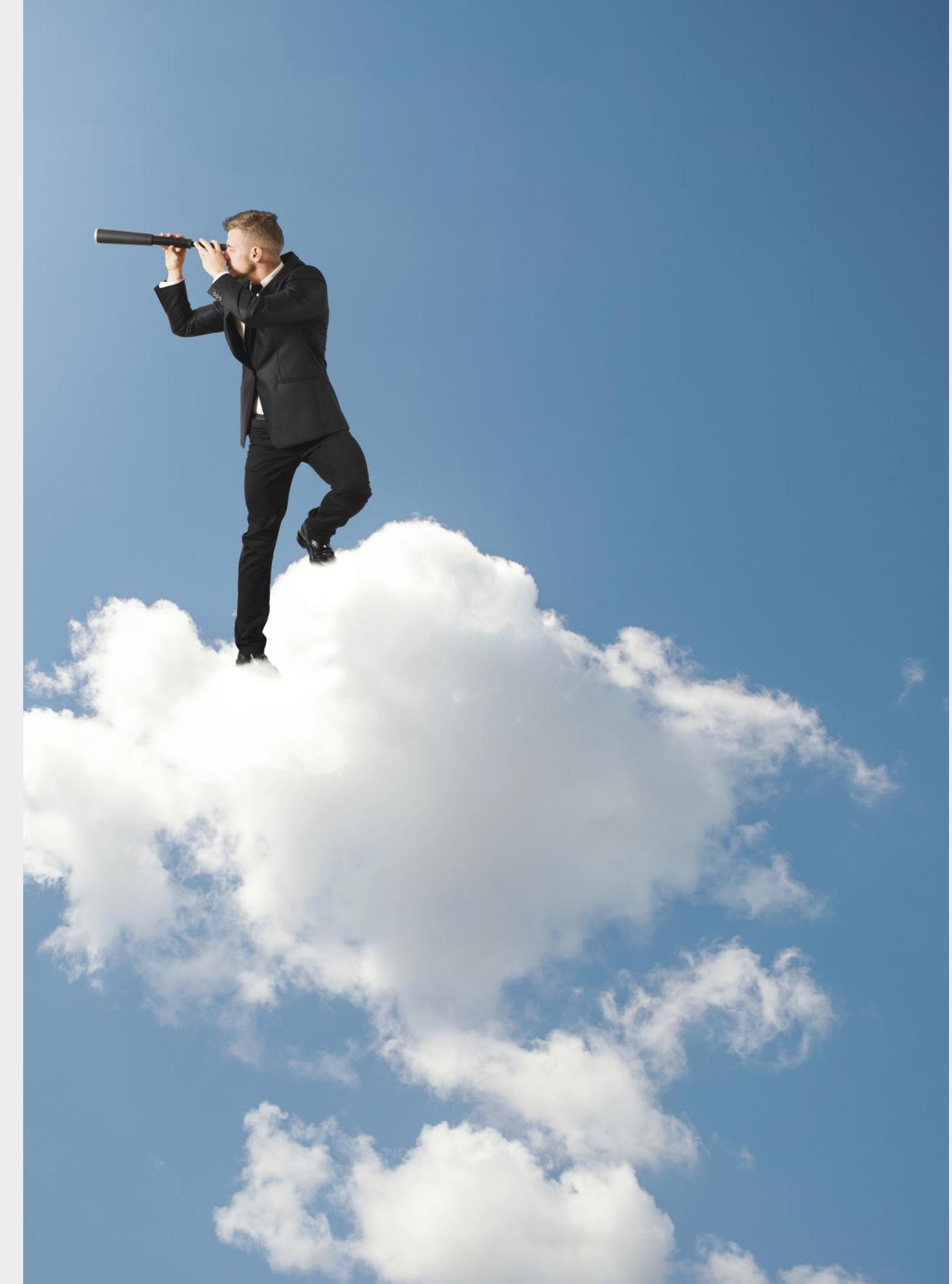
Empirical evidence

- **Presence of a website** has a positive impact on the probability of being a successful ICO and not a scam.
- BUT does not differentiate between success and failure
- **Presence of advisors** and a **white paper** - significant in differentiating fraudulent from successful ICO.
- **Sentiment score** is relevant and with **NEGATIVE** sign for both the classes
- Increase in the sentiment causes an increase in the probability of success when we consider both failed and fraudulent ICOs



Closing Remarks

- Initial coin offerings (ICOs) are one of the several by-products of the cryptocurrencies world
- IPOStart-ups and existing businesses are turning to alternative sources of capital as opposed to classical channels like banks or venture capitalists. They can offer the inner value of their business by selling ‘tokens’, i.e. units of the chosen cryptocurrency, like a regular firm would do by means of an.
- The investors hope for an increase in the value of the token in the short term, provided a solid and valid business idea typically described by the ICO issuers in a white paper. However, **fraudulent activities perpetrated by unscrupulous actors are frequent and it would be crucial to highlight in advance clear signs of illegal money raising**





Thank you for attention!

Have a great day



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