

Factors influencing the Return on Investment of Initial Coin Offerings (ICOs): Exploration of ICO companies

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Abstract

Purpose : This research therefore examines internal as well as external factors that may influence ICO's return on investment (ROI) by collecting data from 100 ICO companies with positive ROI between 2018 and 2020.

Design/Methodology/Approach : Overall, this is a mixed-method research. Based on a literature review a conceptual research model has been proposed which includes internal and external factors (incl. 9 hypotheses) that affect ICO ROI. A multiple regression analysis was employed to examine the causal relationships in the proposed research model.

Findings: The results indicate that internal factors such as publication of sources codes on GitHub, relevant ICO expert ratings, ETH platform usage, and pre-ICO processes and the external factors such as Google search data and number of tweets positively influence ICO ROI. The findings reveal that expert ratings and the number of tweets are the most critical internal and external factors.

Practical Implications & value: The findings and suggestions provided in this study will help the relevant investors for increasing public trust in the ICO market and enhancing investors' interest in this area of investment.

Keywords: Financial technology, Cryptocurrency, Initial Coin Offering, Return on investment

JEL Classification G11 · G20 · K22 · M13

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1. Introduction

Financial technology (FinTech) is an emerging industry that employs cutting-edge technologies to disrupt the existing financial service model. Blockchain, which emphasizes decentralization of the financial system by transferring of control from a centralized entity to a distributed network, is the most popular topic in FinTech (Swan, 2015). Blockchain is also recognized by investors and professionals as a novel technique with substantial potential (Ehrenberg & King, 2020). The implementation of blockchain has also focused attention on initial coin offerings (ICOs). However, most ICO offerings do not conform to the ‘standard investment paradigm’ because of “the ways value is created and attributed between the different participants of a network and the difficulty in quantifying that effect” (OECD, 2019, p. 7). ICOs have not only a potential to deliver a quick return, but they ‘can turn into an unrecoverable loss’ due to their high risks. (Dean et al., 2019). ICOs use mainstream cryptocurrencies, such as Bitcoin (BTC) and Ethereum (ETH) for transactions. Šapkauskienė and Pakėnaitė (2021) described ICO as a “new financing instrument for entrepreneurial ventures” (p.55) as it grows rapidly at the pace of distributed ledger technology (DTL) and cryptocurrencies. An ICO is a blockchain-based ‘crowdfunding’ mechanism that enables a group of or single entrepreneurs to issue new cryptocurrency in order to collect funds and avoid centralized processes (Giudici & Adhami, 2019). The emergence of ICOs has enabled startups to collect funds based on their business proposals. ICOs help increase productivity because they have no commission fees and target entities beyond financial institutions and enterprises and thus ICOs have become the most attractive funding model for startups (Wu et al., 2019). However, government supervision of ICOs is still limited, resulting in substantial information asymmetry risks between the ICO team and investors (Chod & Lyandres, 2019). Because of the rapid development of ICOs and the cryptocurrency market, there is a good number of literature focusing on the factors influencing the success rate of ICOs (Fisch, 2019). These factors include white paper details, publication of source code on GitHub, platform selection, pre-ICO processes, and team size (Fisch & Momtaz, 2020). Expert ratings and the campaign duration are also discussed as external factors in the literature (de Jong et al., 2018). On the other hand, announcements through social media which may promote the ICO (Momtaz, 2020), and frequent social media activity that may mitigate the information asymmetry problem (Fisch, 2019) are the two important internal factors.

Researchers have mostly used total collected funds as the indicator of a successful ICO (Momtaz, 2020). However, the amount of collected funds cannot guarantee future operation and profit following the ICO. Howell et al. (2020) argued that overcollection of funds results in more expenses and harms future operations. By contrast, return on investment (ROI) may be an appropriate indicator of ICO success



(Benedetti & Kostovetsky, 2018). According to our findings, most relevant research investigated the effect of known internal factors on ICO success rate. However, the definition of success rate for each study is varied. Hence, this research aims to fill the gap by integrating external factors as well as internal factors and using ICO ROI to represent ICO success. The two research questions therefore to address in this study are : (1) what are the internal and external factors that affect ICO ROI? and (2) how do internal and external factors differ in importance in ICO ROI?

2. Literature Review

FinTech has been developing rapidly in the finance industry, and it relates to topics such as network security, mobile transactions, data analytics, blockchain, online loans, chatbots, and Internet of Things technology (Chen et al., 2019). The cryptocurrency market is a FinTech application based on blockchain technology (Thakor, 2020). Blockchain uses encrypted blocks to connect and distribute ledger technology, enabling each block to be protected from modification after verification. Cryptocurrency is a novel trading media, and cryptocurrency assets can be regarded as real assets if the value of a currency is redefined (Liu et al., 2020). However, Frame et al. (2018) argued that cryptocurrency is merely an electronic token, not an asset. According to Huynh et al. (2020), the legitimacy of cryptocurrency is still under debate, but the market has become a popular form of investment. Cryptocurrencies generate new potential risks, and new methods should be developed for investor risk management. Tran and Leirvik (2020) have revealed that the number of cryptocurrency transactions has dramatically increased, and the price has increased accordingly. The price of a currency is positively associated with ROI. To address the demands of cryptocurrency users, many payment companies have begun offering cryptocurrency payment services.

An ICO is a fundraising method that involves receiving cryptocurrency from investors. The decentralization of ICOs can reduce extra ICO costs faced by startups and help them raise capital efficiently and rapidly (Burns & Moro, 2018). ICOs are similar to initial public offerings (IPOs) but without the associated supervision and regulations. Moreover, an ICO collects funds for the development of a business, whereas in an IPO, the business develops first before collecting funds. ICO fundraising is conducted mostly in the early stage of idea construction. Evaluating the potential value of the ICO is thus challenging. Researchers have investigated ICO success rates to help investors make judgments. A major disadvantage of ICO is information asymmetry (Adhami et al., 2018). The success of an ICO depends on relevant white paper details, publication of source code on GitHub, and pre-ICO processes. According to the study of Bourveau et al. (2018) success of ICO offerings is positively associated with the quality of disclosure and the information environment of token issuers. In this case, the frequency and quality of social media activity is important aspect of



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such an information environment. The study also found some critical characteristics of the secondary market characteristics. Token issuers with higher liquidity and volatility will be more likely to crash in the market if they have a high degree of opaque disclosures. Ahmad et al. (2021) investigated the success of ICO campaigns using data on 503 ICOs from 60 countries launched between 2015 and 2018. The results indicated that while the number of team members and advisors, contribute positively to the ICO's funding success and post-ICO activity, presale offers, and bonuses contributed negatively. Additionally, the results highlighted financial system development of a country and legal friendliness strongly determines the success of the ICO issue. Belitski and Boreiko (2021) examined the effect of ICO characteristics on ICO performance and found that three boundary conditions predict ICO fundraising amount,

such as number of investors, hard cap achievement and token ranking. The study also identified some other factors, such as serial investors, presale of tokens, bonus sales and funders' ownership share. Sharma and Zhu (2020) empirically investigated over 8000 blockchain companies and their study showed that ICO offering size, start bonus, VC backing, and social media are related to the success of ICO. The success factors that Dean et al. (2019) identified were investor sentiment, time horizons and correlations with other assets of the markets.

Relevant studies have mostly investigated the role of internal factors on the ICO success rate. However, investors and market sentiment are also influenced by social media (Benedetti & Kostovetsky, 2018; Fisch, 2019). Domingo et al. (2020) study suggested that the ICO return is positively influenced by the sentiment extracted from social networks. External factors such as the amount of Google search data may influence the ICO success rate (Gächter & Gächter, 2020).

3. Research Methodologies and hypotheses

Overall, this is a mixed-method research. Based on a literature review a conceptual research model has been proposed (Figure 1) which includes internal and external factors that affect ICO ROI. Internal factors refer to the features of an ICO company, which are relevant to the company and information revealed in public. Examples of such factors are white paper details, publication of source code on GitHub, pre-ICO stage processes, ETH platform selection, and team size (Fisch, 2019; de Jong et al., 2018; Burns & Moro, 2018). A white paper includes details on the specifications of the ICO and can help investors understand the real operation of the company. Having the ICO's source code on the GitHub platform can enhance exposure and security to influence willingness to invest. The expert ratings of credible ICO platforms is a key reference point for investors and the ratings came from trustable experts.

External factors are those that cannot be controlled by the funding company. Studies



have indicated that investors and market sentiment may be affected by factors related to the Internet (Benedetti & Kostovetsky, 2018; Fisch, 2019), such as Google search data (Gächter & Gächter, 2020), popularity on Google, and number of Twitter followers (Burns, 2018). Burns and Moro (2018), and Boreiko and Sahdev (2018) have revealed that Twitter has high information dissemination value, which can be leveraged by ICO companies to publicize their messages. Hence, we regard Google search data and the number of Twitter posts as critical external factors that influence the success of an ICO. Moreover, this research uses ICO ROI as the principal dependent variable based on relevant research (Fisch, 2019; Howell et al., 2020). The current approach differs from that of most related research, which has used the amount of collected funds in ICOs and is close to the success of the future business.

Hypotheses Development

A white paper is an official document that includes essential information for investors, and it is a major part of ICO activities (Cohney et al., 2019). An IPO specification disclosures provide information to the same standard as a whitepaper and are managed by the relevant government which provides investors with objective information. A white paper is the major channel for presenting ICO details and must be specific (Lashkov, 2018). Studies have investigated the association of the information contained in the white paper variables with ICO success; for example, the number of pages in a white paper is positively associated with ICO success rate (Amsden & Schweizer, 2018) and the lack of an ICO white paper may reduce the likelihood of ICO success (Fisch, 2019). Hence, we propose the following hypothesis:

H1a: Number of pages in an ICO white paper is associated with ICO ROI

Numerous ICO companies store complete or partial source code on GitHub to highlight the feasibility of their ICOs. Investors can pre-evaluate an ICO and its value by reviewing the source code and progress of that ICO. If ICO companies opt not to confirm their source code and store it on GitHub, the likelihood of ICO success diminishes (Amsden & Schweizer, 2018). The ICO guidebook for investors indicates the importance of scrutinizing source code before investing in an ICO (Mulders, 2018). Fisch (2019) also indicated that positive reviews of ICO source code influence ICO success. The visibility of GitHub enables investors to trace the progress of an ICO. Therefore, we propose the following hypothesis:

H1b: Storing of ICO source code on GitHub is associated with ICO ROI

During the ICO campaign duration, the company must still develop its product, and the intellectual properties such as patent or trademark are incomplete. Most investors lack sufficient domain knowledge to understand the techniques outlined in white papers and assess an ICO. That is, expert ratings is a crucial reference point for



investors (Fisch, 2019). Mollick and Nanda (2016) reported that expert ratings can be employed through a third party that may be able to uncover reliable signs of risk. De Jong et al. (2018) indicated that expert ratings are positively associated with ICO success. Hence, we propose the following hypothesis:

H1c: ICO expert ratings is associated with ICO ROI

ETH is a blockchain platform that emerged in 2015, and Ether is the cryptocurrency it uses. Each node on ETH operates an ETH virtual machine to execute a complete program—the smart contract. Any individual can create their cryptocurrency by following related regulations (ERC20). ICO companies receive cryptocurrency through the use of smart contracts. According to ICOWatchList, 82% of ICOs issued currency on ETH. Moreover, the security level of ETH is mature, enabling rapid and convenient currency exchange (Amsden & Schweizer, 2018). The use of ETH is positively associated with fundraising potential (Amsden & Schweizer, 2018; Fisch, 2019). Thus, we propose the following hypothesis:

H1d: Use of the ETH platform for an ICO is associated with ICO ROI

Pre-ICO is the independent stage before the official ICO and after the private ICO. In this stage, cryptocurrencies can be used for transactions and investment. The funds collected during this stage help cover the cost of the official ICO. The costs consist of sales expenses and ICO setup costs, which can increase the speed of execution. Promotions offered by the ICO team in the pre-ICO stage may encourage investors to purchase this currency, thus raising the ICO success rate (Fisch & Momtaz, 2020). Crowdfunding focuses on attracting investors to join the project and maximizing fund collection (Vismara, 2018). A pre-ICO is positively associated with an ICO success rate (Adhami et al., 2018; de Jong et al., 2018). Hence, we propose the following hypothesis:

H1e: Pre-ICO is associated with ICO ROI

The literature has revealed that entrepreneur and team features are major criteria for investors (Block et al., 2019). Investors prefer large ICO teams because large team size indicates that more people are willing to contribute to the ICO. The problem-solving ability of large teams is also superior to that of small teams, thus enhancing the likelihood of ICO success. Human capital is positively associated with the amount of funds collected, and large ICO teams may use their large network to promote ICO development (Ahlers et al., 2015). A large ICO team is also positively associated with ICO success rate (Amsden & Schweizer, 2018; de Jong et al., 2018) and the final amount of collected funds (Burns & Moro, 2018). Hence, we propose the following hypothesis:



H1f: ICO team size is associated with ICO ROI

Crowdfunding researchers have tended to use the campaign duration as a control variable (Anglin et al., 2018; Vismara, 2016). Investors can use the time period of an ICO to determine the likelihood of the ICO raising a considerable amount of money. However, the campaign duration is strongly associated with the amount of funds collected, and a shorter campaign duration is more likely to achieve the expected goal (Courtney et al., 2017). That is, long campaign durations may diminish investor confidence and increase the difficulty of reaching the fundraising goal (Mollick, 2014). De Jong et al. (2018) revealed that a long campaign duration is negatively associated with the ICO success rate. Hence, we propose the following hypothesis:

H1g: ICO campaign duration is associated with ICO ROI

Market sentiment, which can be affected by media coverage, is another factor that influences ICO success (Benedetti & Kostovetsky, 2018; Fisch, 2019). As an example, ranking in Google trends was demonstrated to affect the ROI of cryptocurrencies (Sovbetov, 2018). Polasik et al. (2015) reported that a high Google search volume on BTC was associated with positive ROI. Google search volume is positively associated with ICO fundraising success (Gächter & Gächter, 2020; Burns & Moro, 2018). Thus, we propose the following hypothesis:

H2a: Google search volume on an ICO is associated with ICO ROI

Entrepreneurs use Twitter to manage their personal and company networks (Fischer & Reuber, 2011), which indicates that Twitter activity is critical to attracting potential investors. Kuppuswamy and Bayus (2017) calculated the number of tweets of an ICO team to measure enterprise activation. Benedetti and Kostovetsky (2018) also indicated that Twitter activity influenced the ICO market. Moreover, Burns and Moro (2018) reported that the number of Twitter followers positively influenced the amount of ICO funds raised and the ROI. Therefore, we propose the following hypothesis:

H2b: Number of tweets is associated with ICO ROI

Measurement

This research uses the number of pages of an ICO as one measurement. We use GitHub to investigate ICO source code data, and we establish a dummy variable to represent companies with (1) and without (0) code on this platform. We also use ICObench to examine expert ratings, with values ranging from 1 and 5. We establish a dummy variable to denote if an ICO is on the ETH platform (1) or not (0). The pre-ICO stage is the step before the ICO, and we set up a dummy variable to denote companies that employ (1) and do not employ (0) at this stage. Team size represents the number of people on the ICO team, and this number is used for measurement. Finally, we



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use total days to represent the campaign duration. We also use the ICO company's name as the keyword for Google search data collection (search volume) and number of tweets with the ICO company's name to represent the two external factors. This research uses ICO ROI as the dependent variable concerning the research of Burns and Moro (2018), who considered the ICO price difference between the 1st and the 120th day after fund collection was completed. Equation (1) presents the concept of ICO ROI, where P_1 and P_{120} are the prices on the 1st and 120th day after fund collection was completed, respectively. Finally, the number is converted by natural logarithm to reduce the absolute number as follows:

$$ROI = \ln\left(1 + \frac{P_{t=120} - P_{ICO}}{P_{ICO}}\right)$$

4. Results and discussion

We use data on ICO companies in operation between 2018 to 2020 which means started ICO after 2018 and ended before 2021. The data for estimating ICO ROI are collected from CoinMarketCap. There are nearly 250 companies between 2018 and 2020 but we filter samples by positive ICO ROI. The reason is results may reveal useful insights for future ICO companies. Finally, we include data for 100 ICO companies (see examples in Table 1 and full list in Appendix available at <https://bit.ly/ico-nmr>). This research uses public data on ICObench and ICOHODER to collect data for internal variables and data on Google and Twitter for external variables.

We employ multiple regression analysis to examine the causal relationships in the proposed research model. The results of collinearity analysis reveal that all variance inflation factor values are lower than 10, which indicates that each variable is independent (Table 2). This result indicates that white paper publication is not associated with ICO ROI ($p = 0.869$); thus, H1a is not supported. This finding is in accordance with that of Adhami et al. (2018), who reported that because ICO white papers have no public verification and review procedures, they may not attract potential investors. Moreover, investors require background knowledge to understand the technical details provided in a white paper (Jafery, 2018). The use of specific words or phrases in white papers was also not directly associated with ICO success in several studies (Moss et al., 2018), and studies have revealed white paper content with few modifications can help deliver accurate information to investors (Kim et al., 2016). Therefore, we infer that the feasibility of techniques in a white paper is more critical than is the number of pages.

The results also reveal that GitHub ($\beta = 0.069, p < 0.001$), expert ratings ($\beta = 0.442, p < 0.001$), ETH platform ($\beta = 0.09, p < 0.001$), and pre-ICO ($\beta = 0.159, p < 0.001$) positively influence ICO ROI. Hence, H1b, H1c, H1d, and H1e are supported. These



results are also consistent with related research on GitHub (Adhami et al., 2018; Amsden and Schweizer, 2018; Fisch, 2019), expert ratings (Mollick & Nanda, 2016; de Jong et al., 2018; Fisch and Momtaz, 2020), the ETH platform (Amsden and Schweizer, 2018; Fisch, 2019), and pre-ICO processes (Adhami et al., 2018; de Jong et al., 2018). Moreover, team size ($p = 0.191$) is not associated with ICO ROI; therefore, H1f is not supported. De Jong et al. (2018) indicated that the fundraising goal did not influence ICO ROI. Team size may influence the amount of ICO funds raised but not ICO ROI (Burns and Moro, 2018). Team size is not a determinant of ICO execution and not associated with future success. The result of ICO campaign duration ($p = 0.892$) is also not associated with ICO ROI; hence, H1g is not supported. Studies have indicated that the campaign duration is strongly associated with the amount of funds raised, with longer campaign durations diminishing the likelihood of ICO success (Mollick, 2014; Courtney et al., 2017). However, Vismara (2016) and Anglin et al. (2018) have reported that longer campaign durations increase the likelihood of collecting more funds. We infer that the campaign duration indicates the ICO team's acceptance of various levels of risk but not ICO success.

In terms of the effect of external factors on ICO ROI, Google search data ($\beta = 0.086$, $p < 0.01$) and number of tweets ($\beta = 0.17$, $p < 0.05$) are both positively associated with ICO ROI; thus, H2a and H2b are supported. ICO information on social media represents the visibility and potential value of the ICO team (Boreiko and Sahdev, 2018) and may help maximize fund collection. These results are in accordance with those of related research on Google search data (Gächter & Gächter, 2020; Burns & Moro, 2018) and number of Twitter followers (Benedetti & Kostovetsky, 2018; Fisch & Momtaz, 2020).

Discussion

Relevant studies have mostly investigated internal factors by focusing on the amount of funds collected during an ICO. By contrast, this research uses ICO ROI and adds external factors. The results (Table 3) indicate that the major factors in decreasing order of importance are expert ratings ($\beta = 0.442$), number of posts on Twitter ($\beta = 0.17$), pre-ICO use ($\beta = 0.159$), ETH platform use ($\beta = 0.09$), Google search data ($\beta = 0.086$), and availability of source code on GitHub use ($\beta = 0.069$). Kuppuswamy and Bayus (2017) indicated that regular tweets by an ICO company can help update investors on the ICO progress and reduce information asymmetry (Benedetti & Kostovetsky, 2018; Fisch, 2019). Twitter activity can influence the success of an ICO. Our results confirm that the number of tweets is the most crucial external factor and second most important factor overall in terms of the effect on ICO ROI. The fifth most important factor overall is Google search data. Both external factors are positively associated with ICO ROI, which is consistent with the viewpoint that social media activity may influence investors and market sentiment.



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Our results indicate that expert ratings have a larger effect on ICO ROI than do GitHub, ETH platform, and pre-ICO. As a factor, expert ratings indicates the recognition of third parties and is a credible indicator of risk (Mollick & Nanda, 2016). Most investors are concerned about the visibility of an ICO, and expert ratings can reduce the risk of information asymmetry. Expert ratings is similar to social media (external factors), which aims to enhance the publicity of a funding project. Our result confirm that expert ratings is positively associated with ICO ROI. Adhami et al. (2018) indicated that the use of GitHub and pre-ICO processes was positively associated with ICO success rate; in particular, pre-ICO processes are more critical than is the use of GitHub. These results are consistent with our findings as summarized in Table 3. Our results indicate that using the ETH platform is also more crucial than publishing source code on GitHub in terms of ICO ROI, which confirms the results of Fisch and Momtaz (2020).

5. Conclusion

The popularity of ICO enables investors to evaluate the complexity of diverse virtual currencies. Knowledge of the factors that influence ICO ROI are essential for increasing investor trusts in ICOs and attracting more people to invest in ICO projects. Different from previous studies that have tended to focus on ICO success rate, this research examines internal and external factors that may influence ICO ROI. We collect data on 100 ICO companies between 2018 and 2020 with positive ROI. The results indicate that internal factors such as publication of source code on GitHub, relevant ICO expert ratings, ETH platform usage, and pre-ICO processes and external factors such as Google search data and number of tweets positively influence ICO ROI. The findings reveal that expert ratings and number of tweets are the most critical internal and external factors, respectively. We discover that social media can reflect market sentiment and influence investors (Benedetti & Kostovetsky, 2018; Fisch, 2019). Our findings confirm the major role of external factors in ICO ROI and future management success.

Implications

In conventional IPOs, the market and competitors may influence outcomes. Hence, market sentiment may change investors' behaviour, indicating that external factors are also crucial to IPO companies. Similarly, company potential is a major consideration for investors in ICO startups, and the management performance directly influences the development of the company. Our findings indicate that expert ratings substantially influences ICO ROI. ICO companies must have a solid team as well as efficient and reliable execution ability to obtain high expert rating evaluation. Moreover, ICO companies should actively communicate with the public through social media to increase exposure and reduce information asymmetry. The popularity of social media can be leveraged to maximize ICO ROI, and ICO companies should emphasize the influence of external factors in the future.

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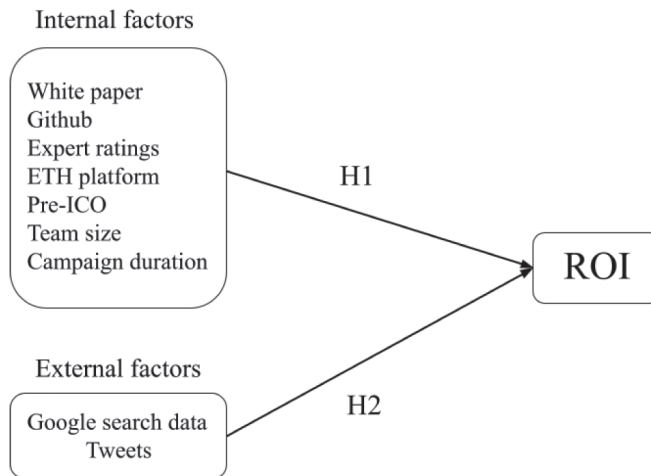


Figure 1 Research model

| ICO Com-pany | White paper (pages) | GitHub | Expert ratings | ETH | Pre-ICO | Team size (person) | Cam-paign dura-tion | Google search data | Tweets | ROI |
|------------------|---------------------|--------|----------------|-----|---------|--------------------|---------------------|--------------------|--------|--------|
| Lunes Platform | 86 | 1 | 4.5 | 1 | 1 | 63 | 15 | 13.0385 | 9.0783 | 1.7918 |
| Game.com | 52 | 1 | 3.3 | 1 | 1 | 39 | 50 | 13.6651 | 7.9215 | 1.2809 |
| Digitex | 16 | 0 | 2.4 | 0 | 0 | 19 | 90 | 12.8071 | 6.4265 | 0.4959 |
| Power Ledger | 93 | 1 | 4.8 | 1 | 1 | 70 | 15 | 15.3649 | 9.1601 | 1.9095 |
| Maester Protocol | 22 | 0 | 1.9 | 0 | 0 | 15 | 100 | 11.7981 | 5.8777 | 0.2469 |
| YGG-DRASH | 40 | 0 | 3 | 0 | 1 | 31 | 70 | 13.4303 | 6.9197 | 1.0296 |
| BCDiploma | 17 | 0 | 2.4 | 0 | 0 | 19 | 90 | 12.8186 | 6.4313 | 0.5176 |
| XAYA | 63 | 1 | 3.7 | 1 | 1 | 48 | 40 | 14.2289 | 8.4022 | 1.5041 |



| | | | | | | | | | | |
|-------------|----|---|-----|---|---|----|----|---------|--------|--------|
| Pan-the- | 33 | 1 | 2.8 | 0 | 0 | 24 | 80 | 13.1519 | 6.5971 | 0.7747 |
| Breeze Coin | 62 | 1 | 3.7 | 1 | 1 | 46 | 40 | 14.0830 | 8.3763 | 1.4784 |

Table 1 Data on a sample of 10 ICO companies

| ICO return on investment | | | | |
|---------------------------|-------------|-------------|----------|-------|
| | <i>B</i> | <i>SE B</i> | β | VIF |
| White paper | 0.000 | 0.001 | 0.007 | 3.378 |
| GitHub | 0.073*** | 0.015 | 0.069*** | 6.332 |
| Expert ratings | 0.276*** | 0.042 | 0.442*** | 4.085 |
| ETH platform | 0.095*** | 0.016 | 0.09*** | 5.948 |
| Pre-ICO | 0.172*** | 0.015 | 0.159*** | 4.382 |
| Team size | 0.002 | 0.001 | 0.048 | 5.483 |
| Funding time period | 0.000 | 0.002 | 0.014 | 3.878 |
| Google | 0.044** | 0.015 | 0.086** | 2.068 |
| Twitter | 0.081* | 0.034 | 0.17* | 3.756 |
| <i>R</i> ² | 0.84 | | | |
| <i>Adj R</i> ² | 0.78 | | | |
| <i>F</i> | 1802.135*** | | | |
| <i>df</i> | (9, 90) | | | |

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 2 Factors and ICO ROI

| Internal Factors | Result |
|--|---------------|
| H1a: Number of pages for ICO white paper is associated with ICO return on investment | Not supported |
| H1b: The store of ICO source code on GitHub is associated with ICO return on investment | Supported |
| H1c: Expert ratings of ICO is associated with ICO return on investment | Supported |
| H1d: The use of ETH platform for ICO is associated with ICO return on investment | Supported |
| H1e: Pre-ICO is associated with ICO return on investment | Supported |
| H1f: ICO team size is associated with ICO return on investment | Not supported |
| H1g: ICO funding time period is associated with ICO return on investment | Not supported |
| External Factors | Result |
| H2a: The amount of Google search data on ICO is associated with ICO return on investment | Supported |
| H2b: Number of Tweets is associated with ICO return on investment | Supported |

Table 3 Summary of hypothesis testing

