

Aleksei Panin

**A MULTIPLE CASE STUDY ON FACTORS AFFECTING
ICO SUCCESS**



UNIVERSITY OF JYVÄSKYLÄ
DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION SYSTEMS
2019

ABSTRACT

Panin, Aleksei

A Multiple Case Study on Factors Affecting ICO Success

Jyväskylä: University of Jyväskylä, 2019

Information Systems, Master's Theses

Supervisors: Abrahamsson, Pekka and Hara, Veikko

Blockchain and Initial Coin Offering (ICO) hold incredible potential in our world today. The opportunities of these technologies are believed to be going further beyond the horizon; ICO helps start-ups succeed in receiving sufficient investments for their projects, and subsequently succeed in developing and creating necessary and useful blockchain based applications into society. This paper investigates the factors that are positively affecting firms' ability to meet their fundraising goals via ICO. This set of factors is identified from existing literature and up-to-date information derived from hands-on experience of eight firms that have already completed their ICOs with different achievement level of their maximum fundraising goals. This work concludes that prior to conducting an ICO, managers should build first a strong backbone of the company. Regardless of crypto market specifics, ICO companies, like any other ones, seem to follow the same rule of doing business. Findings of the most important success factors reported by case companies included all key elements of a Business Model Canvas, and therefore managers could be advised to use this tool for planning and building a company. This study moreover investigates and finds explanation to when and why the same factors can play different role across projects with different project settings.

Keywords: ICO, success factors, cryptocurrency, blockchain, fundraising, crowd sale, token

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DEFINITIONS

Throughout the paper, the following terms are being used. This page provides a definition for all of them. It is worth noticing that blockchain and ICO terminology is still a work in progress with no approved definitions yet. All definitions have been compiled using the following resources: Ernst & Young (2017), Judmayer et al (2017), Buterin (2014), Ryshin (2018), Amsden & Schweizer (2018), Rosic (2017b), Bitcoinwiki (2019), OESD (2009).

Bitcoin: the first decentralized distributed cryptocurrency using a public blockchain as its foundation

Blockchain: the most common consensus mechanism on distributed ledgers; it is often used as a synonym for distributed ledgers in general.

Distributed ledgers: distributed database stored on a set of nodes with records synchronized through consensus mechanisms.

Public/permission-less blockchain: anyone can become a member of blockchain.

Private/permissioned blockchain: blockchain members and their rights are determined by an administrator.

Ethereum: general-purpose platform for creation of decentralized application and digital tokens. Build on its own blockchain of the same name. Ethereum is also a name of a coin, which is native to Ethereum blockchain.

ERC20: technical standard of the token, created on Ethereum platform

ICO: initial coin offering, during which projects attract funds through the sale of digital tokens. ICO can have the following phases:

Private sale: token sale arranged prior to presale or crowd sale. Not publicly announced and not everyone can participate. Investments are very high. Investors are usually institutional investors or pool of investors.

Presale / Pre-ICO: token sale arranged prior to the crowd sale. Announced publicly and anyone can participate but the minimum amount of investments is significantly higher than during the crowd sale.

Crowd sale: main sale of an ICO's tokens. Announced publicly and anyone can participate with even minimum amount of investments.

Cryptocurrency: the term is used usually to refer to coin or token which could be used for transactions within the blockchain

Coin: standalone cryptocurrency like Bitcoin or Ethereum, which is functioning on its own blockchain (platform)

Token: cryptocurrency that requires the usage of a separate coin blockchain in order to operate.

Tax haven: is defined as a country or place with very low "effective" rates of taxation for foreign investors

Whitepaper: a public document with the description of an ICO project.

"Know your client" (KYC): the procedure for confirming the identity of the token buyer.

Bounty program: token distribution on special terms (most often discounts) to a limited number of early investors.

Airdrop: is when a blockchain project distributes free tokens or coins to the crypto community. It is usually done to bootstrap the project.

Phishing: cloning official webpages in order to lure user data.

FIAT: government-issued currency, like US dollar (\$) or Euro (€).

Soft Cap: minimum fundraising goal for the ICO.

Hard Cap: maximum fundraising goal for the ICO

Wallet / Cryptocurrency wallet: a software program that stores private and public keys and interacts with various blockchain to enable users to send and receive digital currency and monitor their balance.

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1 INTRODUCTION

1.1 Motivation

In recent years, blockchain technology has grown widely into becoming one of the most significant innovations due to its characteristics that are considered revolutionary compared to the traditional technologies. Zhao et al. (2016) stated that blockchain is to become the most thrilling invention after the Internet because of its transformation to be a “frontier of venture capitals that has attracted the attention of banks, governments, and other business corporations”. One big factor why blockchain is significant now is related to security as it adds an additional layer of it and every user can be sure that data stored in there is true and valid throughout time. It creates trust between users and it opens up endless possibilities if used properly. Zhao et al. (2016) confirmed that blockchain would help solve the trust problem more effectively via network computing.

Companies that make use of a blockchain technology acquire funds through Initial Coin Offering, a method of financing projects through the Internet (Russolillo, 2017). This method simplifies the process of acquiring funds in comparison to more traditional ways. If used well, ICO can foster development of blockchain-based products and services, which can have a big value in a modern society. Unfortunately, so far we have witnessed the misuse of blockchain and related to it fundraising method ICO. For some reason people manage to create the use of new technologies in a bad destructive ways much faster than in good constructive ones. Perhaps the reason lays in a greediness of people and their desire to get rich fast despite even of illegal ways of achieving it.

ICOs are not an exception; Roubini (2018) affirmed that during the year of 2017 four out of five ICOs were actually scams. Only a fraction of projects that acquired funds through ICO was productive and innovative. People invested a lot of money in ICO mainly because of a general big hype around IT companies' movement into the crypto market. A similar story happened in late 90s when there was a so-called “dot com bubble”, when a great deal of investors invested into venues which began to engage in Internet business just because it was a

popular and promising movement (Panko, 2008). As it happens with any bubble, “dot com bubble” eventually collapsed, with many companies going bankrupt and many investors going downhill with them. However, time went by, and doing business online nowadays is not a hype anymore, but necessity for any company that is willing to be present on the market. Additionally, the usage of a web sites or web applications became everyday life also for ordinary people. The author believes that this will also happen with blockchain and ICOs, and that is just a matter of time.

Author of this paper is inspired by blockchain technology, believes that it can change peoples’ lives for better and wishes to see more practical applications of it in daily human lives. This increase of blockchain presence and its wide spread across different areas of human lives is believed to be possible with the help of ICOs. Moreover, since investments in ICO happen over the Internet without borders, ICOs can allow also the spread of innovations, by allowing innovative companies all over the world, and not only from certain places with a big pool of investors, acquire funds for their projects and create something really needed for the people. There are plenty of great ideas and smart people worldwide, everyone should have a chance to realize its potential, and ICO is believed to be allowing it.

The motivation for this research is thus to help start-ups to succeed in receiving sufficient investments for their projects via ICOs, and subsequently succeed in developing and bringing needed and useful blockchain based applications into the society. This is wished to be achieved by finding out factors that are positively affecting on ability of firms to reach their fundraising goals via ICO. These set of factors will be found from existing literature and from new information derived from practical experiences of eight firms participated in this study who have already completed their ICOs with bigger or smaller achievement level of their fundraising goals.

1.2 Research Questions

The main research objectives of this study are as follows: to understand different impact factors that affect both, positively and negatively on the performance of the ICO; and to compare previous factors believed to be impact factors on ICO success against a sample of real life companies which have conducted ICOs in the past. Having these objectives in mind, author developed the research question. There is one broad research question, which drives the entire research, and it sounds as follows:

Which factors affect the ability of firms to raise investments via ICO that are sufficient to proceed with a core project?

The aim of this research question is at finding factors, which affect both, positively and negatively on reaching investments via ICO. To answer it three

different ways have been applied and three different sub-questions have been introduced, answers to which collaboratively can provide multifaceted answer to the main research question. Reaching a sufficient amount of investments for a company to proceed with the core project sometimes referred as reaching a soft cap in the ICO. Both these terms will be used throughout this paper.

At first, author aimed, without introducing firms to factors identified in earlier studies, at finding out, based on firms' point of view and their experience, factors that are essential for reaching a sufficient amount of investments to proceed with a core project. The goal was to gather information not only from those firms that reached their maximum fundraising goals (hard cap) but also from those firms, which did not. The fact is, even though some firms did not reach their fundraising goals, they still managed to raise several million dollars in investments and how did they do it is of a big interest too for this research. Moreover, some of the case companies, which did not achieve their fundraising goals, managed to reach better results in ROI in a long run than those, which achieved a hard cap in the ICO. Thus, the input from both groups of firms are very valuable for this research. The first sub-question thus sounds as follows:

Which are the most important factors positively affecting the ability of firms to raise investments via ICO that are sufficient to proceed with a core project?

Even though all case firms reached their soft caps, as was said earlier, not all of them achieved their maximum fundraising goals. Even if this is not an indicator of a success for the firms' core project (as companies might reach different results in a long run), it is still in this paper's interest to find out what factors were the possible reasons for that. To do so, companies, which did not reach their fundraising goals, were additionally asked about possible causes of not reaching a maximum fundraising goal. Thus, the second sub-question sounds as follows:

Which factors negatively affect on an ability of firms to reach their maximum fundraising goals via ICO?

At last, author aimed to study factors from previous literature in project settings of each of the case firms, and try to find out did these factors actually have an effect on firms' ability to reach their soft caps via ICO, how did these factors affect if they did, and why firms even chose to use these factors or that particular values of the factors. Author assumed that the same factor can play different role depending on different settings of each given project and results of this section perhaps can provide a confirmation of this assumption together with additional insights. Idea of this section thus was not to argue with existing studies but rather to bring new insights and additional explanations into the issues, into possible contradictions regarding the role of the same factor across findings of previous studies. Thus, the third sub-question sounds as follows:

How factors identified in earlier literature affect the ability of firms to raise investments via ICO that are sufficient to proceed with a core project?

1.3 Scope of Work

This paper does not study factors on how to become a successful crypto company, which had succeeded to develop and sell in sufficient volumes what it aimed to. This paper only tries to find out how to succeed in raising funds throughout ICO, which is just a company's initial step towards implementation of the core project. ICO therefore should not be seen as an end goal of a crypto company but rather as one of the initial necessary step in the entire project life cycle.

There are also several ways to measure a success of an ICO. Amsden & Schweizer (2018), in addition to total amount raised, look to whether or not a token became tradable on exchanges and whether or not it was listed on, coinmarketcap.org (requires sufficient trading volume as according to Coinmarketcap 2019a). The last two success measures go beyond the period of the ICO because it takes time for a token to evolve into a tradable token and to reach good trading volumes. This study stays within the period of the ICO and focuses just on finding out how companies manage to reach a soft cap by the end of their ICO. How company and its token perform after that is outside of the scope of this work.

At last, this paper looks at the ICO solely from a company's perspective and not from an investors' perspective, therefore it is outside of the scope of this research to give guidelines to potential investors on how to choose a promising project and invest into.

1.4 Structure of Theses

The remainder of this paper proceeds as follows. Section 2 is a literature review. It is divided into two parts, the first one, subsection 2.1 provides introduction into key concepts and the second, 2.2 provides information from reviewed literature regarding earlier identified success factors of ICO followed by identification of a research gap which this papers tries to cover at some extent. Section 3 describes applied methodology, data gathering and data analysis processes, and description of case companies, which participated in the research. Section 4 describes the findings. Section 5 is the discussion section where findings are compared with earlier literature. Section 6 concludes, mentions limitations of the given paper and proposes topics for future researches.

2 LITERATURE REVIEW

The literature review is divided into two parts. The part 2.1 provides introduction into key concepts, namely into blockchain technology and ICO while part 2.2 reviews existing literature about impact factors of ICO success and presents their key findings. The section 2.2 serves as a basis for the empirical part of this paper. Due to the fact that by the time of writing this paper blockchain technology and ICO are still relatively new and not very well studied phenomena, this work utilized both types of a literature, scientific and a gray literature what makes this literature review to be a multivocal literature review (MLR). Gray literature as according to Schöpfel and Farace (2010) is the one “produced on all levels of government, academics, business and industry in print and electronic formats, but which is not controlled by commercial publishers, i.e., where publishing is not the primary activity of the producing body”. According to Garousi et al. (2019), MLR can be useful there where it can broaden the study and there where relevant factors would otherwise be missed out. MLR in this study is thus done to make a gap smaller between academic research and professional practice because this gap seem to be present. Guidelines proposed by Garousi et al. (2019) on conducting MLR was followed as close as possible including the following processes: search selection, source selection, study quality assessment, data extraction and data synthesis.

2.1 Introduction to Key Concepts

This section aims at providing a reader with although overall but quite comprehensive introduction into crypto namely into what blockchain and ICO are, how they are connected, how they work and what are their potentials and challenges. Author aimed at collecting in one place all information needed for a reader, who even has never heard of crypto before or know very little, to follow main points of this research and truly understand reasons why it is done.

2.1.1 Background

At present, there is an obvious global movement of economics into a digital space and one of the most notable player in this process is Initial Coin Offerings (ICO). ICO is a method of financing projects through the Internet (Russolillo, 2017) with the help of which new ventures raise capital by selling tokens to a crowd of investors (Fisch 2018). A token is a representation of a value unit (Hartmann et al., 2018) what investors buy for the sake of gaining certain benefits offered by token creators. Tokens can be used to pay for project services in the future (Demidenko et al. 2018). ICO has emerged due to a blockchain technology and in order to understand ICO better, one should have at least rough idea of what blockchain is and how it can be used. This paper does not mean to provide in-depth knowledge of blockchain, its different algorithms, consensus types and protocols; it rather gives a general picture of it.

Blockchain started its history back in 2008 when Satoshi Nakamoto, a mysterious founder, or a group of founders, of blockchain and Bitcoin has released a paper titled "Bitcoin: A Peer-To-Peer Electronic Cash System" where he describes a new mechanism of exchanging electronic cash from one party to another directly without a need of a middleman (Nakamoto, 2008). He called this new mechanism "Bitcoin" and introduced the first decentralized distributed cryptocurrency - "Bitcoin" - using a public blockchain as its foundation (Judmayer et al., 2017). Levin (2018) gives a definition to a blockchain as "a cryptographically secure distributed ledger that allows for exchange of ownership and verification of ownership without needing a trusted third party to act as a middleperson". Distributed ledger is usually managed by peer-to-peer network (Buterin 2014; Nakamoto 2008) where transaction are organized into blocks that are linked together into a chain. Blockchain has the following characteristic which makes it very well suitable for financial transactions (Chen 2018): after all transactions are validated through certain mechanisms and recorded in the peer-to-peer network, they become permanent, irreversible, verifiable and secure on the blockchain. This creates a trust in the system between its members because everyone can be sure that all records keep true. Bitcoin, being empowered by the blockchain technology, was the first which tokenized and decentralized money and that have led to potential disruptions in financial industries (Larios-Hernández, 2017) and not only there. As according to Tapscott & Tapscott (2016), as blockchain technology advances, it became possible to tokenize, in addition to money, also other assets. However, to allow this, certain developments on a blockchain technology were needed and that is where the era of Blockchain 2.0 has begun (Fitzjohn 2018). In the year of 2013 a project titled "Ethereum" has been initiated, which aimed to develop a general-purpose platform for creation of decentralized application and digital tokens (Buterin 2014). With this platform, which was released in 2015 developers, could create big variety of decentralized applications and digital tokens, which are created on top of a blockchain and can be used to represent a wide range of assets, in addition to money (Chen 2018). Having such an ability developers realized they

could tokenize entire projects and sell these tokens in order to raise funds for these projects (Chen 2018). That was the starting point for an ICO to be born. As time went by, other general-purpose platforms like Ethereum begun to emerge but applications developed on all of them mainly suffer from limited scalability and with this limitation in mind, at present, a community is developing Blockchain 3.0 (Fitzjohn 2018). How it will affect ICOs only time will show.

2.1.2 Cryptocurrency and regulations

Blockchain tokens, sometimes referred also as crypto-tokens, are divided into two major types: coin or currency and token. They usually refer to a same thing - cryptocurrency - but their origins are different. According to Amsden & Schweizer (2018) "a coin refers to a standalone cryptocurrency functioning on its own blockchain (platform) and a token refers to a cryptocurrency that requires the usage of a separate coin blockchain in order to operate". Tokens can grant certain rights to their holders, for example profit sharing, voting control, proof of stake or they could have a role of a solely transactional currency like Bitcoin (Conley, 2017). In crypto market and in ICOs particularly, it is often talked about three different types of tokens: security token, equity token and utility token. Wilmoth (2018) provides explanation to them: a security token is a broad classification that refers to any kind of tradable asset, ranging from coins redeemable for precious metals to tokens backed by real estate; equity tokens are a subcategory of security tokens that represent ownership of an asset, such as debt or company stock; utility tokens, often called app coins or user tokens, provide users with future access to a product or service or play a role of means of payment on a blockchain platform. It is token creators who decide what rights tokens grant to their holders and it could be a combination of several or even have characteristics that are entirely new. Due to this unclear role of tokens, it is challenging for government authorities to control crypto market because tokens don't entirely fall under existing laws. Conley (2017) summarizes that if crypto-tokens are a form of currency, then the issuing startup may need to comply with know your customer (KYC) and anti-money laundering (AML) rules; if they are a form of stock or security, startups must comply with securities and exchange commission (SEC) regulations in US, with European Securities and Markets Authority (ESMA) in Europe or with other similar authority depending on jurisdiction under which ICO is conducted. Due to these regulations, ICOs usually issue utility tokens because regulations for those are less demanding.

If regulations of investors are concerned, then according to Amsden & Schweizer (2018), ICOs are equally available to institutional and accredited investors, as well as (and without restrictions on) individual investors. However, across multiple ICO projects, which have been skimmed through by an author of this paper, it was noticed that ICO organizers sometimes restrict citizens of certain countries from participating. This is due to unwillingness of ICO companies to comply with particularly above-mentioned authorities SEC and ES-

MA. At present, thus investors' participation is regulated not by governments but solely by ICO organizers.

There seems to be no common understanding between different countries about how crypto market should be regulated. In some countries there are favorable conditions for crypto economics, in another - more strict and third ones, like China and South Korea ban them completely (Demidenko et al. 2018). But regulations are constantly evolving and if a company wishes to run an ICO, it should perform an in-depth research on which regulation fit them better. Even though this paper does not aim at examining different countries' ICO regulations, table 1 and table 2 are anyways included which show top countries by number of ICOs and top countries by raised funds respectively. This is done to give a reader an overview of which jurisdictions have been chosen by crypto companies as the most favorable ones for running an ICO so far.

TABLE 1 Top 5 countries by the number of ICO (Icobench 2019a)

Country	Number of projects
USA	746
Singapore	559
UK	491
Russia	329
Estonia	284

TABLE 2 Top 5 countries by raised funds in ICO (Icobench 2019a)

Country	Raised funds
United States	\$7.5B
British Virgin Islands	\$2.4B
Singapore	\$2.3B
Switzerland	\$1.9B
UK	\$1.4B

2.1.3 Initial Coin Offering: history and steps of conducting

ICO takes its history from the year of 2012 when a software developer J.R. Willett, being fascinated by a potential of blockchain technology, wrote his famous article "The Second Bitcoin Whitepaper" (Willett, 2012) where he summarized his idea about mechanism for people to raise funds and benefit from the development. A few months later, he gave a speech at the 2013 Bitcoin: The Future of Payments conference: "*... you could do it without going to a bunch of venture capitalists...here's who we are, here's our plan, here's our bitcoin address and anybody who sends coins to this address owns a piece of our new protocol. Anybody could do that! And I've been telling people this for at least a year now because I want to invest in it...Does anybody in this room want my bitcoins?*" (YouTube 2019a). Less than four months later, Willett himself launched what would become the first ever Initial Coin Offering (ICO)—a mechanism to raise funds by selling virtual tokens for capital. It promised 100 newly created master coins in exchange for every

bitcoin received, and it raised a total of 4,740.620098 BTC, worth about \$680,000 (Amsden & Schweizer (2018)). Since then ICO started raising its popularity and by the end of 2017 reached a pick of \$2.4B (Icwatchlist 2019b) fundraised during the whole year (compare to \$78.6M (Icwatchlist 2019b) million during 2016). However, right on the next year there happened cryptocurrency crash on the market which refers to a historical event which took place in the year of 2018 when after an extraordinary growth in price during the year of 2017, the price of bitcoin fell by about 65 percent during the month from 6 January to 6 February 2018 which caused the drop of price of other cryptocurrencies as well (Popken 2018; Smith 2018). It should be remembered thus that cryptocurrencies and particularly ICOs as any other investment instruments hold big financial risks especially due to their novelty nature.

So what makes or at least made ICO to be so attractive (before the cryptocurrency crash) that billions of dollars have already been fundraised despite of its short history? According to Amsden & Schweizer (2018) there are four main reasons for that: 1) little to no regulations, 2) greater cost efficiency, because they eliminate most intermediary costs, 3) larger pools of investors (no restrictions on investment or marketing), and 4) rapid liquidity for investors upon successful listing (investors can sell tokens almost immediately at no detriment to the project). Lipusch (2018) compared ICO with more traditional fundraising methods namely with crowdfunding, venture capitalists and IPOs and in addition to above mentioned reasons adds a type of capital seekers (in ICO it could be a venture with just an idea or proof of concept, while in others it must be at least a prototype) and that ventures can raise funds more quickly and therefore get off the ground more quickly which may be an important gain momentum for their overall success.

Crypto space is by now a self-regulated space where is no any explicit rules of behavior, requirements or regulations, particularly in ICOs. There is no prerequisites for companies to run their own ICO. Any company could do it, a start-up or the one which has existed on the market for some time. The only condition is an adoption of blockchain technology. Cryptocommunity acts as a filter itself and most probably will not invest into projects, which have nothing to do with blockchain. However, it is observed that companies in order to get an access to cryptocommunity's pool of money adopt blockchain there where it is not even appropriate, there where other technologies would work better. Some companies simply fail to justify their use of technology well, being content just with cliché phrases about blockchain like "Next-generation platform" or "Decentralized network that puts users in control / driver's seat" (Ernst & Young, 2017).

Regarding steps of preparing and conducting ICO as well as developing artifacts needed for that, then it is complete freedom, although structural pattern seems to have already emerged. For example, it is a company who decides what information to put inside of its whitepaper (similar to business plan of a regular company), how to structure it, or even whether to publish it or not (e.g. among of 253 observed ICOs by Adhami et al. (2017), 16% did not have a

whitepaper publicly available). Company decides whether to use an existing blockchain platform (list of the most used platforms is presented in table 3) or develop a new, how long their ICO will last, what would be their minimum (soft cap) and maximum goals (hard cap), who is restricted from participation, what currencies they are accepting and much more. There are also three different phases what ICO company should think about. As according to Ryshin (2018) these phases as follows: private sale, presale and crowd sale and they all serve their different purposes and seek for different level of investments (big, medium and small respectively). The bigger investments are being sought, the bigger discounts such investors are waiting, thus there are own pros and cons of each phase. Company is free to structure its ICO to include all these phases, only two of them including crowd sale or only a crowd sale phase. Therefore, it is a complete freedom on how companies can structure their ICOs, however Kaal & Dell'Erba (2017) identified structural elements of ICOs roadmap and in a timeline sequence they are presented in table 4.

TABLE 3. List of the most used platforms by the number of ICO (Icobench 2019a)

Platform	Number of ICOs
Ethereum	4861
Waves	132
Stellar	81
Separate blockchain	53
NEO	44
Other	392

TABLE 4. ICO roadmap in timeline sequence (Kaal & Dell'Erba, 2017)

Step	Additional Comments
Project is announced on cryptocurrency fora (such as Bitcoin Talk, Cryptocointalk, Reddit)	
Project's "executive summary" is presented to project investors	Specific comments on the project are obtained
Whitepaper is drafted	"Comments on the project" are considered by the management team / promoter. Whitepapers are not audited by any authority. Therefore these preliminary steps are crucial in order to build a general market credibility and investors' trust in the soundness of the project
Yellowpaper is drafted	Provides the technical specifications to support project at this preliminary phase
Pre-ICO is launched	A first stage, when a preliminary offer is made to selected investors
Launch of ICO is announced	After signing of the offer, PR campaign addresses to a broader segment of investors begins.

ICO is launched

The new venture sells its own cryptocurrency to be used with their software before the software itself is even written

The better ICO companies may have a proof of concept or an alpha version before starting the token sale, and sometimes even a beta version

Funds are typically collected in Bitcoin, either via a global, public address (in which case the participants need to send Bitcoin from an address for which they control the private key) or by creating accounts of each participant and providing them with a unique Bitcoin address.

ICO best practices suggest that all funds be held in a multi-sig address made public.

Fundraising (usually only one) happens before the start-up has launched its project, however duration of the ICOs may vary depending on the success of the entrepreneurial initiative among the investors: the most successful ICOs were concluded in a few minutes.

The digital tokens are “listed on cryptocurrency exchanges for trading”

While “pre-ICO price” is arbitrarily determined by the start-up team that structured the ICO, post-ICO price dynamics are determined by supply and demand. Instead of any authority, the network of participants determines the price of the tokens. Should the start-up fail, the token price will plummet.

2.1.4 Start-Ups and ICO

Even though ICO may sound technical, at the end it is just another way for a company to fundraise itself and it is just one phase in the whole lifecycle of the entire firm. In any other manner companies who utilizes ICO as a fundraising method seem to be similar to any other company or start-up operating in any other markets, therefore they all seem to follow the same rules of doing business. Here comes to mind a business model canvas initially proposed by Osterwalder Alexander (2004) and further developed in the work of Osterwalder, A., & Pigneur, Y. (2010). As shown on figure 1, this model consists of nine building blocks each of which should carefully be thought of for the entire business to have better chance to succeed, i.e. to become profitable. As accord-

ing to Osterwalder, A., & Pigneur, Y. (2010), these nine building blocks sounds as follows: customer segments (different groups of people or organizations an enterprise aims to reach and serve), value proposition (bundle of products and services that create value for a specific Customer Segment), channels (how a company communicates with and reaches its Customer Segments to deliver a Value Proposition), customer relationships (types of relationships a company establishes with specific Customer Segments), revenue streams (represents the cash a company generates from each Customer Segment), key resources (most important assets required to make a business model work), key activities (the most important things a company must do to make its business model work), key partnerships (describes the network of suppliers and partners that make the business model work), cost structure (all costs incurred to operate a business model). Since ICOs are done in the context of businesses, their environment, characteristics and not anyhow separately, it might be assumed that above mentioned building blocks affects on both, business as a whole and ICO as one of its phases.

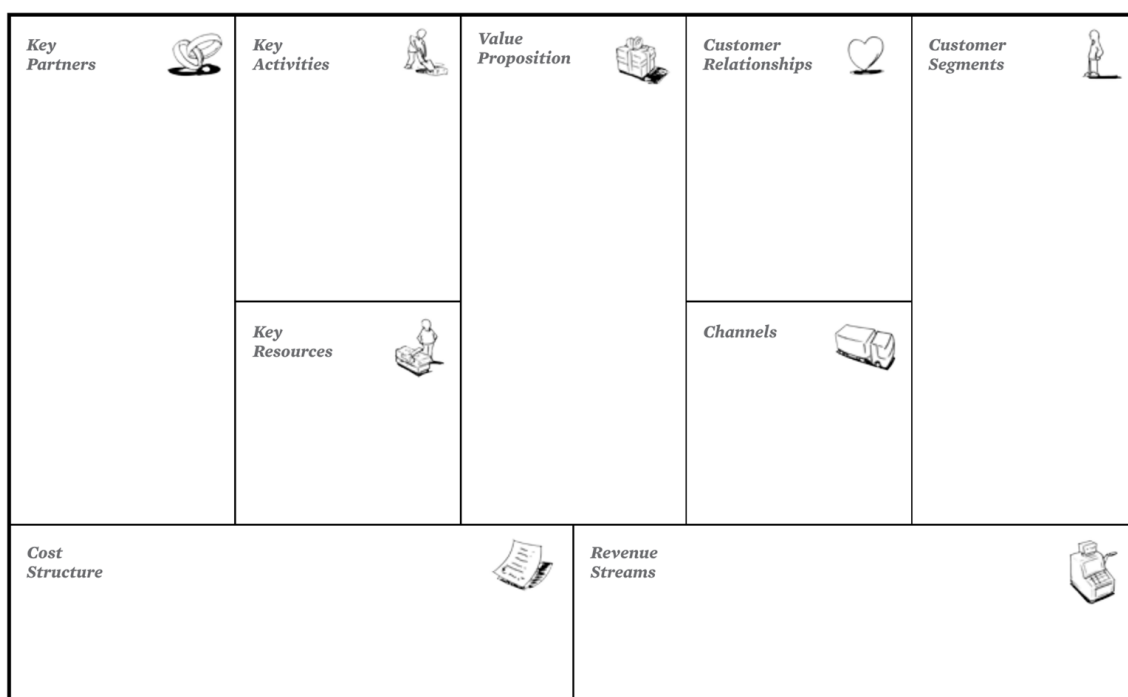


FIGURE 1 Business Model Canvas template (Osterwalder, A., & Pigneur, Y. 2010)

2.1.5 Potentials and challenges of blockchain and ICO

Potentials of ICOs are two fold, the first to boost appearance of projects on blockchain and thus increase a presence of this technology in different areas of human lives and the second to revolutionize fund-raising methods in order to enable access to big pool of money for different companies, not only for well-established ones how at present it primarily is, but also for unknown start-ups

with great ideas which are located anywhere in the world and which almost didn't have an opportunity to get sufficient investments so far.

If an increase of blockchain technology presence in different areas of human lives is concerned, there are debates going on whether it is a good thing or not because as almost anything else, blockchain has its own pluses and minuses, potentials and challenges and how people will eventually deal with those, only time will show. As of potentials of blockchain, then all of them are probably not yet even discovered but according to Tapscott & Tapscott (2017), "blockchain's ability to generate unprecedented opportunities to create and trade value in society will lead to a generational shift in the Internet's evolution, from an Internet of Information to a new generation Internet of Value". Internet of Value is yet a phenomena at its formative stage, which according to Leonard (2017) will allow instant exchanges of any asset that is of value to someone directly between people whether it is a question of stocks, votes, intellectual property or music, scientific discoveries and etc. This can also allow modern technologies and innovations, bypassing obstacles and borders, start appearing there where they are mostly needed thereby increasing people's quality of life. Blockchain can be used not only for the direct exchange of ownership of values but also to store information durably and securely. A good example of this demonstrates Estonia which prescribes blockchain for healthcare data storage and security (Marshall, J. 2017).

As of challenges of blockchain, then blockchain could prove to be a controversial technology, as all information is stored forever and that would appear to violate the right to be forgotten. If widely adopted, blockchain will cut jobs or even drive entire companies, which at present act as intermediary party in different areas like banking or rental services, into bankruptcy. Perhaps the biggest challenge of blockchain on example of Bitcoin is an enormous consumption of electricity and emission of heat and CO₂ due to global Bitcoin mining. According to Powercompare (2017), electricity consumption of global Bitcoin mining is bigger than of 159 countries (separately not collectively) including Ireland and most countries In Africa. This is a serious alarm bell indeed as the global climate is concerned which is moreover already changing with unexpected consequences. Throughout the history, a humankind faced many challenges but if it managed to act collaboratively, it always managed to solve those, so is wished in case of blockchain.

If to talk about ICO as of fundraising method and its potentials, then according to Kaal (2017) ICO bear a potential to democratize the funding of new types of ventures by opening up investment possibilities to a broader range of investors who otherwise would not invest in highly innovative projects. It thus disrupts the traditional hierarchies in venture capital where only a smaller group of elite investors can invest in highly innovative projects (Kaal, 2017). By having a web-based cross-border nature, ICOs can help to overcome the high geographical concentration of venture capital in which one companies from certain areas are facing abundance of risk capital while others from another regions face chronic shortage of the same (Lipusch, 2018). All of these might

help to loosen the grip hold of existing institutional investors that still take a dominant role in deciding what kind of innovation happens and where they happen (Lipusch, 2018). If to compare with traditional fundraising methods, then ICO also facilitates faster capital formation, bypassing costly bureaucratic processes. A start-up therefore can start working on its idea much faster.

Regarding of challenges and risks associated with ICO as a fundraising method, then the most obvious challenge of it is uncertain legal status of ICO across countries and a lack of protection for investors against the scam. Moreover as anything on Web, cryptocurrency exchanges, wallets, projects' websites are all affected by hacker attacks with all corresponding consequences. At the time of writing, there have been identified 6 775 scams in crypto market, out of which 716 are active (Etherscambd, 2019). Moreover, due to that fact that ICO offers easier mechanism of raising funds in compare to more traditional methods, it attracts unfair people as well, who create fake projects and just steal investors' money. In addition, the free possibility of project owners to modify smart-contract code at any time does not promote the trust among investors as at any time, the code could be modified and money will be gone in unknown direction together with owners. From another hand project owners must be able to modify the code in case of appearance of bugs. Perhaps some proper reviewing, testing and auditing mechanism for smart contracts by independent third parties and potential investors must be introduced and once code is approved, it should be locked from any modification during ICO.

2.1.6 Conclusions

ICO is a method of financing projects through the Internet (Russolillo, 2017) with the help of which new ventures raise capital by selling tokens to a crowd of investors (Fisch 2018). ICO has emerged due to a blockchain technology that is "a cryptographically secure distributed ledger that allows for exchange of ownership and verification of ownership without needing a trusted third party to act as a middleperson" (Levin 2018). The first blockchain and first coin of the same name is a Bitcoin developed by Satoshi Nakamoto. Further development of a blockchain technology allowed appearance of Ethereum project, which aimed at developing general purpose platform with the help of which developers could create big variety of decentralized applications and digital tokens, which are created on top of a blockchain and can be used to represent a wide range of scarce assets, in addition to money (Chen 2018). Having such an ability developers realized they could tokenize entire projects and sell these tokens in order to raise funds for these projects (Chen 2018). That was the starting point for an ICO to be born.

Blockchain tokens are divided into two major types: coin and token. They both usually refer to a same thing - cryptocurrency - but their origins are different. Coin is native for the blockchain while a token requires another blockchain in order to operate. In crypto market and in ICOs particularly, it is often talked about three different types of tokens: security token, equity token and utility

token. Conley (2017) summarizes that if crypto-tokens are a form of currency, then the issuing startup may need to comply with know your customer (KYC) and anti-money laundering (AML) rules; if they are a form of stock or security, startups must comply with securities and exchange commission (SEC) regulations in US, with European Securities and Markets Authority (ESMA) in Europe or with other similar authority depending on jurisdiction under which ICO is conducted. Due to these regulations, ICOs usually issue utility tokens because regulations for those are less demanding. If to look globally, there seems to be no common understanding between different countries about how crypto market should be regulated. In some countries there are favorable conditions for crypto economics, in another - more strict and third ones, like China and South Korea ban them completely (Demidenko et al. 2018). Despite of that, ICO started raising its popularity and by the end of 2017 reached a pick of \$2.4 (Icwatchlist 2019b) fundraised during the whole year (compare to \$78.6 (Icwatchlist 2019b) million during 2016). According to Amsden & Schweizer (2018) there are four main reasons for that: 1) little to no regulations, 2) greater cost efficiency, because they eliminate most intermediary costs, 3) larger pools of investors (no restrictions on investment or marketing), and 4) rapid liquidity for investors upon successful listing (investors can sell tokens almost immediately at no detriment to the project).

Regarding steps of preparing and conducting ICO as well as developing artifacts needed for that, then it is complete freedom, although structural pattern seems to have already emerged and it is presented in table 4. Even though ICO may sound technical, at the end, it is just another way for a company to fundraise itself and it is just one phase in the whole lifecycle of the entire firm. In any other manner companies who utilizes ICO as a fundraising method seem to be similar to any other company or start-up operating in any other markets, therefore they all seem to follow the same rules of doing business.

ICOs can boost appearance of blockchain technology what could be seen as both, positive and negative phenomena. From one hand, blockchain allows secure exchange of assets between interested parties without a middleman but from another hand it can violate peoples' rights to be forgotten because information stored in blockchain cannot be removed. In additional there are ecological challenges caused by enormous consumption of electricity and big emission of heat and CO₂ due to global bitcoin mining.

ICO as such also had its potentials and challenges. ICO bear a potential to democratize the funding of new types of ventures by opening up investment possibilities to a broader range of investors who otherwise would not invest in highly innovative projects (Kaal, 2017). As a challenge then as anything on Web, ICO projects, cryptocurrency exchanges, wallets, projects' websites are all affected by hacker attacks with all corresponding consequences.

Throughout the history, a humankind faced many challenges but if it managed to act collaboratively, it always managed to solve those, so is wished in case of blockchain and ICO.

2.2 Existing Literature Regarding ICO Impact Factors

Because ICO is a new phenomenon, at present there is a very limited amount of researches done on this topic, and particularly on topic related to the success factors of ICO. By the time of starting this research, author found four relevant articles, which studies success factors of ICO. Those are of Adhami et al (2017), Amsden & Schweizer (2018), Fisch (2018) and Fenu et al (2018). They were carefully reviewed and their main findings were collected and represented below in the text. These findings then were critically reviewed and commented by the author. After that, common conclusions of an entire section have been drawn together with identification of a research gap what this study aims to fulfill at some extent. ICO is however a hot research topic and therefore author admits that by the time this paper is published it might not include all relevant papers published on this topic. As a part of MLR, this section includes an information from practitioners as well, which is then will be used to compare findings of this study with existing knowledge. Theoretical framework though was constructed solely based on academic literature, which, as according to Garousi et al. (2019), follows a controlled review and publication process, and therefore it is more luckily to be valid and free of bias.

2.2.1 Criteria of ICO success

It is hard to determine what success is in terms of ICO. It could be a reaching of a soft cap, when a team does not need to return a money and can proceed forward (as noted by the author's, it is a common practice for companies to return money in case of not reaching a soft cap, although Fenu et al (2018) claims otherwise). Success could also mean a reaching of a hard cap when team successfully raised 100% or even more of what they aimed to. It could be successful listing on exchanges, reaching certain volumes of trades or certain level of ROI within certain period.

The following is the success criteria used in reviewed articles:

- **Adhami et al (2017):** Article did not provide a clear definition of 'success', instead were provided the reasons of when an ICO can be labeled as 'failed'. Thus 'success' is taken as opposite to described 'failure' and corresponds to successfully closed offering which DID NOT fail to reach its minimum funding goal, have a security flaws, perform a retirement of the sold tokens, suspend distribution, stop the crowd sale and didn't reveal itself as a scam.
- **Amsden & Schweizer (2018):** ICO is classified as successful if the ICO-related tokens are traded (TRA) on any exchange or if the trading takes place at CoinMarketCap (CMC). Total amount raised (TOT) is a

complementary success measure which is in line to success measures of crowd-funding campaigns described in Ahlers et al., 2015.

- **Fisch (2018):** total amount raised in ICO which is in line to success measures of crowd-funding campaigns described in Ahlers et al., 2015.
- **Fenu et al. (2018):** ICO is classified as successful, which raised more than \$200 000 and whose market cap didn't diminish by more than 75% after their quotation.

Across analyzed articles there are different criteria of ICO 'success' what makes it challenging to draw common conclusions out of three articles. Total amount raised (Amsden & Schweizer (2018), Fisch (2018)) as a criterion for the success of an ICO in author's opinion is quite unclear. In articles it is not explicitly connected to soft or hard caps of an ICO and that is why it is hard to say whether an ICO has reached its minimum or maximum financial goals or not. However a logical conclusion could anyways be drawn, that total amount raised is bigger than ICO's soft cap because normally if an ICO doesn't reach its soft cap, the money are returned back to investors and total amount raised is then zero. Companies in this case usually hide this information to protect their reputation. Thus if information about total amount raised was available for researches, it must have been higher than minimum goal (soft cap) of an ICO. Other success criteria, TRA and CMC also do not imply that an ICO have reached its maximum financial goals (hard cap) even though its tokens became tradable. The way of tokens to the market is opened after reaching a soft cap, when money does not need to be returned to investors, all the rest is reorganization of a company and possible change in plans depending on amount of money a company managed to raise for their project via ICO. However, a success definition of Adhami et al (2017) almost fully could be used as a common for all the articles. This definition states that an ICO can be considered as successful when it reached its soft cap (and thus a retirement of sold tokens was not performed), did not have any security flaws during ICO, did not suspend a crowd sale or token/coin distribution during on upon completion of an ICO. Success criteria of "total amount raised" does not imply last criteria of success suggested by Adhami et al (2017), namely an ICO not revealing itself as scam, since there is no information of what happened to the tokens afterwards like in case of TRA and CMC (they become tradable), which can be an indicator that the projects were not scam since investors trade their tokens afterwards and even in sufficient volumes like in case of CMC.

It turned out, that not all firms, who participated in this study, have publicly specified their soft caps in ICO description, but even then, author's assumption is such, that, if a company, upon completion of an ICO, proceeded forward with its project, it means they have managed to raise at least that minimum amount of investments, that allowed them to do so in a most minimalistic way possible. Therefore, for this study success definition is adopted from Adhami et al (2017) as it is the most general one, allows drawing common conclusions and reflecting situation of the case companies. **ICO therefore can be**

considered as successful when it reached its soft cap, did not have any security flaws during ICO, and did not suspend a crowd sale or token/coin distribution during or upon completion of an ICO.

2.2.2 ICO Impact Factors. Theoretical Framework

Reviewed literature has studied numerous factors that affect ICO success. The full list of them can be seen in the APPENDIX 1. Theoretical framework for this study is a list of factors presented in the table 5, which have been preselected out of the full list of impact factors based on the following criteria:

- contradictoriness in results regarding the same factor across different papers
- at least two factors from each group of factors (ICO characteristics, financial details, team characteristics, cryptocurrency dynamics. Factor group “pre-ico characteristics” was not included because not all case firms had run a private / pre-ICO)
- factors with identified negative effect in order to find additional insights into why these factors play negative role and may they play a positive role under different project settings

The framework then serves as a prism through which a researcher looked at the companies and their success stories in order to identify recurring factors that affect ICOs between academic literature against real life, find different perspectives and possibly new explanations to the findings of previous literature regarding the role of the same factors in ICO success since some of them were very contradicting across the papers.

Table 5 thus presents the theoretical framework for current study. \oplus sign means that the determinant has a positive effect on ICO success, \ominus sign means the effect is negative and \oplus/\ominus sign means that the determinant has both positive and negative effects depending on the dependent variable in question (see APPENDIX 1). Following is the more detailed discussion on each of the factors.

TABLE 5 Effect of determinants on ICO success. Theoretical framework. (grouping of factors into the following blocks was adapted from the work of Amsden & Schweizer (2018))

Determinant	Adhami et al. (2017)	Amsden & Schweizer (2018)	Fisch (2018)	Fenu et al. (2018)
Whitepaper		\oplus	\oplus/\ominus	
Ethereum-based (ERC20 token)		\oplus/\ominus	\oplus	\oplus
Code availability (GitHub)	\oplus	\oplus		

Private sale / pre-ICO	⊕	⊖
Jurisdiction	⊕	
Telegram		⊕
Accepting FIAT		⊖
Bonus schemes		⊕
Token_services (utility token role)	⊕	
# of advisors		⊕
Team size		⊕
ETH Volatility		⊕
ETH Value		⊖

Whitepaper as success determinants was studied in almost all articles however empirical evidences are a bit contradicting. Adhami et al (2017) found that whitepaper does not affect anyhow on ICO success while Fisch (2018) found its negative influence on ICO success if it is not long enough what he measures by word count. Fisch (2018) however warns that negative effect of whitepaper should not be overstated since in his results the variable was highly skewed (92% of the ventures had a whitepaper). He therefore provided more robust conclusion regarding whitepaper, i.e. it does not have a positive effect on ICO success. However, an increase in word count of whitepaper positively affects on ICO success what is in line with findings of Amsden & Schweizer (2018) who measured the length by amount of pages. As Fisch (2018) concluded, 'a poor whitepaper may harm an ICO, and ventures would be better off having no whitepaper at all'.

Developing an application on existing **Ethereum platform** seems to be positively affecting on ICO success (Amsden & Schweizer (2018), Fisch (2018)). However, there are certain contradictions regarding this success factor across these articles. Amsden & Schweizer (2018) says that Ethereum platform positively affects on probability that token will become tradable after an ICO but negatively affects on total amount raised because big ideas may require developing own blockchain due to limitations in the functionality of Ethereum. The later finding goes in contradiction with findings of Fisch (2018) which says otherwise. Possible explanation of this could be a sample size that in the study of Amsden & Schweizer (2018) is almost four times larger and covering wider time interval than of Fisch (2018). Perhaps that sample had bigger amount of large ICOs, which utilize also their own blockchains and thus had better opportunity to study the effect of Ethereum platform on total amount raised. Despite of this, a common conclusion could be made that an Ethereum platform positively affects on at least reaching ICO its soft cap.

There seems to be a unanimity across articles who studied this factor about positive affect of **code availability on GitHub** on ICO success. Fisch (2018) goes further and says that not a bear GitHub account and presence of

project's code in it affects on success, but rather its quality that is reflected by amount of stars (rating) what other users gave to it. Generally, this finding follows a common sense since public code availability creates transparency and therefore creates a trust. However it is a questionable, whether or not those companies who do, disclose 100% of their code on GitHub or something still stays unrevealed? Moreover, how many ordinary investors knows programming well, particularly related to developing of crypto assets, to confidently evaluate a quality of the code? This all raises questions but despite of this, the fact that some companies without being scared of critics of their code from developers, reveal it and make public definitely creates trust what is in its turn can result in better achievements in ICO.

Other contradicting results were received regarding an effect of **pre-ICO** on ICO success. Adhami et al (2017) found its positive affect while Amsden & Schweizer (2018) negative. Adhami et al (2017) claims that testing the market with a targeted, smaller token sale is a valuable strategy to entice ICO funders who can then generate initial market interest and price-discovery for a larger pool of web-based contributors while Amsden & Schweizer (2018) in contrast saying that those entrepreneurs are launching pre-sales who may be 'insecure' about quality of their ventures and thereby signaling greater uncertainty. Moreover, authors continue, that 'the absence of a pre-ICO also serves as a proxy for token sale bring part of an existing business' what can be seen by potential investors as favorable factor for token purchase. Amsden & Schweizer (2018) however agreed that pre-icos can attract more sophisticated investors what can be seen by other investors as an endorsement. They also discovered that if a pre-ico is anyways kept and had a hard-cap for it, it can increase both probability of token tradability, and the amount raised in the ICO because then investors can easily assess the success of the pre-ico. This information then can influence the decision to participate in the actual ICO. Thus, it is possible to draw a common conclusion that pre-ico if organized without specifying a maximum financial goal (hard cap) can have negative effect on ICO success but positive if a hard cap is on place.

Jurisdiction was studied by Adhami et al (2017) and Amsden & Schweizer (2018). In their work, Adhami et al (2017) studied the influence of the jurisdiction of reference for the token sale on ICO success and founded its positive effect on the last. In their sample set of 253 ICOs authors noticed that in several of them, the whitepaper specify the jurisdiction that is regulating the token sale [author: "and which can be different to the jurisdiction of the country where the project team is physically located"]. Authors call this jurisdiction as jurisdiction of reference for the token sale and they noticed that in their sample set they often find Singapore, Gibraltar, Cayman Islands, Virgin Islands, Delaware and Estonia as choices for such a jurisdiction. According to Adhami et al (2017) jurisdiction of reference offer a minimum legal protection to potential contributors in case of fraud but despite of that, as according to the findings of their research, potential investors seemed to not mind of that and on the contrary, the choice of jurisdiction of reference for the token sale by project promoters was

even appreciated and added to the probability of success of the campaign. Author of current paper assumes that such a behavior of investors could be explained by unclear legal status of crypto and ICOs in many countries. Due such an unclear attitude of some countries towards crypto and due to old laws which are at most only put legal impediments to crypto projects, investors, while neglecting their own legal protection in case of fraud, appreciate that the ventures where they invest money chose more friendly regulator and thus will meet as less legal impediments as possible what in eyes of investors could potentially promote to a success for the entire venture. Amsden & Schweizer (2018) studied the effect of tax havens on ICO success. Top 20 tax havens also include, but not limited to, countries mentioned by Adhami et al (2017) except for Delaware and Estonia. In contrast to Adhami et al (2017), the work of Amsden & Schweizer (2018) have not found any evidences of tax havens affecting on ICO success anyhow. The reason for this could hide in a sample size which in case of the later work was almost four times bigger than of Adhami et al (2017) and which could include more ICOs with jurisdictions of references.

Regarding the social networks where companies conducting ICOs are present, only **Twitter** (Adhami et al. (2017) and Fisch (2018)) and **Telegram** (Amsden & Schweizer (2018)) were studied. Twitter didn't show any evidence of having neither positive nor negative effect on ICO success while Telegram did show strong positive effect. Regarding Twitter, according to Fisch (2018), a possible explanation of it showing no evidence on ICO success could be the fact that almost all companies had a twitter account and thus didn't allow revealing of a correlation between its presence and ICO success. Telegram in the sample of Amsden & Schweizer (2018) were present only in 67% of companies, which could give possibility to study its correlation to an overall success.

Accepting FIAT as according to Amsden & Schweizer (2018) affects negatively on ICO success, at least in terms of a token to become tradable because if an ICO lets FIAT investors to invest, it could indicate insecurity of ICO organizers to raise required funds from crypto investors. Amsden & Schweizer (2018) also adds that accepting FIAT could also signalize "exposing the venture to the possibility of interventions by regulators to e.g. freeze bank accounts, which increases venture uncertainty".

According to Adhami et al (2017), likelihood of success seems to be unaffected or affected marginally by **ICO bonus schemes** while Amsden & Schweizer (2018) found a positive effect of this factor on ICO success at least in terms of a token to become tradable. Such difference in results may lay in different sample sizes where later had much bigger sample size and therefore had better opportunity to study the effect of bonuses on ICO success. Amsden & Schweizer (2018) warns though that bonuses are "double-edged swords". They continue that from one hand higher bonuses can contribute to early investments (this phenomena was also studied for traditional crowdfunding, see Hornuf and Schwienbacher, 2017) and attract attention of sophisticated investors but from another hand investors who got big bonuses (e.g. token discounts) have bigger temptation to monetize these bonuses right away when ICO tokens get

listed on exchanges by selling their tokens and thus crashing the token exchange rates to the disadvantage of later investors. Above mentioned articles mostly studied effect of bonuses due to their presence or absence in the ICO. Bonus schemes though is quite broad factor and can include many different techniques, which in their turn can affect differently on ICO success. Authors of above-mentioned papers acknowledge these limitations and tell that further studies should be done to find an effect of different bonus techniques on overall ICO success.

Adhami et al (2017) studied success impact of tokens based on their features. Among studied tokens were tokens which grant contributor an access to the service of the start-up (such token also refers to a **utility token**), tokens which are used as internal currency, tokens which give governance rights to holders or profit rights and tokens which donate to the holder the ability to contribute to the project's development. The findings were such that token which grant contributor an access to the service as well as token which give profit rights positively affect on ICO success while results of other token types were not statistically significant.

Team as a success factor of an ICO wasn't studied much perhaps because of multicomponent nature of a team as a single success factor and thus hardness to empirically measure the quality of it which could include, but not limited to, work experience of CEO and particularly in crypto space, work experience of developers, reference to technologies which they are familiar with, reference to prior projects they were involved in, references to code comments in GitHub and many more. The only characteristics of a team, which were studied across reviewed articles, were number of advisors (# of advisors), CEO with LinkedIn profile of more than 500 connections (CEO LinkedIn 500+) and a team size. Amsden & Schweizer (2018) concludes that better connected CEOs and larger team size contribute to higher quality of the venture in the eyes of potential investors and therefore to better chances that ICO succeeds. At the same time work of Fenu et al (2018) found no evidence that team size is anyhow correlated to the success or failure of an ICO. Both of these works have a sample size of more than one thousand ICOs, perhaps different results are due to different approaches in measurements.

Return and volatility of the currency associated with underlying blockchain, according to Adhami et al (2017) seems to be not affecting ICO success whether it was measured a week or a month before the ICO (in their work values for Bitcoin and Ethereum were of main interest). Amsden & Schweizer (2018) found different results regarding Ethereum price and volatility. They found that higher values for Ethereum decrease the likelihood of participation in an ICO while higher level of Ethereum volatility can in contrast even foster investments. As possible explanation, authors assume that during periods of higher Ethereum prices, ICOs are less appealing to investors because if they wanted to participate in ICO with certain amount of Ethereum, they now have to invest more FIAT money in it. At the same time higher volatility, particularly when Ethereum value is steadily growing on the market, may trigger a fear of

mission out (FOMO) an investment opportunity, when he/she can assume to be able to earn on ICO itself and on Ethereum exchange rate if it continues to grow, and therefore foster the investments. The trend of volatility is not taken into consideration though. Will above-mentioned results keep true if an Ethereum value is steadily decreases on the market? Perhaps not.

2.2.3 Practitioner's Viewpoint on ICO Impact Factors

The following is an additional set of factors which was not present in academic literature as having any impact on ICO success but which seemed to be known as affecting ICO success by practitioners. This is a solely a complementary set of factors and will be used in discussion part only where findings of this study are compared with existing knowledge. In Internet there were found big variety of articles and blog posts regarding positive and negative factors of ICO. After careful selection and analysis, author selected and provide the findings of the following sources: Ayton, N. (2017), Marshall, A. (2017), Vo, T. (2018), Mulders, M. (2019), Belei, A. (2018), Kleydints, A. (2018), Sharma, A. (2018), Rosic, A. (2017a). Table 6 summarizes the findings.

TABLE 6. ICO success impact factors. Practitioners' viewpoint

Positive Impact Factors	Negative Impact Factors
Idea / minimum viable product	Security issues and scams
Business plan	Unrealistic objectives and budgets
Marketing	Inadequate product market
PR	No proof of concept available
Partners	Failure to create a brand identity
Timing	Lack of auditing, reporting, and measurement
All channels (social media)	Lack of legislation
Supporters	Untrustworthy or non-experienced team
Project goals	Little preparation time
Quality of code	
Stage of the project	
Community building	
Experienced team	
Clear use case	

2.2.4 Research gap

By the time of writing this research, there are just very few papers done on the topic of ICO and even fewer are done to study factors that are positively affecting on an ability of a firm to reach its fundraising goal via ICO. Moreover, all papers, which did study above-mentioned factors, were done solely as quantitative researches where the data was collected using secondary sources of information available in the Internet. As in author's point of view, one of the big limitations of quantitative studies is that they study only those factors, which can be empirically measured, but as according to the researcher, not all of those factors, which particularly can have an effect on ICO success, can be measured. Some of them can be intangible like a firm's reputation, informational background around crypto sphere or an image what a crypto project tries to create of itself in a crypto community. These factors can not be measured but they definitely can have an impact on ICO success. Qualitative study and these are also the reasons for choosing it does not have such boundaries, plus it can help to look at the phenomena of ICO from different angle and by different approach than it was done earlier. Such approach can contribute to enriching already existing knowledge regarding ICO and factors affecting on its success. Moreover, qualitative study allows working with primary sources of information and actually be in touch with real people who were involved in the phenomena in question. This can also allow discovering new information regarding ICOs and its success factors and / or finding new viewpoints, new explanations to the role of existing formulated factors. This study is thus done not to produce results which could be generalized but rather to bring new insights, perhaps new discoveries to the phenomena of ICOs and also to find different perspectives and possibly new explanations to the findings of previous literature regarding factors affecting on the ability of a firm to reach its fundraising goal via ICO since some of such findings were very contradicting. Moreover, it was wished to find the reasons behind certain entrepreneurial behaviors, their decisions regarding factors they though could affect on ICO success and rationale behind these decisions. What is more, company representatives who were participating in this study were interviewed not before or during their ICOs but sometime after an ICO was ended and hence they could provide more objective evaluation of their companies' decisions regarding factors influencing ICO success since certain results of these decisions were already visible. This additional insights are very important for this study because they can reveal the information regarding what was perceived to be good for ICO success prior or during ICO campaign but eventually turned out to be harmful when ICO have been completed or other way around. To sum up, this study is done to cover the following research gaps: too little researches in the field of ICOs, only quantitative studies identifying success factors of ICO, contradicting findings of existing literature regarding the role of the same factors in ICO success.

3 RESEARCH DESIGN

The research method developed for this study consists of two phases. The first phase was a data gathering for this study. Within this phase, the author developed a theoretical framework presented in section 2.2.2 by finding relevant academic literature and analyzing their findings. The following four papers were used in this process: Adhami et al. (2017), Amsden & Schweizer (2018), Fisch (2018), Fenu et al. (2018). Data on case firms was collected using primary and secondary source of information. Primary, real-life data was collected via semi-structured interviews from eight companies who have conducted their ICO in the past while secondary data - through firms' web pages and whitepapers of their ICOs. During interviews, in addition to the factors from the framework, companies, even prior to being introduced to it, described in their own words positive and negative impact factors based on their experience. The second phase covers the examination of case firms' experiences and reported factors against the theoretical framework. Factors which were reported by companies in a free form and which might have included also unknown before factors were compared more broadly and against of both academic and gray literature findings. Figure 2 demonstrates the research method graphically. Following is more detailed description of research method, data collection and data analysis processes. Entire section ends with a description of case companies.

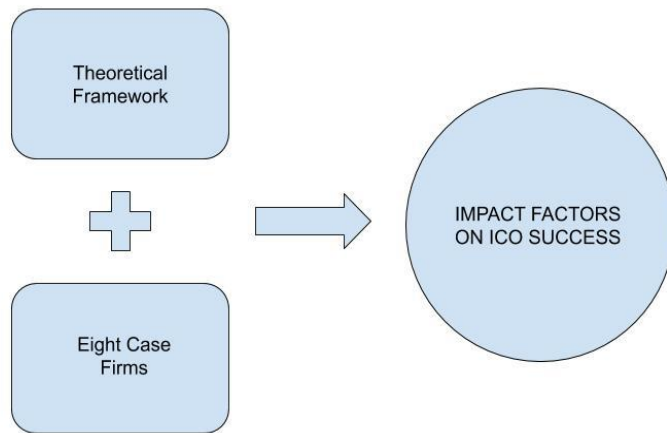


FIGURE 2 Graphical representation of research method

3.1 Research method

This study is qualitative and empirical where multiple case study method was applied. The guidelines proposed by Eisenhardt (1989) were followed as closely as possible using the no theory and no hypotheses origin in the research process. This study aims at empirical observation of the companies rather than a theory building and therefore it is done not for the purpose of producing results which could be generalized. Objective of this study is to understand different impact factors, which affect both positively and negatively on the performance of the ICO and to compare previous factors believed to be affecting on ICO success against a sample of real life companies, which have conducted ICOs in the past.

Qualitative research was chosen because it is concerned with understanding a human behavior and it assumes a dynamic and negotiated, not fixed and measurable, reality (Minichiello et al., 1990). At the beginning of this study it was assumed that not all ICO impact factors can be measured because of their possible nature. Moreover, this study tried to collect additional insights on the role of previously identified factors because literature showed that the same factor can play different role and therefore qualitative research method was seen more appropriate. Among qualitative research method types, multiple case study was chosen for several reasons. First, at the time of doing a research, ICO was a very new phenomena which was not studied well yet and constructs of which were not very well developed and understood and a case study research is particularly useful there where “research and theory are at their early, formative stages” (Benbasat et al, 1987). Second, as according to Walsham (1995) and Yin (2003), a case study research is appropriate for addressing “how” and “why” research questions. This research focuses on questions “how”, “why”

and also on exploratory “what” regarding factors affecting ability of a firm conducting an ICO to reach its fundraising goal.

According to Eisenhardt (1989), it is optimal to have 4-10 cases for a multiple-case research. The research setting for this study consisted of eight firms (see table 7) which have raised funds for their projects via ICO. From theoretical perspective, cases were selected according to company characteristics and their ICOs characteristics. Among of company characteristics, type of industry was seen relevant. Among ICO characteristics, the following aspects were seen relevant: year of conducting an ICO, situation on crypto market during ICO and level of achievement of a hard cap. It was particularly wished to get both types of companies, which reached and which did not reach their fundraising goals because in addition to positive impact factors it was wished to identify also negative impact factors on ICO success. Coverage of such a wide variety of “popular type” firms is important for studies with relatively small sample of research sites (Eisenhardt, 1989; Pettigrew, 1990).

To acquire companies to participate in this research open enquirers for participation have been sent by email or in social media channels depending on which contact information was available on firms’ official web pages. Companies were found using the resources icodrops.com and icobench.com, which list active, ended and future ICOs. According to interest of this research, only those companies have been contacted whose ICO has already been ended by the time of contacting. A total of around 250 enquirers were sent on which 8 positive answers were received. With these companies further interview dates and times were agreed upon. Due to a big distance between location of case companies and a researcher, video interviews by skype / hangout and not face-to-face interviews were organized. All companies were clearly informed about outcomes and benefits of this study, how much time and resources it takes to participate and where and how the results are published (Darke et al., 1998). Due to increasing amount of cases when ICO projects are approached by competitors pretending to be media or university researchers in order to steal valuable information, two out of eight firms who agreed to participate in this study additionally requested the researcher to provide a proof of identity and a proof of being a student who is doing a research. The researcher has met all these requirements.

3.2 Data collection

To construct a theoretical framework author conducted a literature review of four academic articles, which were found, and chosen at the beginning of this research: Adhami et al. (2017), Amsden & Schweizer (2018), Fisch (2018), Fenu et al. (2018). In gathering data on each case firm, multiple sources of information were used, primary and secondary. Primary data, which is new information collected by the researcher, was collected through semi-structured interview which was constructed with some predefined questions but where was

also a room for improvisation (Myers and Newman, 2007). Secondary, existing data was collected through Internet, namely through case companies' web pages and whitepapers of their ICOs.

During interviews, at first, interviewees were asked to name in their own words and in the order of importance the most essential factors that in their opinion contributed to the success of the ICO. Such an approach of collecting success factors from companies was adapted from the work of Ojala & Tyrväinen (2008) where they studied factors contributing to the success on Japanese software market. Due to the time constraints, the amount was limited to the top five factors. This research adapted the definition of the success from the work of Adhami et al (2017) where the main criteria is firm's reaching ICO soft cap and since all companies have reach it, this question was asked from all case companies despite of whether a fundraising goal (hard cap) was reached or not. Moreover, even though some firms did not reach their fundraising goals, they still managed to raise several million dollars in investments and how did they do it is of a big interest for this research. The first question was then followed by questions about each of ICO factor from theoretical framework as follows: "Do you think that [a factor from the framework] affected on a success of you ICO? How? Why did you chose to use it / this value of it?". At last, at the end of the interview, those companies whose ICOs didn't reach hard caps were additionally asked with the following questions: "Why do you think your ICO didn't manage to reach its hard cap? Having this experience, what would you do differently in the next ICO?".

All participants in the beginning of interviews were clearly notified that the results of this research would be public and proceeding with interviews meant agreeing with this condition. Author also asked the permission for a record of the interview on voice recording device. Two out of eight companies wrote their answers in writing, due to their unavailability for a video interview, therefore obtaining such permission from them were not necessary. Altogether, 1-2 interviews per firm were conducted, each lasting at average 45 minutes long. Thus, 10 semi-structured interviews were conducted in total. Table 8 lists informant(s) from each firm. All of the informants belonged to the executive teams of their companies; some of them were even co-founders who were in the project from the day one. It is worth noticing though that interviewee one from firm C did not work in the company when ICO had been prepared or conducted but he was present at the team meetings where ICO related issues and retrospectives were discussed quite in details, so he assured researcher that he was competent to provide the necessary information. All interviews were digitally recorded, carefully listened to, and transcribed verbatim using word processing program. The collected data was also triangulated with secondary sources, such as websites and ICO whitepapers. A second listening was conducted to ensure that transcribed data corresponds to what actually have been said by interviewees.

3.3 Analysis of data

After all interviews have been conducted and transcribed verbatim, author based on what have been said and based on semantics of the text, wrote conclusion regarding the role of factors from theoretical framework on firms' ICO success. The values of conclusions were either positive, negative or neutral with a description why author thought so. These transcripts with conclusions have been sent back to interviewees for a review. Whenever interviewees have noticed some inaccuracies, they corrected them and sent back to the researcher.

Ordinal scale measurement method was used to obtain the research results regarding the most important success factors in firms' point of view. This approach was again in line with the work of Ojala & Tyrväinen (2008) that this study used as a guideline for collecting and analyzing success factors from the companies. These positive impact factors were then arranged in their order of importance and placed in the table. Idea was to find the most important success factors in companies' opinion and possibly find new success factors, which were not yet identified in earlier literatures. Due to relatively small amount, negative impact factors were collected and presented as-is. They then play important role in the section of managerial implications, where managers are advised to take care of these factors because they can harm the project. Regarding factors from theoretical framework, then they were placed in a table with values of "positive", "neutral" and "negative" depending of the interviewees' attitude towards the role of these factors in ICO success. Emphases was not on the attitude itself, but on the explanation of why factors play such a role. This was therefore done not to argue with a literature but rather to gather new insights and enrich findings of previous studies and possibly find explanations when and how the role of the same factor could be different for different projects.

To ensure reliability and validity of the data, the following measures have been applied:

- Semi-structure interview guides have been prepared (Ferlie et al., 2005) with relevant to the phenomena open-ended questions
- Data was collected from multiple sources to enable triangulation and cross validation (Klein and Myers, 1999; Miles and Huberman, 1994)
- Interviews were recorded, interview transcripts were checked and data gathered from interviews were compared to secondary resources to ensure the accuracy and completeness of data (Yin, 2003)

3.4 Case companies

Author of this paper respects desire of case companies to stay anonymous, which they expressed before they agreed to participate in this study, and there-

fore the following does not contain too detailed information on case firms out of which firms' names and profiles could be identified. However, all relevant information needed for this research is present. The stage of the product development is described according to what it was when companies were reached out and told about it, not according to the time when information below was compiled because the author did not follow the product development of case firms after the interviews have been conducted. Stages of the product development are described according to the following stages proposed by the work of Wang et al., (2016, May): concept, in development, working prototype, functional product with limited users, functional product with high growth, and mature product. Information about whether or not a company had minimum viable product (MVP) or a prototype by the beginning of an ICO was taken using the resource icobench.com

Firm A's main activity is to develop an online ad platform on Ethereum, which is claimed to remove costly middlemen and reduce the problem of ad fraud using advanced AI technology. Company was found in the year of 2017, just six months before they conducted an ICO. By the time of an ICO the concept was developed but not a prototype, what means the product was in "in development" phase.

Firm B's main activity is building peer-to-peer decentralized lending and borrowing platform where crypto holders in need of access to cash can use their crypto as collateral in order to get a loan in dollars. Company was not in the business before and the intention of the company was always to do an ICO. By the time of ICO no prototype was developed while the concept was on place. The platform was in "in development" phase.

Firm C's main activity is building global bank, providing a service to people from all around the world. The goal of company is to remove borders in the financial sector, and to ensure that every citizen has access to alternative financial services, finally ending the artificial monopoly created by local regulators and traditional banks. By the time of ICO no prototype was developed while the concept was on place. The platform was in "in development" phase.

Firm D's main activity is to develop a speculative coin that can be exchanged against other cryptocurrencies and whole ecosystem which offers services such as cryptonisation (virtualization) of equity, trading in cryptonised shares and assets, cryptocurrency exchanges, crypto-fiat currency exchanges, e-commerce, debit card purchases, business transactions, and commodity trading. The company was founded in 2015 but started working on ecosystem development only later. By the time of ICO no prototype was developed while the strong concept was on place. The platform was in "in development" phase.

Firm E operates in financial sector. It designed the platform that allows access to microfinancing services and cheap, global remittance services. Platform was claimed to provide fast, easy, cheap way to send money and cash them out in different currencies. Company existed from 2014 but started working on platform development only later. By the time of ICO no prototype was developed

while the strong concept was on place. The platform was in “in development” phase.

Firm F’s main activity is building a global blockchain ecosystem, which should contribute to blockchain infrastructure development by establishing common standards for decentralized applications. Company started as an ICO company when they decided to tackle a storage problem. Along with 20 other companies worldwide they claimed to be one of those companies based in China that was developing blockchain system how people can securely store the information in a blockchain. Company was found in the year of 2016 as a research company. By the time of ICO no prototype was developed while the strong concept was on place. The platform was in “in development” phase.

Firm G’s main activity is developing the platform for establishing a new level of trust, transparency and security in online betting. The solution was based on already existing gaming platform. Before the ICO the company existed a while and they also had a working and running product related to what they were building. Then they decided to take a next step with ICO. Despite of existing and working platform, which is related to the new product, by the time of ICO new product itself did not have any prototype although a strong concept was developed. The product was in “in development” phase.

Firm H’s main activity is building decentralized hosting platform to reach greater decentralization and autonomy. Ecosystem relies on hosts that provide processing and storage for distributed applications. The company was found in 2017 and specifically for the purpose or creating ICO, however there was a longer story behind of it. The company intended to raise money for development of its project and for another much longer project that never intended to raise money. There was already an important technological innovation regarding cross blockchain distributed ledger technology, which was developed and valuable before ICO began. ICO itself created a secondary product and opened infrastructure that they wanted to bootstrap. By the time of ICO, prototype of the solution was available. The platform was in “working prototype” stage.

Table 7 presents data collected on each of the firms. Data was collected from multiple sources including ICO whitepapers, icobench.com, icodrops.com and from interviewees’ answers. Determinates are the same as during literature review and description of all of them is presented in APPENDIX 1.

TABLE 7. Overview of the case firms and their ICOs

Determinant	Firm A	Firm B	Firm C	Firm D	Firm E	Firm F	Firm G	Firm H
<i>Company characteristics</i>								
Industry	Advertising	Finance	Finance	Finance	Finance	Cloud storage	Casino&gambling	Cloud storage
Year of establishment	2017	2017	2017	2015	2014	2016	No info	2017
Team size by the time of ICO	19	29	10	No info	9	16	7	30+
# of advisors by the time of ICO	11	7	6	2	No info	4	9	No external advisors
<i>ICO characteristics</i>								
Whitepaper	present	present	present	present	present	present	present	present
Year of conducting ICO	2017-2018	2018	2017	2017	2017	2017	2017	2018
MVP / prototype	No	No	No	No	No	No	No	Yes
Duration (in days)	30	8	30	57	37	14	30	30
Hard Cap	10 000 ETH	50 mln USD	200 000 ETH	13.5 mln USD	70 000 ETH	29,6 mln USD	12 mln EUR	25 mln EUR
% of hardcap reached by ICO	100%	100%	~30%	~104%	~71%	~39%	~17%	~78%
Platform	Ethereum	Ethereum	Ethereum	Nem	Ethereum	Ethereum	Ethereum	Ethereum
Code availability (GitHub) by the time of ICO	No	Yes	No	No	Yes	Yes	Yes	Yes
Telegram	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Presale (Pre-ICO)	Yes	Yes	Yes	Yes	No	Yes	No	No

Jurisdiction	Canada	UK*	Estonia*	Vanuatu*	Singapore*	Singapore*	Austria	Gibraltar*
<i>Financial Details</i>								
Accepted cryptocurrencies	ETH	ETH, BTC	ETH	ETH, BTC, LTC, XEM	ETH, BTC	ETH	ETH	ETH
Accepting Fiat during ICO	No	USD	No	No	No	No	No	No
ICO Bonuses	Token discounts, bounty program	Token discounts	Token discounts, bounty program	Token discounts	Airdrops	Token discounts	Bounty program	No
Role of token	Utility token	Utility token	Utility token	Utility token	Utility token	Utility token	Utility token	Utility token
ROI as of 22.03.19**	0.60x ETH	0.89x ETH	0.43x ETH	0.43x ETH	0.39x ETH	0.43x ETH	0.25x ETH	37.84x ETH

* jurisdiction of reference for the token sale which is different to the physical location of the team

** as according to coinmarketcap.com

TABLE 8. List of informants

Firm	Informant title	Number of interviews	Total number of interviews
Firm A	Co-founder and Chief Marketing Officer	1	1
Firm B	Chief Marketing and Chief Product Officer	1	2
	Co-founder and Chief Operating Officer	1	
Firm C	Head of Legal Compliance	1	2
	Co-founder and Product owner	1	
Firm D	Social Media & Marketing manager	1	1
Firm E	Chief Marketing Officer	1	1
Firm F	Regional manager	1	1
Firm G	Support Manager	1	1
Firm H	Documentation & Research Lead	1	1

4 EMPIRICAL FINDINGS

To preserve the consistency, findings are grouped and present according to the research sub-questions in three different sections, 4.1, 4.2 and 4.3 respectively. Thus, sub-section 4.1 talks about positive impact factors and presents findings regarding the first five most important factors of ICO success from firms' perspective. Focus was given at finding possible new success factors, which were not yet identified in earlier studies. Sub-section 4.2 talks about negative impact factors and reveals why some of interviewed companies did not reach their fundraising goal. Idea was to find such factors which might not influence ICO success directly but which can, on contrary, lead ICO to the failure if they are not given enough attention from ICO organizers. Sub-section 4.3 talks about preselected success factors from earlier literature and attitude towards them from interviewed companies. Main idea of this section was not to argue with existing studies but rather to bring new insights and additional explanations into the issues, into possible contradictions regarding the role of the same factor across findings of previous studies. The last section, 4.4 presents primary empirical conclusions by summing up the findings of first three sections.

4.1 Positive Impact Factors

Table 9 presents the five most critical practices for successful conducting of an ICO based on interviewed firms' viewpoint. The most important success factor identified by each firm is given 5 points in the column for the firm; the second most important, 4 points; the third most important, 3 points; the fourth most important, 2 points; and the fifth most important, 1 point. Each firm could distribute maximum of 15 points across the factors. If there were 2 interviewees per firm, like in case of firm B and C, then points given by each interviewee were additionally divided by 2, i.e. each interviewee could distribute only 7.5 points across the factors, where 2.5 points were given for the most important factor of all five and 0.5 points for the least important factor of all five. If both

interviewees mentioned the same success factor, then points given by both interviewees for this factor were summed up and put into the table. All the recognized success factors are arranged in decreasing order of importance based on their total score (total score = average * frequency, where average = sum / number of cases). Following is a discussion of the top 5 success factors of an ICO. Such success factors as team and marketing / SMM happened to be discussed twice, among five factors mentioned by firms (table 9) and among factors identified in earlier studies (table 10) therefore finding regarding of team and marketing / SMM success factors are combined and discussed in this section.

TABLE 9. Success factors of ICO named by interviewees in own words

Factors	Firms								Average	Frequency	Total score	Order
	A	B	C	D	E	F	G	H				
Inspiring idea which people will buy		2.5	2	5	5	5		5	3.1	6	18.6	1
Efficient building of a community of supporters		1	3		1	3	4	4	2.0	6	12.0	2
Effective marketing / SMM	2		3	3	2		3	3	2.0	6	12.0	2
Professional team		2.5	4.5		4			2	1.6	4	6.4	3
Clarity of a problem and of a solution	5	3.5				4			1.6	3	4.8	4
Partnerships / advisors	3				3				0.8	2	1.6	5
Perceived progress vs actual progress 1	4					2			0.8	2	1.6	5
Transparency / creating trust				4			2		0.8	2	1.6	5
PR	1					1			0.3	2	0.6	6
Legal compliance							5		0.6	1	0.6	6
Market research / market potential		0.5		1					0.2	2	0.4	7
Correct timing			2						0.3	1	0.3	8
Translations		2							0.3	1	0.3	8

Real business practice	2	0.3	1	0.3	8
Video content / campaign	1	0.1	2	0.2	9
Token economics	1.5	0.2	1	0.2	9
Passion / trust in success	1	0.1	1	0.1	10
Technical preparation	0.5	0.1	1	0.1	10
YouTube influencers	1	0.1	1	0.1	10
Telegram	0.5	0.1	1	0.1	10

¹ The ratio between what is promised to be developed in whitepaper (perceived progress) and the actual progress what firm is making (reaching of milestones, releasing of a prototype etc.)

Inspiring idea which people will buy

Idea / innovation / value proposition of the project received the highest rank of importance. Firms D, E, F, H mentioned it as the most important factor for an ICO success. Good, innovative, motivating idea was seen as the first thing which makes people actually to do something and without such an idea there is no belief in the project from the team members what can result in bad execution of the project and subsequent possible fail of it. Once there is a belief in the idea, mission and vision of the project, it can help a team to stay motivated despite of possible hard times plus project observers will feel also that the project is good and a team is committing to it. Firm H told that at the beginning of their project for almost half a year a team was doing hard work 24/7 at almost no pay plus half of them even decided to live together for some period of time in order to be even more dedicated to the project and be even more efficient. This tells how passionate people can be if there is an inspiring subject of the project, possibilities of which goes beyond the horizon. Firm D also noted that since ICOs are done in a crypto space then in order for the project to complete its ICO successfully, the subject of a project should show a real use of a blockchain implementation, not just a speculative cryptocurrency because it is best to see how blockchain technology improves or creates a real usable industry or product.

Efficient building of a community of supporters

With the same values of total score, factors of building a community of supporters and marketing share the second highest rank of importance. Author thinks that such a coincidence is very symbolical because obviously these two factors are very much connected to each other. Some of interviewed firms confirmed that getting first outside supporters, financial backers and building a community starts even before a whitepaper is published or web page is ready.

It starts right after the idea is formulated and actually never ends because each firm wants to continuously expand the community of those who supports their project. All firms agreed that getting supporters who loves the project, who is ready to share the same passion, mission and vision and moreover to spread this idea forward is extremely important both for the entire project and for ICO success particularly. Some firms entered public phase of ICO while having a soft cap already reached meaning that behind the scenes there was already a lot of job done during private sale and pre-ICO phases. Firm C mentioned the term of "book building", when a firm was making pre-agreements with investors, whom they approached personally, that they are willing to participate and will do it when ICO starts. This is crucial to create a momentum at a correct time. When fundraising round starts and investors see that others started investing, they are also highly likely to invest. According to firm F, same momentum is important in growing community. More project observers see that the community is growing and growing fast, the better chance that they will join too. Very important part of building a community as a according to firm C, G, H is a community management, meaning that it is very important to have good customer service that focuses on every single potential investor, answer any questions, support active community members, encourage others to become active with the help of certain incentives, track and ensure that agreed incentives are provided for members who deserved them etc. Firm C mentioned that putting together a community of 50k was a huge task but very crucial for the success. Firm H adds and enhances the role of subject of the project in the process of forming a community because the better and more inspiring it is, the (relatively) easier it is to attract more supporters and create a strong global community.

Effective marketing / SMM

Marketing as a way to communicate the project plays also a very important role in overall ICO success. 6 interviewed companies gave it their votes. According to firm C, being able to market your ICO globally, going different countries, being able to reach users globally is that what makes ICO successful. Firms A and G although admitted that it is very hard to get exposure, there is so much going on now. There is not many areas to advertise anymore and that is why a firm have to invest into crypto specific ad networks to get in front of relevant audiences. A firm have to engage industry influencers (e.g. big youtubers). Therefore, performance marketing was said to be very important.

One of the purpose of the marketing is to make a project eye catchy and memorable for potential investors. Firm C recalled their interactive cartoon characters on their web page and overall design of their web page as a way to be memorable while firm A recalled their video campaign for the same purpose. Anything what stays in people's mind, what make them talk about the project, share information about it is a big achievement of a marketing campaign. If a firm does not have something people talk about then its ability to get exposure solely depends on firm's ability to pay for every impression what it gets. A firm

can amplify that by something what people want to talk about and tell other people about.

Firm A also talked about such notions, which particularly can be seen among crypto investors as Fear Of Missing Out (FOMO) and Fear of Jumping In (FOJI) which are quite self-explanatory. And it is very important for the firm with any means, including marketing techniques make people overcome FOJI and create a FOMO because exactly somewhere in between is a good place and time for a firm to get investments.

Special attention of interviewed firms, as a part of overall marketing strategy, deserved a presence in social media (social networks, forums, other relevant platforms) because as according to firm D, most investors, if not all, first look at firm's and project's social media profile and how active, engaging and popular they are. Forums like bitcointalk.org are must for an ICO as it is the most popular forum for crypto users. Many ICOs fail because they do not have an announcement thread of their project. For example, firm A told that it is very important to maintain a regular communication through different marketing channels, particularly through social media, with community in detailed enough manner to show a progress. People want to see daily social media posts, couple blogs a week, live and prerecorded video. As time goes by, it is important to show faces and assure that team is doing what it promised to do. It is thus important to keep progress vs perceived progress ration at a good level. Also as according to firm A addressing objectives head on, is important in crypto space and particularly in social media (if a firm doesn't have an ability to tackle tough questions, it can really hurt it in crypto space). Firms B and H also added there an importance to have a clear messaging in social media where a firm provide very clear and precise and consistent messaging to potential investors which is like telling a story, it's narrative must build up and which cannot be done on ad-hoc basis. When interviewer asked about the role of social media channel Telegram, all firms expressed their positive attitudes towards it as to success factor of an ICO (see table 10). Telegram is a secure bidirectional discussion platform where people want and have an ability to get almost instant answers on their questions and therefore it is very appreciated in a crypto community. In addition, as firm D said, Telegram is the preferred discussion messenger app used in crypto space. The reason for this was the security and encrypted messages that everyone wanted to have. Firm E though told that a firm has to be in all social media channels in order to find right audience. On one social media a firm can find B2B clients, on another - potential investors of the crowd.

Professional team

Idea alone is just an abstraction until people really start doing something about it and bringing it to the life. According to firm C, team is probably the most important factor in everything you do. Firm C explained even further that a team can virtually be divided into two parts, internal and external. Internal one is the operation side while external is a public notion side. Team's operation side con-

sists of knowledge, skills, credibility of each member, their passion and commitment to the project, how team as a whole produce outputs and deliver milestones. Public notion side is what others, external project observers think about the team and its capabilities. This attitude or perception to the team can be formed through public profiles of team members for example in LinkedIn, through code commits on GitHub or through references to earlier completed projects. For example, while asking companies about the role of CEO experience in ICO success, many said it played good positive role but couple agreed that it had negative role because their CEOs did not have any experience in crypto space and project observers could verify that. It was mentioned or advised by firm B that if a team does not have a notable team's public notion side, then before running an ICO it is good to develop at least some prototype that people can evaluate. Otherwise if a team does not have much of experience in the field, no big achievements and didn't develop any prototype, potential investors might be very suspicious about whether or not a team can deliver what it promised to in this project. Nevertheless, if a team has some great achievements in the past, it is ok to have no prototype, as the level of trust to the team from external observers could be high enough. Also as according to firm H, if a firm runs international project, it is good to have people in a team with different mindset. It was specifically pointed out that the decision-making process in Asia and in Europe is different (collective decision-making vs individual) and so is the process of attracting new investors as well. If the team consists of only similar mind-set people, a firm might miss out quite much in building global community.

Credibility of the team, its quality play very important role. It is often said "quality over quantity" regarding the team and firms B, C, E agreed with this statement (see table 10). Team size though was said to play also important role in some aspects. For example, as firm A said, potential investors when they look at the project they think can they really do it and one thing what they look is an experience and another is allocation of resources what is measured in a team size. Bigger ideas take more people to execute. Firm G adds to this that team size is especially important when a project faces a lack of time and there are too many tasks to manage with a small team. At the same time the size of a team have to be well balanced. Firm D didn't have a big team and admitted that sometimes they were understaffed but at the same time they managed to develop a family feeling and worked extra hard to get things done. Firm H on the contrary had a big team and noted that if a team is too big, it can get a little stressful. The more people, the more communication can get dangerous.

Project advisors, even though they are third party people, are sometimes also perceived as a part of the project team because they are also involved in the project one way or another. Firm B even identified three different types of advisors based on their role and level of involvement in the project: famous, beneficiary (who gives money) and functional (who actually advices). Like in the case with the core team, quality and quantity of advisors were debated. Under quality of a project advisor is assumed his/her credibility, famousness in crypto

space, number of advised projects which eventually succeeded, number of relevant publications, business experience in related fields and some other factors. Firms A, B, C, D, F, G said that quality is the most important factor in project advisor while quality doesn't really matter (see table 10). For their projects quantity just happened naturally. Company B moreover said that if they had found somebody else who was good for them, they would have added him/her to the list, meaning that for their project the number of advisors was not restricted to any certain figure. Firm E in its turn opened the issue up more in detail and explained when number of advisors actually could matter. So firm E stated that the balance of quality of advisors and their quantity is what actually important. If a project has couple of advisors but famous names it is very good. In the same time if advisors are unknown but there are twenty of them, it is ok too. It is a trade-off.

Clarity of a problem and of a solution

It was pointed out that however good idea can be, it is totally nothing and nobody will care unless a firm succeeds to formulate clear message of what the problem is, why it is important to solve it, how a firm plans to solve it, do they have all necessary capabilities and why exactly this idea deserves to live and be implemented in order to solve the challenge. Firm also should be able to inspire others about the solution and attract more people into the community of supporters. For this reason a good clear "packaging" of the solution (since solution can be not just a single product but also a supportive service to it), clear branding and clear explaining of a use case deserved another attention from interviewed firms and receive forth rank of importance as a factor positively affecting on ICO success. As firm B pointed out that the better use case, the more people need a service and more successful project becomes because its mission and vision are meaningful. It has to be very well thought through what message to deliver to potential investors to touch their minds and persuade them to invest into the project. As firm F also said that there are very smart people out there who are very good at solving the problem but they are bad at branding and telling about themselves. This implies for ideas, projects or entire companies as well.

4.2 Negative Impact Factors

Five out of eight companies participated in this study, namely firms C, E, F, G, H did not manage to reach hard caps of their ICOs in bigger or smaller extent and therefore they were asked with additional question of why in their opinion their ICO didn't manage to reach a hard cap and what would they do differently if they run another ICO. Results of these sections is then used in a conclusion part of given paper where overall bullet points of how it is advised to organize and run an ICO are provided.

Among factors which could have acted as potential causes of an ICO not reaching its hard cap, interviewee one from firm C mentioned too little preparation time, including time for addressing big investors personally and keeping them all on board (as according to interviewee, firm C missed some of big investors from their local area just because they didn't have a chance to personally meet them or to have a call with them due to the lack of time). Next time, interviewee A, in addition to giving more time for preparation, would keep a proper pre-ICO funding and do all necessary things to be 100% legal compliant (firm C didn't have a KYC process on place prior to their ICO what created certain legal complications later on). Interviewee B from firm C would possibly lower the hard cap because in his opinion their ICO did not manage to reach its hard cap because of the timing. He pointed out that prior to their ICO they have witnessed few big success stories and being late on the market affected on our success.

Firm E, if they run another ICO, will most probably utilize automatized platforms for token distribution or airdrops management. During their ICO they did it manually and they spent a lot of time on that, plus it was not accurate. Firm F would pay more attention to the security and to any fraud activities, which might appear around their project because back in the days they were hacked. Hackers developed exactly the same web site with exactly the same design and made investors to invest to a wrong wallet address while firm F was unaware of this for a whole week. People's money who invested from wrong site, were gone what has subsequently affected negatively their ICO. Firm F continues that the second thing what he would do better next time is a proper preparation in terms of visuals. Project of firm F originated in China and some of the product's deliveries was not localized based on European mindset, just according to Chinese mindset what created certain misunderstandings among non-Chinese investors. They had a team consisted on Chinese members for 95% versus foreigners, and next time, interviewee would look more into foreign side to have more proper international marketing versus marketing with a Chinese mindset.

Firm G mentioned the following factors as reasons for not reaching a hard cap: crash of Ethereum price on the market, bans of ICOs in China, uneducated in crypto sphere target group, underestimated the needed marketing budget, too little preparation time. Interviewee from firm H told that if she runs another ICO, she will invest more efforts into developing and executing social media and marketing strategies. During their ICO, despite of much time spend on building the community and a presence of good communications, there were lacking social media and marketing strategies or those were created and executed only in the middle of the project when firm H hired a marketing director because the situation was critical. Interviewee concluded that if they had a head of marketing who knew a crypto space in the beginning of the project, the effect would have been different stating thus that marketing overall and particularly social media marketing are very important parts of a successful ICO.

4.3 Examination Against of Theoretical Framework

Table 10 reveals attitude of interviewees regarding success factors suggested by earlier studies and tell how those factors affected firms' ICOs in reality. If there were two interviewees like in case of firm B and C and they answers were different, both of the answers were put into the table in a short form where pos stands for positive, neg - negative, neu - neutral. A dash ("-") means no answer on the given question was provided due to either the fact that a question wasn't asked during the interview because of lack of time or the interviewee couldn't provide a confident answer. Following is the discussion of each success factors from previous literature except for factors "# of advisors", "Team size" and "Telegram" because those have already been discussed in section 4.1 under the success factors "Team" and "Marketing / SMM" what companies mentioned themselves.

TABLE 10. Examination of findings against theoretical framework

Factors	Firm A	Firm B int1/in t2	Firm C int1/in t2	Firm D	Firm E	Firm F	Firm G	Firm H
Whitepaper	posi- tive	posi- tive	posi- tive	posi- tive	posi- tive	neutral	posi- tive	posi- tive
Ethereum- based (ERC20 token)	neutral	neutral	neu / pos	-	neutral	posi- tive	posi- tive	posi- tive
Code availa- bility (GitHub)	neutral	posi- tive	neu / pos	neutral	-	neutral	posi- tive	neutral
Private sale / pre-ICO	posi- tive	posi- tive	posi- tive	posi- tive	neutral	posi- tive	nega- tive ²	nega- tive ²
Jurisdiction	neutral	neutral	neu / pos	posi- tive	neutral	posi- tive	neutral	neutral
Telegram	posi- tive	posi- tive	posi- tive	posi- tive	posi- tive	posi- tive	posi- tive	posi- tive
Accepting FIAT	neutral	posi- tive	neutral	posi- tive ¹	neutral	neutral	neutral	posi- tive ¹
Bonus schemes	posi- tive	neg / neu	posi- tive	-	neutral	neutral	posi- tive	neutral
Utility token role	posi- tive	neu / pos	pos / neu	posi- tive	posi- tive	posi- tive	posi- tive	posi- tive
# of advisors	neutral	neutral	neutral	neutral	posi- tive	neutral	neutral	-
Team size	posi- tive	neutral	neutral	neutral	neutral	-	posi- tive	posi- tive

BitCoin price & volatility prior/during ICO	neutral	-	neutral	positive	neutral	positive	negative	neutral
Ethereum price & volatility prior/during ICO	neutral	negative	neutral	neutral	neutral	positive	negative	negative

¹ Firm D and firm H did not accept FIAT currencies during their ICOs and according to them this fact had affected their ICOs negatively. Based on this, researcher made a conclusion that if firm D and firm H had accepted FIAT currencies this would have positively affected their ICOs.

² Firm G and firm H did not have a pre-ICO and according to them this fact had affected their ICO positively. Based on this, researcher made a conclusion that if firm G and firm H had had a pre-ICO this would have negatively affected their ICOs.

As visible on table 10, interviewees from firm B and firm C had different opinions regarding several factors. Author assumes that these differences could be correlated to the role of a person in the company and subsequently his area of expertise, and the stage at which that person has entered the company. Interviewee 1 of firm C is the head of legal compliance and could perhaps evaluate better and with a bigger competence an effect of a utility token role on the success of an ICO (since a utility token role makes a legal compliance of a company easier) while interviewee 2 of firm C, who is a co-founder and a product owner, and who thus participated in the development of the product could perhaps evaluate better and with a confidence the choice of Ethereum platform and code availability on GitHub on ICO success. The different opinion regarding the choice of jurisdiction may lay in the fact that the interviewee 1 has entered the company only after an ICO has been completed and therefore he wasn't involved in a decision making process regarding the choice of jurisdiction and perhaps that is why it was harder for him to compare legal performance of a company under chosen jurisdiction with what it was expected to when this choice was made. Interviewees from firm B had different opinions only regarding two factors, bonus schemes and utility token role. Interviewee 1 of firm B is chief marketing and chief product officer and he perhaps was involved very much in the process of developing bonus schemes and monitoring how they perform. Therefore, he had better knowledge and could perhaps evaluate better an effect of bonus schemes on overall ICO success. Interviewee 2 is a co-founder and chief operating officer and perhaps had better confidence to evaluate the impact of utility token role on ICO success.

Whitepaper

7 (all except for the firm F) firms pointed out that a whitepaper has a positive effect on overall success of the ICO because it is the very important way to communicate the project in a great deal where a potential investor can have all questions answered in one place what, as according to firm B, is almost impossible to do just on a web-page. Firm H also adds to this that if a project is based

on some sort of innovation, it is in a firm's interest to describe it as well as possible in order to gain supporters and attract investors' attention and for this purpose there should be a better place to describe the project in details than a web-page and a whitepaper is a good alternative for that. Firm B states that when a company who is running an ICO is asking a lot of money from investors, the least they can do is to give them a sort of prospectus to provide more information about the project. Firm G questions that how else would investors decide to invest if there is no product yet they can test or have ever met the team or heard of the brand before? According to firm E, whitepaper, if written well, is done also to gain trust and credibility because there a firm discusses not only the idea of the project but also the risk factors, potentials, roadmap, token economics, discloses information about the team who is going to execute it and much more. Firms B and D make an accent also on a design of a whitepaper. They break a false opinion, which says that, the more academic and dry a firm makes its whitepaper the more legitimate and more real a firm sounds. In their opinion that is not true. If a firm wants it's potential investors really go through a whitepaper, it should be digestible, attractive and actually readable rather than academic. For this purposes making a good design alongside with good, appropriate content is very important. Interviewer from firm F adds though that in his opinion in case of China a whitepaper did not bring a lot of benefit, it was just a formality. Most of funding was raised due to personal connections, presentable team, support of advisors and professional pitching in the Chinese investment community.

Ethereum platform

Firms F, G, H pointed out that the use of Ethereum platform (ERC20 token) in their project affected positively on their success, firms A, B, E said the effect was neutral and interviewees from firm C had two different opinions, neutral and positive. Firm D utilized different to Ethereum platform and therefore did not provide any comments regarding to it but about NEM platform. For the firms A, C, G the reason for choosing ERC20 token was the fact that back then it was a standard many were familiar with and Ethereum as a whole was credible and trusted platform with good scalability, big knowledge base, good development support and a big community of developers being able to work with Ethereum. Firm E also added that Ethereum was the one of the widely used platforms, which was globalized and efficient. Also, as according to firm B, if ERC20 token fits well into the project, its utility token and use case, then it allows to save valuable time and money because there is no need to develop own blockchain, own coin and therefore it is less risky. Having decided to build an own blockchain, firm F decided to utilize Ethereum to build a prototype, 3D show case of the project and according to them it was a very good solution timing-wise because as was said during interview it takes around nine months to develop own blockchain and if they had done it back then, they would have lost the game. Correct timing is believed to be also very important factor in ICO. For the firm H ERC20 token played positive role in conducting ICO but at the same time

brought negative impact on communications because from one hand they were criticizing blockchain and cryptocurrencies per se, they though there were better ways to do it and from another hand they were themselves using ERC20 tokens. Firm D decided not to go with Ethereum but with NEM platform because they believed that NEM was a superior blockchain for what they were aiming for. According to firm D, NEM offers more functionality than most blockchains in terms of name-spaces. In addition, the more knowledgeable investors understood the features of NEM's blockchain and how it could help them. Ethereum in their opinion is older and more limited platform.

Code availability on GitHub

Firms B, G, H told that presence of code on GitHub prior / during ICO affected positively on the success of their ICO. Firms A, D, F told the affect was neutral and interviewees from firm C had two different opinions, neutral and positive. Firm A admitted that having publicly available code is important. Project that have an empty GitHub repository is not good! Firm B added that people want to see developers that firm is indeed building stuff, its actions are in place and in order. It creates transparency, assures people that team knows what it is doing. And being a part of crypto community it is important to show that the project is building things for the community. Firm F also adds that exposing at least some amount of code on GitHub is one way of communication with a community to show that team is doing something in order to get the respect and trust. The GitHub by definition is just like social media outlet where you share the code and community interacts with it by leaving comment, fixing bugs etc. Firm G also said that code on GitHub is one the rules of the game and you have to play by the rules if you want to be perceived as a fair participant. Firm H even though admitted that visibility of smart contract was important still said it was not huge because they have not noticed much of auditing of that code externally. Firm F told that they showed only some parts of code to show people what is going on and let them to contribute and fix bugs and get rewarded in return, but the most important code was never exposed prior the project release. They continued that in the other project they do show their own codes but anyone can get in and somehow hack the system. This very same concern was raised also by firms C and D and that is why they decided no to make the code public prior / during ICO. Firm C added that in 2017 there were huge amount of attacks, so they were careful about it.

Private sale / pre-ICO

Firm A, B, C, D and F agreed that private sale affected positively on their ICO, firm E was neutral about it and firms G and H did not run pre-ICO and told it affected them positively what in this context and under author's interpretation could be understood as negative attitude towards pre-ICO as a success factor for the entire ICO campaign. Firm A highlighted that the structure of ICO is very important. A project always needs some sense of urgency and by having a

presale and specific bonuses that end in a certain time lead people to take actions. Without that, people might wait before taking actions for too long. Firm A further continues that in general private sales are playing important role but more importantly is to have multiple phases in the ICO that lead people to take action because they are going to miss something. Firm B conducted private sale because at that point there was a little bit money that could have been raised sufficiently and effectively with a crowd. The cost of bringing in a dollar with a crowd especially at that time when Ether and Bitcoin were traded low was very inefficient, very expensive. Firm B further adds that it is much easier to raise the money if a firm introduces bonuses on private sale than during a public crowd-sale. Firm C said that private sale is a very good tool to validate the idea, to measure temperature of the project to see that people cared about the project and give a green light for a public phase of an ICO. Firm C continued that it is very important because when a firm launches main sale, people want to see that somebody is already committed to the project, it makes them feel more comfortable otherwise if there is no a single commitment, people will simply turn away. Company E claimed that private sales are needed to feel the market and to feel the traction but if a firm has a good marketing, it does not need it. Firms G and H did not run a private sales and though it was a good decision and it affected them positively. Firm G told that it was a decision to let everyone have the same chance to participate and it worked for them well because people considered them a “community ICO”. Firm H still added that it was one of the few design choices to show people their commitment to have a fair and ethical ICO.

Jurisdiction

Two out of eight interviewed firms, particularly firm A from Canada and firm G from Austria, had decided to conduct their ICOs according to the jurisdiction of their domestic countries while other six have specified jurisdiction of reference for the token sale, which were different to their actual physical locations. Among jurisdictions of reference were mentioned United Kingdom (firm B), Estonia (firm C), Vanuatu (firm D), Singapore (firm E and F) and Gibraltar (firm H). Jurisdictions of Singapore, Gibraltar and Vanuatu are moreover included into the list of tax havens, where first two are even listed in the top 20 tax havens (OECD, 2009). The reasons for choosing mentioned jurisdictions and the level of their affect on ICO success is discussed further. Firms D, F told that the choice of jurisdiction had a positive effect on the success of their ICO. Firms A, B, E, G, H said the affect was neutral and interviewees from firm C had two different opinions, neutral and positive. Firm A admitted that for the sake of conducting an ICO, it is easier to be on Cayman Islands or in Singapore or in Switzerland but despite of that firm A conducted their ICO under jurisdiction of Canada which is harder to comply with, there are a lot more hoops to jump through and therefore more difficult to succeed. But they chose to do it this way because they thought it is more transparent and credible to have the jurisdiction there where the company is actually based on. In addition, firm’s A ambitious goal is to adopt Fortune 500 companies to their project and people from these

companies are certainly more confident knowing that firm A have got through those hoops and that fact may put them to different echelon of projects which could be deemed safer. Firm B while based in US made an ICO under UK jurisdiction because it is very dangerous to do ICOs in US due to very strict regulations. UK was chosen because upon firm B's sent clarification of the nature of their token, they got a response back from UK where they legally recognize their token to be a utility token and that worked for firm B's favor. On the question of "why didn't you chose even easier jurisdiction like of Switzerland" the answer from firm B was "Switzerland didn't accept up, we are Americans, we had to choose an entity in Europe". Firm C decided to go with Estonia because after they observed many other project who carried out their ICOs in Estonia they noticed that regulators behaved favorably for these projects. In addition, it was noted that from internal perspective it was also good because firm C had access to legal advice and to regulators in Estonia. Firm G decided to run their ICO in Austria and as they said that gave them the chance to be the pioneer, to work with authorities and perhaps even drive the change in their favor. Firm D decided to go with Vanuatu, firms E, F - with Singapore, firm H - with Gibraltar because these are friendly countries welcoming ICOs and their jurisdictions are relatively easy to comply with.

Accepting FIAT

Firms A, C, E, F, G told that accepting / not accepting FIAT affected neutrally on their ICO, firm B told it affected positively and firms D and H did not accept FIAT and told that this fact affected them negatively what in this context and under author's interpretation could be understood as positive attitude towards FIAT acceptance as a success factor for the entire ICO campaign. Firm A didn't accept FIAT and, as according to interviewee, it didn't affect them anyhow due to the fact that they sold out all their tokens. Firm A admitted though that in general more options and less friction means more conversion. Firm B told that around 10% of funds came in FIAT and nobody knows would these people had invested if they had to use crypto. Firm B also added that some people prefer to use FIAT and not crypto due to the situation with crypto market, with prices and volatility of crypto assets, when price for Ethereum dropped almost twice closer to their ICO in comparison to what it costed in the beginning of the year. Firm C admitted that not accepting FIAT limited amount of funds that they could have perhaps raised but since they were a crypto project from day one, they decided to stick with Ethereum. In addition, as according to firm C, accepting FIAT would have made it more complicated legal-wise. Firms D and H both said that many of their investors were first timers and purchasing accepted for their ICOs crypto proved to be difficult. If they had accepted FIAT, it would have made the whole process smoothie with perhaps bigger conversion. The reasons they didn't accept FIAT was legal issues for firm D and lack of clarity how they were thinking at that time for firm H. Firm G also admitted that if FIAT had been accepted, the accessibility would have been better but on the

other end it would have asked much more effort from their side therefore not doing so was considered a good balanced decision.

Bonus schemes

Firms A, C, G pointed out that bonus schemes, which they applied, affected positively on overall ICO success, firms E, F, H told affect was neutral and interviewees from firm B had two different opinion, negative and neutral. Among bonus schemes firms mentioned different bounty programs, airdrops and token discounts at different stage of the ICO. Firms A and C agreed that token discounts are useful and stimulate people to buy. It is moreover fair to complement people who are jumping in at early stage of the ICO when uncertainties are at their tops. Many people even expect it. Firm B added to this that especially big investors who are going to invest big money during private sale or pre-ICO definitely expect a bonus which should moreover be better than the one a firm shows openly on its web site. Firm B continues that if a firm has a bonus it should be very well communicated and not anyhow confuse people. In their case during pre-sale, a token costed 33% less than during a crow-sale what already meant 33% bonus but on the top of that, they were giving additionally 20% bonus, which created certain misunderstanding, and confusion among investors and it was hard to advertise. Firms either should show already lowered token price or show how big the bonus is out of a normal price, not both. Firm F launched an airdrop, which aimed at motivating people to buy more tokens, but in their case, despite of the fact that it did motivate some people to buy more, it still did not work out as they expected and that is why, as according to interviewee, they did not reach their hard cap, which was 30mln. Firm G had a bounty campaign that helped them a lot. They moreover suggest everyone to do one but they warn that it is a lot of effort and also will cost a firm quite some money. Firm E used airdrops as well but at their minor, it wasn't something big, they wanted to concentrate on organic growth while airdrops is not organic, people are there just for a free tokens and they don't appreciate project that much. Firm E continued that airdrops do stimulate people to share about the project, but it shouldn't be too much, it should be very well balanced otherwise a firm is at risk of getting only those people who just like free stuff but who are not real customers a firm needs for a business. It can harm in a long run. Firm B was more critic about airdrops in general because in interviewee's point of view it is against of everything what crypto is about, it is not transparent, it is fake users, fake retweets. A firm should do a marketing properly but not utilize airdrops. Firm H was the most principled regarding any bonus schemes, they did not use them at all, whether it was a first or last buyer, they payed same amount of money per token. Firm H agreed that with bonuses, they perhaps would have raised more money, but it would not mean more success for them because for them a success meant a community highly committed to the product, to the technology and to delivery rather than people who were more interested in creating hype. They wanted to show people that everyone is equal, that no one is more important than the other is.

Utility token role

All of the interviewed companies agreed that a utility token role-played a positive role in entire ICO success. That is for two main reasons: to support a use case (when a user can redeem some benefits on a platform against of a utility token) and to ease a legal compliance. As according to firm B, on a crypto market by now there are only two types of tokens: security tokens and utility tokens and nobody wants to be a security token because they do not want to fall under jurisdiction of Securities and Exchange Commission (SEC). Firm C also agrees that a security token is too complex legal-wise and it is easier to go with a utility token. Firms G and H told that there was no property behind of their tokens, it was a utility that was needed to fulfill their larger goals. According to firm A, people mostly buy because it is a utility token and there is a usage for that, so it is very important. Firm B still adds that what they hope will happen is that will appear a crypto-token which is not a security token and it is not a utility token because current laws are almost 100 years old in USA and they make no sense in crypto market.

Bitcoin price and volatility prior / during ICO

Results regarding Bitcoin price and volatility prior/during ICO were quite contradicting, namely firms D and F told it affected their ICO positively, firm G told it had negative effect and firms A, C, E, H thought it had neutral effect. And the main reasons for these contradiction appeared to be the timing and conditions on the market when interviewed companies run their own ICOs and whether or not they were accepting Bitcoin as an investment currency. For some of the firms like for the firm D and F, market conditions, as according to the interviewees, were good. The popularity of Bitcoin and crypto in general was high and opened doors to new investors. Bitcoin itself was almost at its peak and coasted around 14-15 thousand dollars. At the same time, prior and during an ICO of firm G, market was crashing and there was a general panic and fear on the market what was obviously not a favorable conditions for investments. Interviewee from firm A attempted to provide general explanation of how Bitcoin price and volatility can affect on ICO success. According to them, Bitcoin price and volatility can have both, positive and negative effects, depending on whether it is up or down and how people feel about it. Firm A continues that even if price goes up, there are still two scenarios. If it's going up and have been going for a while, it seems like it is never going to stop going up, the perception is "well, at the moment your token costs this much. Perhaps I am not going to have it on exchange in 2 months from now, so why would I cash out now while I can hang on Bitcoin because it gets keep going up?" That is where going up can be bad. When going up is good is when it has a massive spike and maybe the perception is "maybe it is going to drop a little bit more and correct and will cash out then until ICO to take some gains". Firm E in its turn told that not the price or volatility affects on ICO but rather a momentum, weather the

price goes up and have been going up already for some time or the price goes down and have been going down for some time. If a momentum and trend are down it is generally bad, if they are up, it is generally good.

Ethereum price and volatility prior / during ICO

Findings regarding the effect of Ethereum price and volatility on ICO success in certain extent were similar to Bitcoin price and volatility effect, especially regarding the price trend and its momentum and how they effect investors. Although, it was interesting to additionally find out that even though firm B did not tighten its token price to the price of Ethereum (it was tightened to US Dollar instead), the crash on cryptocurrency market prior and during their ICO (price of Ethereum in January 2018 was 1400 dollars, during their ICO it was already 400) anyways affected them negatively. It could be assumed thus that accepting FIAT does not save potential investors from negative impact of cryptocurrency market conditions, if market is crashing, even though it perhaps could lower this impact to some extent. To the opposite to firm B, the hard cap of firm A was tightened to the price of Ethereum and even though market conditions were good, cryptocurrency prices were going up, but the perceived value for their token was going down because, as according to interviewee from firm A, some investors might have thought “my Ethereum went up but why the token still cost the same amount in ICO?”. In order to adjust to such a perception and to recalibrate, firm A reduced their hard cap so that people could get more tokens for Ethereum which, as according to firm A, is ended up not working out well for them when the market crashed. Thus, the level of cryptocurrency influence on ICO success also depends on how company is accepting funds and whether or not the token price is tightened to certain cryptocurrency or to FIAT. Firm H added that Ethereum price and volatility affected negatively their company also internally, i.e. not knowing where the price was going to go affected their team, their ability to do things.

4.4 Primary Empirical Conclusions

Based on sections 4.1, 4.2 and 4.3 the following primary empirical conclusions (PEC) can be drawn. These will be referred to in the following section when the empirical results are compared with the existing literature and when the managerial implications are presented.

PEC 1: the most essential factors that have a biggest *positive impact* on firm’s ability to raise funds via ICO are as follows: inspiring idea, which people will buy, efficient building of a community of supporters, effective marketing / SMM, professional team, clarity of a problem and of a solution

PEC 2: the factors that can have *negative impact* on firm's ability to raise funds via ICO are as follows: too little preparation time including time for addressing big investors personally; too high hard cap; fraud activities from attackers (e.g. creation of phishing sites); crash of Ethereum price on the market; bans of ICOs in certain countries (e.g. in China); uneducated in crypto sphere target group; underestimated the needed marketing budget.

PEC 3: factors from literature that showed to have a *positive role* on firm's ability to raise funds via ICO are as follows: utilization of a Telegram as a bidirectional channel of communicating with a community; choice of a role for a project token to be a utility token

PEC 4: factors from literature other than mentioned in PEC 3 can play *different role* (positive, negative or neutral) depending on project setting, project image and project goals. These factors are as follows (factors from literature "team size" and "# of advisors" are included in PEC1 under "professional team"): whitepaper, ERC20 token, code availability on GitHub, private sale / pre-ICO, choice of jurisdiction, accepting FIAT, bonus schemes, Bitcoin / Ethereum price and volatility prior/during ICO

5 DISCUSSION

This section discusses the results of this paper. The discussion concentrates mainly on the primary empirical conclusions listed in section 4.4, and what kind of theoretical implications (section 5.1) and managerial implications (section 5.2) they have.

5.1 Theoretical Implications

Since PEC1 and PEC2, which are top 5 positive and a set of negative impact factors respectively, might include also absolutely new factors, it was necessary to compare them against of both academic and gray literature findings. This was done also to find out impact factors practitioners knew but academia didn't know about. Comparison with academia was done against of a full list of factors (presented in APPENDIX 1), not only those which were included in a theoretical framework.

Factors mentioned in PEC 1, except for the factor of "professional team" have been discussed partially or have not been discussed at all in the reviewed academic literature; however, all of them are present in list of factors known by practitioners what means that there are factors academia need to pay more attention to. The reason perhaps lays in difficulty to fully apply quantitative measures methods to these factors since all previous academic studies were done as quantitative researches. If to examine factors from PEC 1 against of a reviewed academic literature, then certain similarities though could be found. Mentioned by interviewees' factors of "inspiring idea which people will buy" and "clarity of a problem and of a solution" could be the part of a whitepaper factor which was studied by previous literature because a whitepaper normally includes a description of an idea and of a use case. Then the results are quite contradicting. If interviewees put above-mentioned two factors in the top five list of factors positively affecting on ICO success, then the whitepaper, as according to Adhami et al (2017), does not affect anyhow on ICO success or, as

according to Fisch (2018), has even negative influence on it if a whitepaper is not long enough. Such a comparison between these factors is of course only partly appropriate because whitepaper includes much more information than just a description of an idea and of a use case and could indeed affect differently on overall success due to the quality of also other sections and due to the quality of the entire paper, for example its informativeness, readability and design. In addition, idea and clarity of a problem and of a solution are broad factor and for them to achieve a positive effect on ICO success, they should not be limited to boundaries of a whitepaper. Instead, they should be included in the formulation of a entire value proposition and transmitted to potential project supporters through all the possible communication channels. A whitepaper as a success factor is additionally discussed further in this section. Practitioners in their turn identified both of these factors as affecting ICO success with quite similar formulations: "Idea / minimum viable product" and "Clear use case".

Other factors from PEC 1 and from academic literature, which could be partially compared between each other, are "Effective marketing / SMM" and "Telegram" as a social media channel since the last is included into the first. If to do this comparison, then the findings of this paper regarding the positive role of marketing / SMM are in line with the work of Amsden & Schweizer (2018) who found strong positive effect of Telegram on ICO success. But of course marketing and SMM are much broader things and are not limited to just tools and particularly to one specific tool. It is more about marketing strategy, allocation of sufficient resources and proper, regular execution of related activities. Practitioners have identified both these factors and formulated them as two separate ones: "Marketing" and "All channels (social media)".

Team as a success factor was mentioned everywhere, in PEC 1 and in the literature. In academic literature, the study of a team as a success factor was though quite limited and took into consideration only number of advisors, CEO with LinkedIn account with more than 500 connections and a team size. Amsden & Schweizer (2018) concludes that better connected CEOs and larger team size, including the number of advisors, contribute to higher quality of the venture in the eyes of potential investors and therefore to better chances that ICO will succeed. This finding is partially in line with findings of this paper regarding the team factor. Firms agreed with the importance of public notion side of team members (and not only CEO but also developers and advisors) but only part of them admitted that the size of a team, including the number of advisors, matters. According to them, bigger ideas takes more people to execute and especially more people are important when a project faces a lack of time. Regarding advisors, then the actual number of them can play a positive role when each separate advisor is not very known for a crypto community and a big number of them can balance this shortcoming. Another part of interviewed firms empathized the quality over quality in terms of a team while team size does not actually matter what is in line with the work of Fenu et al (2018) who found no evidence that team size is anyhow correlated to the success or failure of an ICO. Practitioners talk mainly about team from their quality point of view, which is

expressed in the experience of the team members, but in the same time admit that quantity can be crucial as well if time is an issue. Table 11 summarizes PEC 1 in relation to previous literature.

TABLE 11 Nature of PEC 1 in comparison to earlier literature (\oplus confirming, \ominus contradicting, ? new)

PEC 1 items	Academia	Practitioners
Inspiring idea which people will buy	?	\oplus
Efficient building of a community of supporters	?	\oplus
Effective marketing / SMM	Partly \oplus	\oplus
Professional team	Partly \oplus	\oplus
Clarity of a problem and of a solution	?	\oplus

What this study found an additional validation of is of a Business Model Canvas as most of the elements of PEC 1 (especially if to look broadly on a table 9) are in line with a Business Model Canvas. Figure 3 correlates nine building blocks of a Business Model Canvas with a findings presented in table 9.

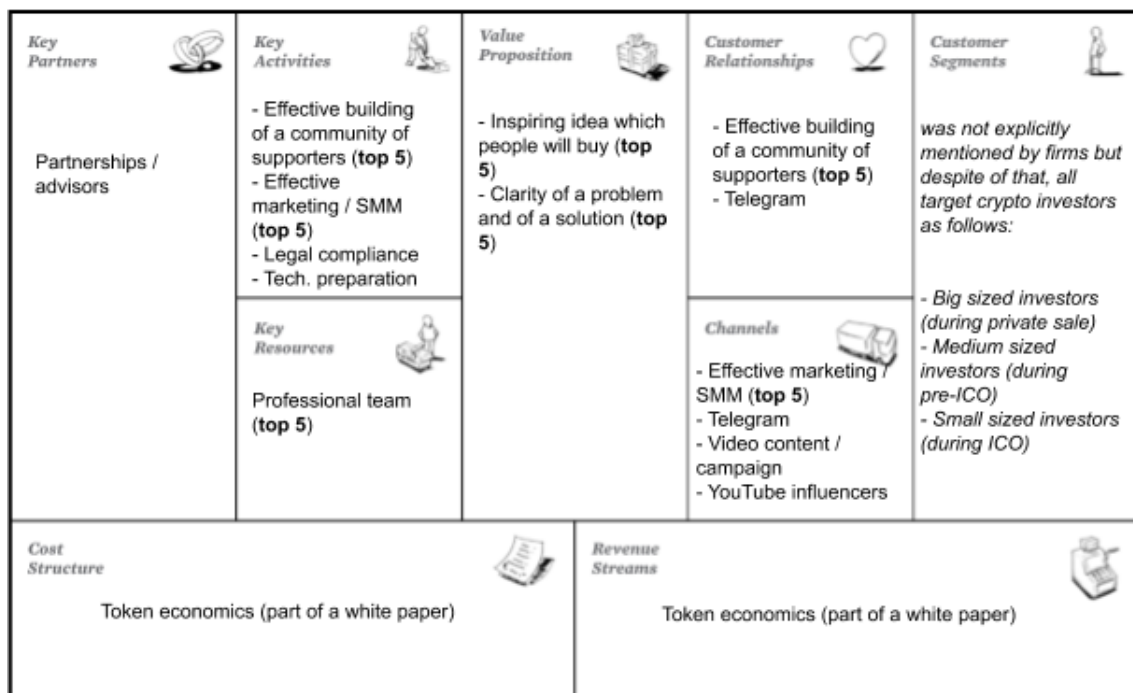


FIGURE 3 Representation of findings on a business model canvas

Such a comparison additionally proves that companies who work in a crypto market and seek funds via ICO, in any other manner are similar to any other company or start-up operating in any other market, and therefore all seem to follow the same rules of doing business. To follow real business prac-

tices was moreover mentioned by one of interviewed firms among factors, which they mentioned, themselves, this factor just didn't make it to the top five (see table 9).

If to compare factors from PEC 2 against academic literature, then all of them, except for one, were not discussed in the reviewed academic literature, probably because the aim of reviewed papers was specifically at finding out positive impact factors, not negative. Practitioners knew a bit more but still not all factors mentioned in PEC 2. Therefore, it is possible to state that this study has found three new negative impact factors what academia and practitioners should look more into. Adhami et al (2017) indirectly talks about the factor of a security flaw, which is similar to fraud activities from attackers, which is mentioned in PEC 2. Adhami et al (2017) includes this factor in the description of a failed ICO what means that the security flaw, as it also follows a common sense, is a negative factor of an ICO success, which is in line with findings of this paper. Amsden & Schweizer (2018) talks about Ethereum price and volatility in their work and their affect on ICO success, while among negative impact factors of PEC 2 is listed a crash of Ethereum price of the market. While these factors sound similar, it is good to make a distinguishment between them, especially since the price and volatility is mentioned in PEC 4 as a factor which can have positive, neutral and negative effects on ICO success while crash of Ethereum price is discussed here as solely negative impact factor. Thus cryptocurrency crash refers to a historical event which took place in the year of 2018 when after an an extraordinary growth in price during the year of 2017, the price of bitcoin fell by about 65 percent during the month from 6 January to 6 February 2018 which caused the drop of price of other cryptocurrencies as well (Popken 2018; Smith 2018). Cryptocurrency volatility if to put it simple is an extent to which an asset's price fluctuates or changes over time (Aziz 2019; Pollock 2019) and that might be seen attractive by some investors who wish to have a possibility to make money fast. Cryptocurrency volatility therefore can have different roles in ICO success while cryptocurrency crash was found to have solely negative one because in such conditions, in the conditions of nearly a panic on the market, the possibility to acquire new investments for an ICO is low. Ethereum price and volatility, under which circumstances they can have positive or negative effects is additionally discussed later in this section in conjunction with PEC 4. Among other factors of PEC 2, ICO specific ones are: bans of ICOs in certain countries (e.g. in China) and uneducated in crypto sphere target group. The other factors, too high hard cap (in another work overestimated target goal), too little preparation time and underestimated marketing budget are quite common issues of any business and they have been discussed in detail in business related literature. This additionally supports the claim that, despite of another way of raising funds, firms working in a crypto market are by any other means very similar to other companies working in different market and all seem to follow common rules of doing business and all seem to be affected by similar success / failure factors. Practitioners in their case talk more about negative impact factors and four of PEC 2 factors are in line with them while other

three (crash of Ethereum price, bans on ICOs in certain countries and uneducated in crypto sphere target group) seem to be new as those was not discussed in reviewed sources. Table 12 summarizes PEC 2 in relation to previous literature.

TABLE 12 Nature of PEC 2 in comparison to earlier literature (\oplus confirming, \ominus contradicting, ? new)

PEC 2 items	Academia	Practitioners
Too little preparation time including time for addressing big investors personally		\oplus
Too high hard cap	?	\oplus
Fraud activities from attackers (e.g. creation of phishing sites)	\oplus	\oplus
Crash of Ethereum price on the market	?	?
Bans of ICOs in certain countries (e.g. in China)		?
Uneducated in crypto sphere target group	?	?
Underestimated the needed marketing budget.		\oplus

PEC 3 and PEC 4 were examined solely against of theoretical framework because the focus was on finding new explanations to the existing factors but not a discovery of new ones. PEC3 fully supports the findings of earlier literature. All firms agreed that the chose a utility role for their tokens affected positively on ICO success what is in line with findings of Adhami et al (2017). This factor affected positively for two main reasons: because a utility token role supported a use case of some firms very well (when a user can redeem some benefits on a platform against of a utility token) and because it made a legal compliance of firms easier. The last, as according to author's observations, was one of the firm's strongest motivation of choosing a utility token role. The other option was a security token, which is very complicated legal-wise because it falls under jurisdiction of SEC in USA and ESMA in Europe and for start-ups it is a very big overhead. Some of the companies wishes to see a new token, a crypto token, which will be different to the previous two but which would fit better to the needs of crypto start-ups and crypto investors. Regarding of a factor Telegram, then again all companies agreed that having a telegram channel for a bi-directional communication with a community affected positively on ICO success what is in line with findings of Amsden & Schweizer (2018). The firms though agreed that a social media should not be limited just to a Telegram but include other channels as well. Table 13 summarizes PEC 3 in relation to theoretical framework.

TABLE 13 Nature of PEC 3 in comparison to theoretical framework (\oplus confirming, \ominus contradicting, ? new)

PEC 3 items	Theoretical framework
Telegram	\oplus
Utility token role	\oplus

PEC 4 says that factors from literature except for those mentioned in PEC3 have different influence on ICO success. The following is a discussion of each individual factors with additional insights of when and why the same factor can have different role in different project settings.

Whitepaper

There are certain similarities and contradictions between a literature and findings of this paper regarding an effect of a whitepaper on ICO success. First of all literature and firms talked about different parameters of whitepaper that make it to be an impact factor on ICO success. Articles looked at a whitepaper from three dimensions, either the entire document was present or absent for a public, number of pages and amount of words the document had in it. Interviewed firms in their turn emphasized more the quality of a whitepaper, which is expressed by its informativeness (presence of important sections), its design, digestibility and therefore its overall appeal to be read by potential investors. Adhami et al (2017) found that whitepaper doesn't affect anyhow on ICO success what is in line to some extent with comments provided by firm F from China, where an interviewee said that a whitepaper didn't bring a lot of benefit for them, but was just a formality, while most of the money came due to other factors like personal connections, presentable team, support of advisors and professional pitching in the Chinese investment community. It could therefore be assumed that the role of a whitepaper is different depending on project's country of origin or on country where most of the funds are being sought. This claim should be tested empirically in future studies. Fisch (2018) found negative influence of a whitepaper on ICO success if it is not long enough what he measures by word count. The article though did not mention the optimum length of the whitepaper therefore, it is impossible to make any comparisons between this finding and with whitepapers of interviewed firms and their lengths. Some of interviewees though agreed that in a whitepaper it is very important to communicate the project in a great deal by including the information not only about the idea of the project but also about risk factors, potentials, roadmap, token economics, team and much more and therefore to accommodate this amount of information the whitepaper at least should not be short what is in line with finding of above mentioned article and also, to some extent, with article of Amsden & Schweizer (2018) who said that increase of page numbers positively affect on ICO success. There might be though some threshold beyond of which a whitepaper is considered too long and therefore not appealing to be read. This perhaps could be a topic for further researches.

Ethereum platform

The overall impression of interviewed companies regarding utilization of Ethereum platform, if it was used at all, was either positive or neutral what means that ERC20 token at least does not have a negative impact on ICO success. Companies A, B, E and partly C (one out of two interviewees) did not provide clear justification of why ERC20 token did not affect positively, it was solely based on subjective opinion and feeling about it. They were on opposite even complementing Ethereum platform saying that it was a business standard many were familiar with, it was credible and trusted platform with good scalability, big knowledge base, good development support and a big community of developers being able to work with Ethereum. Findings from companies F, G, H and partly C (one out of two interviewees) regarding a positive role of ERC20 token on ICO success go in line with findings of reviewed literature, particularly with studies of Amsden & Schweizer (2018) and Fisch (2018) who found a positive effect of Ethereum platform at least on ICO ability to reach its soft cap. There was also a contradiction between these articles regarding an effect of Ethereum platform on total amount raised during ICO where Amsden & Schweizer (2018) found evidences that Ethereum has negative impact on it, while Fisch (2018) claims otherwise. In the frame of this research it was not possible to find new insights for this contradiction due to the qualitative nature of the study and very limited sample size.

Code availability on GitHub

The overall impression of interviewed companies regarding presence of a code in a GitHub, was positive or neutral, however, some interviewees warned also that code exposure on GitHub can also have a negative effect if sensitive or security related parts of the code are exposed publicly because in this case hackers can attack the system and steal investors' money. Findings from companies B, partly C (one out of two interviewees) and G regarding a positive role of public code availability on GitHub on ICO success go in line with findings of reviewed literature (Adhami et al. (2017), Amsden & Schweizer (2018) and Fisch (2018)). Fisch (2018) goes further and says that not a bear GitHub public account and presence of project's code in it affects on success, but rather its quality, which is reflected by amount of, stars (rating) what other users gave to it. Firms who told about neutral effect of publicly available code on GitHub on ICO success told so mostly because they did not notice much of auditing of their code which was available publicly meaning that in their cases code availability on GitHub did not affect ICO success much.

Private sale / pre-ICO

The findings regarding an effect of pre-ICO on ICO success are very contradicting in both, literature and among interviewed companies. For example, Adhami

et al (2017) claims that testing the market with a targeted, smaller token sale is a valuable strategy to entice ICO funders who can then generate initial market interest and price-discovery for a larger pool of web-based contributors. This finding is in line with results got from some of interviewed companies (A, B, C, D and F) who claimed the same. Amsden & Schweizer (2018) in contrast was saying that those entrepreneurs are launching pre-sales who may be 'insecure' about quality of their ventures. A bit similarly, firm E said that private sales are needed to feel the market and to feel the traction but if a firm has a good marketing, it does not need it. Firms G and H avoided pre-ICO to follow the image of their projects of being community projects where everyone is equal and can participate on equal conditions and they claimed that this affected positively their ICO. Private sale or pre-ICO thus can have both, positive and negative effects and such factors as general image of a project, and how well a company managed to build its communication with investors and marketing can possibly define when pre-ICO or private sale are seen to be appropriate by investors and therefore can affect positively on ICO success and when no.

Jurisdiction

The overall impression of interviewed companies regarding factor of jurisdiction and its effect on ICO success was either positive or neutral meaning that this factor at least did not have a negative impact on success of firms' ICOs. Moreover firms E and H whose jurisdictions of reference are in a list of tax havens and which regulations are easier to comply with did not anyhow notice that the effect of these jurisdictions was positive on ICO success but rather neutral like in case of those firms who conducted their ICOs in the countries of physical location (firms A and G). These findings go in line with the study of Amsden & Schweizer (2018) which did not find any evidence of positive affect of tax havens on ICO success. On the contrary to above mentioned findings, firms C (based on result of second interviewee), firm D and firm F who chose jurisdiction of reference different to their physical locations (jurisdictions of firm D and F are moreover listed as tax havens) told that the effect of these jurisdictions were positive what in its turn in line with a study of Adhami et al (2017) who found a positive correlation between jurisdiction of reference and ICO success. It is worth noticing though that majority of firms while answering on the question about effect of jurisdiction on ICO success were considering both internal and external aspects of it. Internal means how the choice of jurisdiction affected the companies internally in term of ICO preparation and ICO proceeding. External aspect meant how the choice of jurisdiction affected ICO in terms of acquiring investments and whether or not it had an impact on investors' decision to invest. Table 10 eventually got the results of external aspect of jurisdiction effect since the main question was formulated in that way, but despite of that all firms who had a jurisdiction of reference for a token sale admitted that it affected them positively internally since they got green light from more friendly regulators to proceed forward with their ICOs. It also follows a common sense because why would firms chose another jurisdiction if it is not

any easier and friendlier than a domestic one. It could be thus assumed that the choice of jurisdiction of reference makes a bigger positive impact on a company internally, on its ability to operate and proceed forward with investment rounds rather than on ICO itself externally, on its ability to attract investments. On the other hand, being compliant in more demanding jurisdiction can put a project in different echelon of projects, which could be deemed safer, and particularly from big investors point of view because they might also know all those hoops and loops a company need to go through to prove itself to be legally compliant. Therefore, projects might need to choose their jurisdiction according to their vision and long-term goals as well.

Accepting FIAT

The overall impression of interviewed companies regarding accepting FIAT and its effect on ICO success was either positive or neutral meaning that all firms agreed that accepting FIAT at least did not have a negative effect on their ICOs what goes in contradiction with findings from Amsden & Schwezer (2018) who found negative effect of FIAT acceptance on ICO success, at least in terms of a token to become tradable, because if an ICO lets FIAT investors to invest, it could indicate insecurity of ICO organizers to raise required funds from crypto investors. Based on findings of this paper it is impossible to provide explanations for this contradiction because all companies except one did not accept FIAT currency and only guessed what would happen if they did accept it without actual experience and a perception might differ from the reality. Further studies needs to be done to study this issue more in detail. It was found out though that the main reason for acceptance FIAT was a possible increase in conversion because purchasing some cryptocurrencies was proved to be difficult while main reasons of firms for not accepting FIAT was legal issues which would appear if doing so. One of the firms did not accept FIAT to follow their project image of being a crypto project from day one.

Bonus schemes

Findings regarding factor of bonus schemes and their effect on ICO success were very different including firms' assumption of positive, neutral and negative effects of this factor on overall ICO success. Bonus schemes is moreover a very complex thing and can include many different techniques, like airdrops, bounty programs and token discounts, and each could affect differently on ICO success. For example, one of the companies had good attitude towards token discounts particularly during private sale or pre-ICO rounds when investments are high and such investors deserve to be complimented for that, but very negative towards airdrops and bounty programs because these things are not transparent and may include a lot of fake, like fake accounts, fake retweets. The more general reason for contradictions regarding the role of bonus schemes in ICO success, in author's opinion, was mostly due to the difference in an image what each project tried to create of itself in a crypto space. Some projects were posi-

tioning themselves as community projects giving equal rights for anyone to participate having no presale or pre-ICO rounds and providing no any token discounts for investors while others positioned themselves as commercial projects where presale or pre-ICO with token discounts were appropriate tools. Different opinion regarding airdrops and bounty programs could be also due to difference in their quality and a way of conducting them across the firms. Analyzed literature also did not have a common attitude towards the role of bonus schemes on ICO success. Adhami et al (2017) found that likelihood of success seemed to be unaffected or affected marginally by ICO bonus schemes while Amsden & Schweizer (2018) found a positive effect of this factor on ICO success at least in terms of a token to become tradable. All authors though acknowledged limitations of their measurements due to a big variance of different techniques within this factor that can affect differently on ICO success. Therefore, all authors suggested that future studies must be done to find an effect of different bonus techniques on overall ICO success.

Bitcoin / Ethereum price and volatility prior / during ICO

Findings regarding factor of cryptocurrency price and volatility and their effect on ICO success were very different including firms' assumption of positive, neutral and negative effects of this factor on overall ICO success. There was though certain similarity among several firms about assumption that it is not actual price and volatility of the crypto currency that effects on potential investors but rather a trend and momentum of those. If a momentum and trend are down it is generally bad, if they are up, it is generally good. Even then, as according to firm A, which additionally commented on an effect of a positive trend, there still could be two different scenarios of how it can affect on investors' perception. If the market is crashing, it seems to affect badly on both types of projects, who tightened their hard caps to crypto currency and who tightened it to a FIAT currency. There neither seems to be same understanding of how cryptocurrency price and volatility affects on ICO success also in the literature. According to Adhami et al (2017) return and volatility of the currency associated with underlying blockchain seems to be not affecting ICO success whether it was measured a week or a month before the ICO (in their work values for Bitcoin and Ethereum were of main interest). Different results were found regarding Ethereum price and volatility by Amsden & Schweizer (2018). They found that higher values for Ethereum decrease the likelihood of participation in an ICO while higher level of Ethereum volatility can in contrast even foster investments due to possible FOMO effect being triggered among investors. Possible reason for such contradictions in results, in author's opinion, could also lay in fact that investors decision-making may be affected not only by project quality and market conditions but also by informational background which surrounds crypto sphere at each given time. This factor has not been taken into account in literature neither mentioned by interviewed firms while in author's opinion it takes place to be. Potential investors for example via some media channels could hear of a big fraud case or about plans of certain country to start

banning crypto projects and ICO completely. Such information can definitely affect on overall situation on crypto market and particularly on investors in their desire to invest in ICOs. Moreover, decision making process and particularly of crypto investors can also be influenced by psychological and therefore sometimes irrational factors what is impossible to take into account in a full volume. Therefore this issue, namely investors behavior, is much deeper and do not only depend on cryptocurrency price and volatility but rather on combination of many different factors. Further researches could be done to study this issue more in detail.

Table 14 summarizes PEC 4 in relation to theoretical framework.

TABLE 14 Nature of PEC 4 in comparison to theoretical framework (\oplus confirming, \ominus contradicting, ? new)

PEC 4 items	Theoretical framework
Whitepaper	Partly \oplus partly \ominus
ERC20 token	Partly \oplus partly \ominus
Code availability on GitHub	Partly \oplus
Private sale / pre-ICO	Partly \oplus partly \ominus
Choice of jurisdiction	Partly \ominus
Accepting FIAT	\ominus
Bonus schemes	Partly \oplus partly \ominus
Bitcoin / Ethereum price and volatility prior/during ICO	Partly \oplus partly \ominus

5.2 Managerial implications

Based on the primary empirical conclusions it is possible to suggest relevant managerial implications as well. PEC1 validates a business model canvas to some extent and suggests that it could be a good idea for managers to use this tool while planning the business as a whole and ICO particularly because business model canvas has all the key elements that was found to be the most important in ICO success (on the top 5 list). Managers are there for advised to build a backbone of the company well before starting to seek money via ICO. PEC2 suggests factors, which had negative factors on firms regarding their ability to reach a maximum fundraising goal, but even then, ICO specific ones are just two out of seven, the rest are related to doing business that proves the idea of building a backbone of the business well and start following common business practices before launching an ICO.

Preselected factors from literature were all found to have an affect on ICO success in bigger or smaller extent. PEC3 suggests two factors, which had solely positive effect on all interviewed companies therefore including them into ICO, seem to increase chances to succeed while factors from PEC4 might have different effects and shall be considered carefully. The effect of them seem to be different based on project settings and the image what a project tries to create of itself. Table 15 is derived from PEC4 and provides additional insights into these factors, reasons for and against of choosing them. Factors Bitcoin / Ethereum price and volatility prior / during ICO are not included into the table because firms don't have a control of them and therefore they could not chose their values, they just happened to be such during their ICOs.

TABLE 15 Firms' reasons for and against of using studied factors

Factor	Reasons for using the factor	Reasons against of using the factor
Whitepaper	To give investors grounds for decision making regarding investment when there is no product yet or / and the brand is unknown; it is not possible to describe project and possible innovation behind of it in a great deal just on a web-page; when firm is asking a lot of money from investors, the least they can do is to give them a sort of prospectus to provide more information about the project.	As such there is no argumentation why this factors should not be used, there were comments when this factor does not play much of a role. Thus, in case of China a whitepaper didn't bring a lot of benefit, it was just a formality. Most of funding was raised due to other factors like personal connections, presentable team, support of advisors and professional pitching in the Chinese investment community.
Ethereum based (ERC20 token)	Ethereum platform and its ERC20 token are standards many are familiar with and Ethereum as a whole is a credible and trusted platform with good reputation, scalability, big knowledge base, good development support and a big community of developers being able to work with Ethereum; to save valuable time and money because there is no need to develop own blockchain (that is the reason for choosing any other available platform including Ethereum); if a company decided to build own blockchain then with a help of particularly Ethereum it can build a prototype, 3D show-case of it.	Ethereum is older and it has more limitations than some other platforms (e.g. NEM).
Code availability (GitHub)	To show people that developers are building what is promised to within a project; to create transparency and assure people that the team knows	Hackers can attack the system and steal all the money if too much / too sensitive code is exposed

what it is doing; to show that things are being done for the community; to have another way of communication with community in order to have additional way of auditing the code, of getting valuable feedback, to find bugs and get suggestions of how to fix them or an actual fix

Private sale / pre-ICO	To validate the idea; to measure temperature of the project in order to verify that people care about the project; to create sense of urgency in order to make people to take actions; to create community of first supporters that will act as a reference point for others during the crowd sale; when the cost of bringing in a dollar with a crowd is very expensive.	When the project positions itself as a community project where everyone is equal and have same right to participate; when firm has good marketing it does not need to run private sale / pre-ICO.
Jurisdiction *	It is dangerous to do ICO in domestic country due to a very strict regulation of e.g. SEC or ESMA or due to the fact that the ICO in domestic country is totally banned (e.g. China); jurisdictions of certain countries (e.g. Singapore, Caiman Islands, Estonia) are very friendly and welcoming ICOs and they are relatively easy to comply with; when a firm has better access to legal advice and regulators of other country than of a domestic one.	It might be more transparent and credible to choose the jurisdiction of domestic country; big domestic investors might be more confident to invest in companies with the jurisdiction of domestic country because they themselves know all these hoops and loops a company need to go through in order to be 100% legal compliant and therefore this factor can make a company to look more trustworthy in the eyes of such investors; when company wants to be a pioneer, work close with authorities and perhaps even drive favorable for ICO changes in domestic country
Accepting FIAT	To increase conversion because generally more options and less friction in the process can lead to it; when situation on crypto market is unstable and therefore there are signs that people might be more comfortable to participate in ICO with FIAT money; when many of potential investors are primarily first timers and process of purchasing accepted for their ICOs crypto currency proved to be difficult	To sustain the image of a truly crypto project; due to legal complications arising from accepting FIAT currency.
Bonus schemes	To increase conversion, to stimulate people to buy tokens and / or share information about project with others; big investors expect bonuses on big investments; it might be seen fair	To sustain the overall image of the project of being truly community project where everyone is equal and have same rights to participate; bonuses can lead to increase in conver-

to complement people who invest at early stage of the ICO when uncertainties are at their tops.

sion but they will not lead to a building of community highly committed to the project; if utilization of bonuses is not balanced with other more traditional marketing efforts, company is at risk of getting only those people who just like free stuff but who are not real customers a firm needs for a business; airdrops are not transparent and may lead to fake users, fake retweets; outputs of some bounty programs (e.g. regarding translations) might be of a poor quality since those are not made by professionals.

* Jurisdiction is a necessary attribute for any ICO therefore table presents findings regarding reasons for and against of using a jurisdiction of reference for the token sale (which is different to the jurisdiction of a country where team is physically based).

As was visible on the table 7, with almost the same combination of visible at a first glance factors, companies anyways reached different results. Therefore the overall conclusion is such that there is not any golden rule on how to succeed in ICO, success is a very complex instance the path to which is different for different companies depending on their goals, subject of the project, resources and capabilities. The road to the success moreover should starts with defining of what a success actually mean for each given project. For different project reaching a success could mean different things, for example reaching of a soft cap or hard cap during ICO or reaching certain level of ROI sometime after an ICO. For example, as possible to see in table 7, firm H did not reach its hard cap by the end of their ICO, but reached outstanding level of ROI right on the next year after their ICO. Depending on definition of success, a message what project tries to deliver into the masses, its image what it tries co create of itself in a crypto community, there will be different set of tools and techniques available for reaching a success. Success is eventually a combination of factors, which are executed well in a correct time, in a correct place. Moreover, it is in some extent also a matter of luck. There are factors on ICO market which firms just do not have much opportunity to affect on or have a control of like legal status of ICO in certain jurisdictions or general conditions on crypto-market namely informational background or a situation with prices and volatilities of crypto-currencies. Also it could be just a bad timing to run an ICO, for example right after another projects which had much bigger hype around them, and which collected most of available funds from the crowd at that time and there was just very little funds available for upcoming projects.

6 CONCLUSIONS

This work has examined factors affecting ability of firms to raise investments via ICO, which are sufficient to proceed with a core project. Section 2 provided information on key concepts and on factors identified in earlier literature affecting ICO success out of which some factors were selected for further examinations. Section 3 describes the used research methodology, data collection and data analysis methods. Sections 4 provided empirical results while section 5 discussed the empirical results and identified theoretical and managerial implications.

This section concludes this work. First, Section 6.1 provides with an answer to the research question. Section 6.2 discusses the limitations of the thesis. Finally, Section 6.3 suggests what further studies are still needed.

6.1 Answer to Research Question

The research question of this paper is: Which factors affect the ability of firms to raise investments via ICO, which are sufficient to proceed with a core project? To answer the research question this paper utilized three different ways. At first, the aim was to find out positive factors affecting ICO success, then negative and after that, in the context of interviewed firms, study the affect of factors, which were identified and preselected from earlier literature. This section thus provides the answer to the research question.

Regarding the factors positively affecting on ability of firms to reach their fundraising goals via ICO then altogether firms reported 20 different practices for successful conduction of an ICO, out of which the first five most important ones are as follows: inspiring idea which people will buy, efficient building of a community of supporters, effective marketing / SMM, professional team, clarity of a problem and of a solution. These factors are moreover in line with some of the building blocks of business model canvas which from one hand validates quite well this tool and from another hand proves that companies who work in

a crypto market and seek funds via ICO, in any other manner are similar to any other company or start-up operating in any other market, and therefore all seem to follow the same rules of doing business. It thus can be suggested that before starting to seek money via ICO, managers should build a strong and very well thought through backbone of the company first.

Factors mentioned by firms whose ICOs didn't reach their hard caps and which were told to be the cause of these unsuccessful results could be divided into two groups, factors, which a firm has a control of, and those which a firm does not have a control of. Among factors from the first group were mentioned the following: too little preparation time, too high hard cap, security issues (fraud activities from attackers like a creation of phishing site), underestimated the needed marketing budget, uneducated in crypto sphere target group. The last one, even though may sound like a factor firms don't have much control of, could anyways be tackled by providing potential investors with step-by-step guidelines on how to participate in the project or by live or pre-recorded webinars where ICO staff walks investors through the entire process. Moreover such webinars were organized by interviewed firm H during their ICO. Among external factors firms don't have a control of were mentioned a crash of Ethereum price on the market and bans of ICOs in China, in more general words these factors may sound like crypto market conditions and legal status of ICOs in certain countries. In this given context, above-mentioned factors were factors of failure but if to look at them differently and think that if these factors had been on place or had had different values, they could be factors of success or at least indirectly leading to it.

Among the factors which were discussed in earlier literature and which were chosen to be studied in this research, majority of firms were favoring the following factors as additional success factors of an ICO: telegram as an efficient social media channel and a utility token as a role for their crypto token. The role of other factors were debatable across different projects with different settings. It is no coincidence because one of the criteria of choosing factors from earlier literature for further study, was the contradictness of findings regarding the role of the same factor across the literature. This research therefore additionally showed that there are indeed such contradictions also across interviewed firms. However, what was more important to find out was why there are such contradiction regarding the role of the same factor. This research does not give though the solid answer to this question but rather scratched the surface by providing new insights into how certain factors affect on ICO success and why they were chosen depending on project. It was noticed that the role of factors differ depending particularly on project settings and project image. For example, if a firm creates an image of being a truly community project, then exposing code on GitHub seems to be appropriate and appreciated (and thus positively affecting on ICO success) while having pre-sale or pre-ICO and / or any token discounts during these rounds or during crowd sale does not seem to be appropriate and can have negative impacts on ICO success as it goes in contradiction to the overall image of the project, where everyone should be equal

and have same rights to participate. Similarly, if a project positions itself as being truly crypto oriented, it might not seem appropriate to allow investments in FIAT. If a firm is criticizing blockchain and cryptocurrency per se and thinking there are better ways to do it, it is not good to utilize existing blockchain platforms like Ethereum as it can create misunderstanding in communication with the community. At last, if a company operates in China or / and seeks investors from there, then a whitepaper might not contribute to the ICO success, but be just a formality while other factors might play a bigger role due to a collective decision making which is dominating in China versus individual in Europe. Difference in project settings is a possible explanation also for contradictions across findings of reviewed articles regarding the effect of the same factor on ICO success. Within this study though it is impossible to give well argued and justified answer to why this happens therefore future researches need to look more into this issue.

6.2 Limitations

There are certain limitations, which came across during this research. At first, there was very limited time per interview since interviewees claimed to be very busy. To tackle this limitation, the theoretical framework was narrowed down to include only that number of factors which was feasible to ask during 35-45 minutes. In addition, in order to save time during the interview, the first open-end question regarding first five success factors, which otherwise might have required the most of the time for thinking and formulating the answer, was sent to participants beforehand by mail. Quite often, answers were received also prior to the interview and only minor clarifications to these factors was done by participants during the interview itself.

Another limitation is that for this study it was wished to organize interviews with at least two different persons from the same company in order to catch more objective picture, but this was possible only with two firms, the rest of them claimed they had lack of time and too busy personnel and therefore provided only one person for the interview. To tackle this limitation to some extent, while sending the first open-end question regarding first five success factors, author advised interviewee to discuss this question with a team and provide more collective rather than individual answer. Moreover, data on case companies was collected from multiple sources to enable triangulation and cross validation.

If the last limitation is concerned, then it is worth noticing that after complete interview transcripts with author's additional preliminary conclusions regarding the role of each factor were sent back to interviewees for a review, firm B, D and E refused to be in contact with the researcher anymore, they did not respond to researchers' emails and / or phone calls and therefore interview transcripts were not reviewed and verified by them. Firm A, even though answered on researcher's email, told that after interview have been conducted,

perhaps due to increased amount of inquiries for an interview from university researchers who later on turned out to be competitors, they were advised to no longer discuss ICO related issues with third parties and therefore representative from firm A, even though with apologies, refused to continue participating in this research and check the interview transcript. Firm A representative though did not separately ask to destroy earlier made interview recordings neither forbidden to use them in this research and therefore findings got from firm A, even though were not verified, were still used in this study as being of great value. Author also strongly believes that using firm's A findings were also morally right because before the interviews were conducted, all firms were informed that results of this study will be public and only those companies continued participating in this study who agreed with this condition, so did also the firm A. To tackle this limitation, recorded interviews with above mentioned firms, were listened not two times as recorded interviews of all other firms, but three and once even four times to ensure that interview is transcribed correctly and the correct meaning have been captured. All data gathered from interviews were moreover compared to secondary resources to ensure the accuracy and completeness of it.

6.3 Further Study Suggested

Upon a completion of this study, certain issues have been raised which need additional studies. The following could be topics for future paper or theseses.

- Success factors from advisors point of view (because those teams who have conducted ICO, in most of cases they made it for the first time and hence may not reflect objectively on what contributed to a success, what to failure. Advisors, on the contrary, have seen several projects and they have got some understanding what should be done in order to succeed, so they might have certain list of factors they believe leading to a success.
- Effect of different marketing strategies on ICO success
- Effect of different bonus techniques on overall ICO success
- Effect of accepting FIAT on ICO success (findings of this study in contradiction to findings of Amsden & Schweizer (2018) and there was not enough data to answer the question why)

6.4 Afterword

Identified in this study set of factors though could be seen as a cookbook for a successful ICO. Nevertheless, like with a real cookbook, even though the recipe is good and have been tried by many others, still a person could fail to prepare a good dish if he misunderstood something, neglected something, bough not

fresh ingredients or faced unexpected factors like loss of power in the oven. It is practically impossible to predict every single factor that can affect on success of an ICO as well as a success of any other activity; it depends on too many factors, both, controllable and uncontrollable. Despite of that, if to know factors discussed in this study, understand how and why they can affect on ICO, bear them in mind, pay enough attention, author believes that a company may increase chances of succeeding in raising funds via ICO.

Unfortunately, author admits that certain level of fraud projects will still be seen on the crypto market, but as legislations evolves, it is hoped that ordinary investors will eventually be more protected from unethical ICO campaigns and risky investments. In addition, author hopes that true genuine companies, who are trying to develop something needed and constructive for the society, after following some ideas and suggestions mentioned in this paper, will manage to succeed in ICO and fund-raise their innovative projects wherever in the world. As last words author wants to add that there is still a border between a crypto society and non-crypto society where last is not aware of what is happening on a crypto market, what projects are running and what products are already available and with what value propositions. Blockchain companies should start demolishing this border and be closer to the ordinary people by educating them and by developing something what will ease the pain of ordinary people already now, not in 20 years, although establishing visions and goals with far going time horizons is also good. Blockchain should become a part of peoples' daily lives like in their time became Internet with web sites and web applications.

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APPENDIX 1

Table below summarizes the finding of analyzed articles, demonstrating effect of determinants on dependent variable(s). Table value "positive" means that the increase of determinant's value (or presence of it if it can take either present or absent values) causes an increase in dependent variable's value or makes its probability bigger (e.g. dependent variable 'soft cap'). A dash (-) means that the determinant was not identified and thus was not taken into consideration in a given paper. A sign (√) shows which dependent variable(s) belong to which article. If dependent variables are several in the given article, value in brackets shows which of them a corresponding determinant have an effect on. Description for the determinants are given below the table. Only those determinants are included, which showed statistical significance in the results of reviewed papers. Interestingly, that there is no a single factor which is mentioned in all four articles as a success factors.

Effect of determinants on ICO success as identified in previous studies (grouping of factors into the following blocks was adapted from the work of Amsden & Schweizer (2018))

Determinant	Adhami et al. (2017)	Amsden & Schweizer (2018)	Fisch (2018)	Fenu et al. (2018)
<i>Dependent variable</i>				
Soft cap	√			
CMC Trading (CMC)		√		
Total Amount Raised in USD (TOT)		√	√	
Trading (TRA)		√		
TOT > \$200 000 and market cap > 25%				√
<i>ICO Characteristics</i>				
Whitepaper # whitepaper pages	No evidence	-	Negative	-
Whitepaper: Word count	-	Positive (TRA,CMC,TO T)*	-	-
Ethereum-based (ERC20)	No evidence	-	Positive	-
		Positive (TRA)* Negative (TOT)	Positive	Positive

token)				
Code availability (GitHub)	Positive	Positive (TRA,CMC)	No evidence	-
GitHub: Stars	-	-	Positive	-
Private sale / pre-ICO	Positive	Negative (TRA,CMC, TOT)*	-	-
Jurisdiction	Positive	-	-	-
Location: US	-	-	No evidence	Positive
Location: Slovenia	-	-	-	Positive
Location: Israel	-	-	-	Positive
Location: China	-	-	-	Positive
Telegram	-	Positive (TRA,CMC,TO T)	-	-
Duration (in days)	-	-	Negative	-
Year: 2017	-	-	Positive	-
Financial Details				
Accepting FIAT	-	Negative (TRA)	-	-
# of issued tokens	-	Positive (TRA,CMC,TO T)	Positive	-
% of tokens available for sale	-	Negative (TRA,CMC, TOT)	-	-
Bonus schemes	No evidence	Positive (TRA)	-	-
Soft Cap	-	Positive (TRA,TOT)*	-	-
Token_services (utility token role)	Positive	-	-	-
Token_profit	Positive	-	-	-
Team Characteristics				
# of advisors	-	Positive (TOT)*	-	-
CEO LinkedIn 500+	-	Positive (TRA,CMC,TO T)	-	-
Team size	-	Positive (TRA,CMC)* Positive (TOT)	-	No evidence
Cryptocurrency Dynamics				
ETH Volatility	No evidence	Positive (TRA,CMC)*	-	-
ETH Value	No evidence	Negative (TRA)	-	-
Pre-ICO Characteristics				
Pre-ICO Hard	-	Positive	-	-

Cap	(TRA,CMC,TO T)			
Icobench.com rating	-	-	-	Positive

* In the article five regressions have been run, first four separately for each block of variables and fifth one for all of them simultaneously. Effect of determinant lose its statistical significance in the fifth regression.

Sample sizes:

- Adhami et al. (2017): 253 ICOs occurred from 2014 to August 2017
- Amsden & Schweizer (2018): 1009 ICOs occurred from 2015 to March 2018
- Fisch (2018): 238 ICOs occurred in 2016 and 2017 (manually compiled in February 2018 from different sources)
- Fenu et al. (2018): 1387 ICOs occurred during 2017 and partly during 2018

Dependent variables:

- *Soft cap* - successfully closed offering i.e. an offering which has reached its minimum funding goal
- *CMC Trading (CMC)* - if the related token or futures on the token are listed on CoinMarketCap.com. This is the stricter form of dependent variable *Trading* because it requires sufficient trading volume
- *Total Amount Raised (TOT)* - amount raised in the ICO in USD
- *Trading* - if the related token is traded or futures on the token are traded

Independent variables:

- *Code availability (GitHub)* - whether or not a code is freely accessible on GitHub
- *ICO Bonuses* - any type of sale incentive
- *Role of tokens:*
 - *Token_service* - token can be used to access or pay for services
 - *Token_profit* - token grants profit to its holders
- *Jurisdiction* - whether or not project promoters have specified a jurisdiction of reference for the ICO token sale (often observed jurisdictions of Singapore, Gibraltar, Cayman Islands, Virgin Islands, Delaware and Estonia as being less demanding from the law perspective and which therefore offer a minimum protection to potential contributors in case of fraud) as choices of jurisdiction and thus offering a minimum protection to potential contributors in case of fraud
- *Ethereum-based* - ICO refers to usage of Ethereum platform
- *Accepting FIAT* - whether or not an ICO accepts any FIAT currency
- *ETH Volatility* - Ethereum volatility over the twenty-five trading days before the ICO start date (data source: CoinMarketCap.com)
- *ETH Value* - Natural logarithm of the Ethereum price at the ICO start date (data source: CoinMarketCap.com)

