An Empirical Study on Cryptocurrency Market in Hong Kong: Can Website Ratings Predict the Success of Initial Coin Offerings?

by

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ABSTRACT

The recent innovation in blockchain and financial technology has resulted in a new channel of crowdfunding known as initial coin offerings (ICOs). While reducing transaction costs and fundraising efforts for entrepreneurs, the ICO phenomenon is also criticized as operating in a legal grey field with scams and financial crimes. How to effectively evaluate the quality of ICO projects remains a challenge for potential investors. With the increasing popularity of ICO exchange platforms, the expert ratings given by such websites seem to be a fix to this information asymmetry problem and can help investors to identify qualified ICO projects.

By constructing a data sample which includes 18 ICO projects from the well-recognized ICO exchange website *ICObench.com*, this paper examines the relationship between expert ratings given by ICO communication intermediary and ICO projects' success by using OLS regression. With a special focus in the Hong Kong market, the empirical results from this research only find partial evidence to support the argument in existing literature that the expert ratings given by ICO exchange websites can provide predictive power of ICO project's success. Specifically, this research find that there is a positive relationship between the website rating and the ICO's total capital raised; However, it does not find any evidence when trying to measure the ICO success by examining whether an ICO token is being listed on a crypto-exchange platform in the long-term. This research suggests that investors should treat such website ratings carefully and analyze market signals from ICO communication intermediaries with caution.

Key words: blockchain, crowdfunding, Initial Coin Offerings(ICO), digital tokens, entrepreneurial finance, communication intermediary

1. INTRODUCTION

1.1 Overview of Initial Coin Offerings (ICOs)

The recent innovation in blockchain and financial technology has resulted in a new channel of crowdfunding known as initial coin offerings (ICOs). The concept of ICO is defined as "an open call for funding promoted by organizations, companies, and entrepreneurs to raise money through cryptocurrencies, in exchange for a token that can be sold on the Internet or used in the future to obtain products or services and, at times, profits" (Adhami et al. 2018). This new form of entrepreneurial finance allows new ventures in the emerging blockchain and financial technology industry to raise funds from a crowd of investors online with no intermediaries. An ICO period usually takes one week or more and investors can invest in widely accepted cryptocurrencies like Bitcoin or Ethereum in exchange for new branded tokens issued by entrepreneurs of new ventures. If the ICO campaign launches successfully and meets the minimum fundraising goal set in advance, entrepreneurs can use the fund to further develop their cryptocurrency-based projects and thus form the real value of their branded tokens.

Unlike other means of financial tools, the ICO market is featured by a relatively low level of regulatory requirements (Huang et al., 2020). The ICO's anonymous feature and the newness of blockchain technology, as well as the immature legal environment in this field, make this new form of entrepreneurial finance be regarded as both opportunity and challenge. On the one hand, the ICO crowdfunding channel can be used as a new financing tool and create potential benefits for different stakeholders. Unlike traditional Initial Public Offering (IPO) process, using ICO as a fundraising tool requires no professional underwriters and legal advisories, which largely reduces the operational cost for entrepreneurs. In addition, the blockchain technology with smart contracts enable the possibility of direct end-to-end transactions. With the help of blockchain technology,

new ventures that seek large funding can receive investment with no intermediaries and thus entrepreneurs could bear lower transaction costs as well as fundraising efforts. Similarly, as a result of shortening the time to raise funds, the ICO channel also creates advantages for entrepreneurs to quickly develop and launch the products or services in the market.

However, on the other hand, the lack of regulation and the ambiguity of regulatory entities also increase huge investment risk for investors. Due to its open and online features, ICO projects often attract individual investors, who might share a very limited knowledge of the nature of blockchain technology as well as the real value of those projects. In fact, the ICO phenomenon is usually criticized as a legal grey field with scams and financial crimes. Investors might face challenges in identifying speculative issuers who try to leverage ICO tools to conduct online fraud. In addition, though granting some benefits in offering privacy protection for both investors and fundraisers, the anonymous spirit of blockchain technology usually further increase the investment risks due to the untraceability of issuers' real-life identities. For example, though a project is identified as a scam or financial manipulation, investors hold no legal rights to retrieve back their investments and the speculative issuers could escape from the legal sanctions. In all, as the cryptocurrency market is still evolving with an unprecedented speed, whether the ICO phenomenon should be understood as a true innovation or another speculative bubble in finance industry remains a heated debate.

Due to the difficulty and challenge of identifying the real quality of ICO projects for individual investors, the information disclosure mechanism should be put great attention when understanding the ICO phenomenon. A recent trend in the market is that many ICO projects will launch their marketing campaigns on third-party web platforms or ICO exchange websites. These websites serve as an aggregate marketplace for connecting online investors with different ICO

projects. Though its primary function is simply targeted for providing information display service for investors and easy information disclosure to the market for fundraisers, such a website will also provide project evaluation and ratings for ICO projects based on different evaluation metrics. By providing such self-claimed "expert-ratings" or "project scores", the ICO exchange websites become more than a simple information displayer but an opinion leader in the whole fundraising process of ICO campaigns. Due to this unique information disclosure mechanism in the ICO market, the main research question of this paper will focus on whether such ratings from the ICO exchange websites could be understood as a reliable signal of identifying the quality of ICO projects. With a special focus on the cryptocurrency market in Hong Kong, this paper explores to identify the relationship between the ICO project success and expert ratings given by ICObench.com, which is one of most well-known ICO exchange websites in the market. Before unfolding discussion on empirical results, this paper will firstly outline the important background knowledge to understand ICO mechanism and build up my research question by borrowing insights from previous literature in this new area of research.

1.2 ICO Mechanism

Blockchain Technology and Token Type

The emergence of ICO provides a unique crowdfunding mechanism that centers on the concept of issuing tokens based on blockchain-related applications. The use of blockchain technology enables entrepreneurs to raise funds without any intermediaries, which largely reduces transaction costs for both potential investors and fundraisers. In general, blockchain technology is a decentralized public ledger that is distributed over a peer-to-peer network. The public ledger contains transaction information and users' cryptocurrency level as entries, which can be verifiable and irreversible. The new block of transactions could be added to the blockchain if the majority of

the users on the blockchain network reach certain forms of consensus. For different blockchain projects, different consensus protocols can be adopted. For example, the Bitcoin blockchain adopts the Proof-of-Work (PoW) mechanism whose name comes from its high requirements for computational power in verifying transactions and reaching a consensus state on the blockchain. The PoW consensus protocol also incorporates an incentive mechanism that the users who can firstly verify and update the public ledger (blockchain) can gain Bitcoin rewards via solving a specifically defined mathematical puzzle.

Typically, ICO projects adopt similar distributed ledger technology when raising funds from different investors. The blockchain technology serves as the foundation for ICO entrepreneurs to issue their own branded digital tokens and thus acquire investment to develop their projects. Although there is no legally binding categorization of digital token types, the "utility tokens" and "security tokens" constitute the majority of ICO tokens issued by entrepreneurs (Fisch 2018). According to *Blockchain Council[1]*, an online forum for blockchain practitioners, utility tokens refer to a digital medium of coupon that could bring the token holders certain forms of utility. For example, with the promise of discounted fees or special access to certain products or services, the utility tokens can be redeemed in the future if the ICO project is successfully developed. However, it is important to notice that the utility tokens issued by entrepreneurs usually do not have real-world usage at the time of the ICO crowdfunding period. In addition, the value of the new branded tokens are not based on any underlying assets. Instead, the value of utility tokens simply comes from investors' trust in the promises given by the entrepreneurs and expectations of their future values. By comparison, security token distinguishes from utility token as the former derives value from tradeable underlying assets. For example, equity token can be a type of security

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[1] https://www.blockchain-council.org/blockchain/security-tokens-vs-utility-tokens-a-concise-guide

token, which grants ownership or control for security token holders (Fisch 2018). In addition, by associating the value of digital tokens with underlying securities, the security tokens are designed to increase the fundraiser's credibility and investor's trust in the new ventures. To sum up, the blockchain and distributed ledger technology make the fundraising channel possible for ICO projects; In terms of the digital tokens issued by different projects, while utility tokens operate and function in a legal grey area with no intrinsic value, the security tokens which associate their value with underlying assets are subject to conventional legal requirements concerning financial securities and assets.

Different Stages of ICO

Taking a period of one week or more, an ICO project usually covers three stages starting from the pre-sale stage, ICO stage and market stage (Dean et al. 2020). For an early period like the pre-sale stage, it is usually targeted for large investments from a small number of investors who seek discounts in exchange for newly issued tokens. The pre-sale stage is often associated with a special bonus scheme of private sale, during which the project promotes large discounts to early investors. However, not every ICO project would adopt the pre-sale strategy to attract early investors. Some ICOs only feature the period of the ICO stage, which is publicly initiated and available for investments from any investors on the internet. During the ICO stage, the token issuers will announce the pre-set price of each token, the number of tokens for sale, as well as the retained share of total tokens by issuers. In addition, each ICO project will give their fundraising goals and the investors will be informed of two important thresholds, namely 'soft cap' and 'hard cap'. The soft cap refers to the minimum threshold of funds that should be raised for an ICO project to be considered a success. By comparison, the hard cap refers to the maximum amount of funding target for an ICO project. If the total purchases from investors fail to exceed the soft cap threshold,

the ICO project will be regarded as a failure and the money raised in this stage should be returned to the investors. However, for an ICO project to succeed, it does not require the investor purchases to hit the maximum threshold. Following the success of the ICO stage, the issuers could use the money to further develop their digital products or services.

Moving forward from the ICO stage, if the project is improved to a degree when it is admissible to be listed on a cryptocurrency exchange platform, the ICO project will enter into the market stage. During this stage, a branded token could be further traded at a new market-determined exchange rate. By listing on such cryptocurrency exchange platforms, it brings liquidity and potential gains to the early investors who participate in the ICO stage. During market stage, those early investors can sell their tokens to other investors in the market. Such a listing also enables early investors to make potential benefits if there is a large increase in the value of their invested tokens. However, not every ICO project that successfully hit the soft cap (minimum fundraising goal) can become acceptable to cryptocurrency exchange platforms. Whether a new token could be acceptable to a cryptocurrency exchange and entering the market stage is subject to the various screening or voting processes adopted by different cryptocurrency exchange platforms (Dean et al. 2020). In addition, unlike traditional financial channels like stock exchange platforms that face stringent legal requirements, the cryptocurrency exchange platforms are available to global internet users with no regulatory protection. In fact, as of April 5th 2021, there are currently more than 300 cryptocurrency exchange platforms listed on the *CoinMarketCap*[2]*,* which offer listing services for ICO projects based on a wide range of admission criteria.

Disclosure mechanism

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[2] The CoinMarketCap is a leading price-tracking website for crypto-assets.
https://coinmarketcap.com/rankings/exchanges/

Another important aspect about ICO process is its unique form of information disclosure mechanism. Due to no formal legal regulations in the market, formal forms of information disclosure like publishing prospectus or open public board meetings in the traditional IPO process are neither mandatory nor popular in the cryptocurrency market. By comparison, different ICO projects reveal information totally on a voluntary basis. In addition, unlike traditional information disclosure process, the ICO process reveal important aspects of projects through two main channels: the first is to issue white papers and to launch related marketing campaigns; and the second is to make project code publicly available on an open-source community like GitHub.

In terms of the first disclosure channel, a white paper is a document that reveals important information about the ICO project at issuers' discretion. It provides relevant information about the project details like the purpose of the project, the technical details, the background of team members, allocation of fund usage, roadmap, and future plans, etc. However, there is no consistent format or legally-binding standard for publish ICO white papers. As a result, the variations in white paper formats and contents create challenges for investors to compare different projects and to identify the quality of ICO projects (Amsden and Schweizer, 2018). In addition to publishing white papers, ICO projects usually deliver their project code online as another channel for information disclosure. Investors can evaluate the technical design and reliability of the project through examining such source code. Due to the close connection between ICO projects and blockchain technology, the source code and its quality can be interpreted by sophisticated investors to understand the technical capabilities of the team as well as the quality of the projects (Fisch 2018). Still, the source code which is in the form of programming language in the computer science field will inevitably create a knowledge barrier for naive investors who share non-tech backgrounds. Whether such two channels of disclosing information can efficiently inform the investors for

making investment decisions remains another interesting topic, which is beyond the inquiry scope of this research paper.

2. LITERATURE REVIEW

2.1 Project Factors of ICO Success

To understand this emerging phenomenon of ICO as a crowdfunding tool in the cryptocurrency market, researchers have been studying the success factors for ICOs despite the evolving volatility in the market. Based on a sample of 456 ICOs executed between March 2016 and March 2017, Fisch (2018) explains the signaling effect of publishing white papers as an important information disclosure channel for ICO projects. He argues that technical white papers serve as a credible signal and contribute to ICO success, while patents shared by projects reveal insignificant effects on ICO success measured by amount of money raised. Adhami et al. (2018) single out a sample of 253 ICO projects that occurred from 2015 to August 2017. They find that the availability of code sources and organizing token pre-sale campaigns play an important role in the success of ICOs. In their research, the success of ICO is represented as a binary variable that takes the value of one if the ICO has reached the soft cap and zero if not. However, their research does not provide any evidence for the assumption that the availability of a white paper would affect ICO success. Amsden and Schweizer (2018) constructed a larger dataset which includes 1009 ICOs from 2015 to March 2018 to investigate the ICO success determinants. They confirm the insight from Adhami et al. that the code available on GitHub is positively associated with ICO success. Besides, they also reveal the team characteristics that the better-connected CEOs (measured by connections on the Linkedin network) and larger team size show positive effects on ICO success in terms of the total amount raised. Howell et al. (2020) research on an updated data

sample of all 1520 unique ICOs collected on the *TokenData* website, which spans the period from the summer of 2017 to April 2018. They find that token issuers' voluntary disclosures via a white paper lead to lower failure rates of ICO projects and the issuers' design of a lockup period for its ICO token sales also contributes to the ICO success. In all, the existing literature provides mixed arguments about the success determinants of ICO projects due to the complex and unstable nature of this emerging phenomenon and diverse data samples adopted in different research work.

2.2 Geographic Factors of ICO Success

While many pieces of research have investigated different project characteristics through available data sources from a global scope, other studies also consider the market heterogeneity across countries and timing. Based on the sample of 915 ICO projects issued in 187 countries between January 2017 and March 2018, Huang et al. (2019) reveal that the popularity of ICOs in a certain country is positively related to the maturity of financial systems and its digital infrastructure. Meanwhile, they find that countries with ICO-friendly regulations result in a larger number of ICOs in the cryptocurrency market. Even though ICO projects are unique because of their easy access to investors across the globe without geographic limitation, this research suggests further studies should be conducted to understand different market characteristics shown by different regions. In addition, by tracking the dynamics of ICO projects' geographic distribution quarterly between 2017 and 2020, Bellavitis et al. (2020) reveal the evolving pattern of ICO popularity across different countries. They show that despite that US projects had dominated the ICO market with a 30% market share in early 2017, it soon loses the dominance with only 1 ICO in Q2 2020 launched in the US. Also, the early popularity of ICOs in countries like Russia and Switzerland quickly lose steam, and other countries/regions like Hong Kong and Singapore are

trying to catch up with the trend. Their study suggests that scholars should sort out different ICO markets and take into consideration geographic distribution and local regulations.

2.3 ICO Exchange Website Ratings

As a main focus of this paper, another important aspect in understanding the ICO phenomenon is to examine the role played by ICO exchange platforms and related communication intermediaries. For ICOs, the public marketing campaigns and crowdfunding process should in theory be independently executed by each entrepreneur. However, due to the growing popularity of ICOs and increased demand for ICO services, online-based agencies have been offering services to help promote ICO projects and attract potential investors. Online platforms like *ICOholder*, *ICObench*, and *ICOdrops* are the popular service providers in connecting ICO projects with online investors. In addition, they also serve as an important information channel for investors by offering services like conducting compliance checks such as Know Your Customer (KYC) service or Anti-money Laundering (AML) measures.

More importantly, although such agencies claim that the information delivered on the website should not be taken as investment advice, many of them still offer an evaluation or rating system for classifying ICO projects. A recent study from Dean et al. (2020) uses a dataset of 341 executed ICOs listed on *ICODrops* website over the period between November 2016 and September 2018. They argue that high expert ratings on the ICO exchange website *ICODrops* are associated with greater ICO success. And the success parameter is measured by the percentage of the hard cap amount achieved at the end of the ICO. Similarly, based on a data sample of 316 ICOs from four communication intermediaries (*ICOmarks, ICOholder, ICObench,* and *ICObazaar*) between 2013 and September 2017, Boreiko and Vidusso (2019) try to examine whether the ratings shown on those websites could inform the success of ICO projects. They found evidence that the

individual ratings of different ICO exchange websites do provide predictive power of ICO projects'

success. However, according to different definitions when evaluating ICO success, these results

are not consistently robust. They suggest that further studies should be conducted to examine the

relationship between the signaling effect of ICO website ratings and ICO projects' quality.

3. HYPOTHESES DEVELOPMENT

3.1 Website Ratings of ICO

Based on the literature above, the success predictors of ICO projects can be understood in

many ways. As described above, the project characteristics for predicting ICO success include

factors like the disclosure of white paper and source code, the team size and team members'

backgrounds, the design of the pre-sale stage, and the leadership's professional networks, etc.. The

existing literature provide mixed interpretations of ICOs' success determinants. In addition to the

project-focused view, many researchers suggest that other factors like geographical distribution

and regional legal environment also play an important role in discussing the success determinants

of ICO projects. In contrast with the mixed view of ICO success determinants, recent researches

seem to arrive in agreement that the ICO website ratings indeed provide predictive power of ICO

projects' success. However, the two researches above ICO ratings mentioned above choose holistic

data sets without considering the regional difference. Whether such an argument still holds true

for individual cryptocurrency market like Hong Kong remains a question.

In this paper, projects are selected only with respect to the cryptocurrency market in Hong

Kong from the well-recognized ICO exchange website *ICObench.com*. To help provide an

evaluation of ICOs, the rating system given by *ICObench.com* website is based on a wide range

of considerations mainly from four dimensions: project team, ICO design information, product

presentation, and marketing & social media[3]. It generally considers the technical and management abilities of the project team, the transparency of information disclosure, as well as how the product/service would be designed and promoted. Detailed criteria under each dimension are shown in Exhibit 1 below.

Exhibit 1

The Rating Criteria by ICObench.com

Team	ICO information	Product presentation	Marketing & Social Media
- Number of members - Photos - Full names - LinkedIn profiles - ICO Success Score > 5 - KYC	- ICO start date - ICO end date - Token ticker - Platform - List of accepted currencies - Number of tokens for sale - Distributed in ICO - ICO or PreICO price - Bonuses - Soft cap - Hard cap - Country	- Whitepaper - Informativeness of whitepaper - Video presentation - Milestones - MVP/Prototype	- Twitter - Facebook - Bitcointalk ANN thread - Medium - Telegram / Slack / Discord - GitHub - Reddit

Though the specific underlying formula or weights attached to different factors remain unknown for the public, this comprehensive matrix for evaluating ICO projects might serve as a credible signal for online investors and help them make investment decisions. The aggregation of information and underlying calculation mechanism of ratings can be regarded as a main value-added service for online investors on this website. Thus, I posit two hypotheses in this paper:

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[3] https://icobench.com/ico-analyzer

H1: The ratings given by the website serve as good predictors of ICOs' short-term success

H2: The ratings given by the website serve as good predictors of ICOs' long-term success

3.2 Control Variables

From the previous study conducted by Bellavitis et al. (2020), evidence suggests that Bitcoin and Ethereum prices show a strong correlation with the ICO market as shown by Exhibit 2. In addition, as the first digital token which captures 55.5% market capitalization in the cryptocurrency market[4], the Bitcoin price is usually served as a proxy of investors' sentiment in the cryptocurrency market (Dean et al. 2020). Thus this paper will use both Bitcoin and Ethereum prices as control variables. In addition, to account for the momentum effect in the cryptocurrency market, the control variables of Bitcoin and Ethereum prices are constructed by calculating the average daily closing prices during a 30-days period ahead of each start date of an ICO project. For example, if an ICO fundraising campaign starts on March 1 2018, the Bitcoin price as a control variable will be calculated by the average of the daily closing price of Bitcoin between Jan 30, 2020 and Feb 28, 2020 (30-days period). The calculation method works the same for constructing Ethereum price as a control variable.
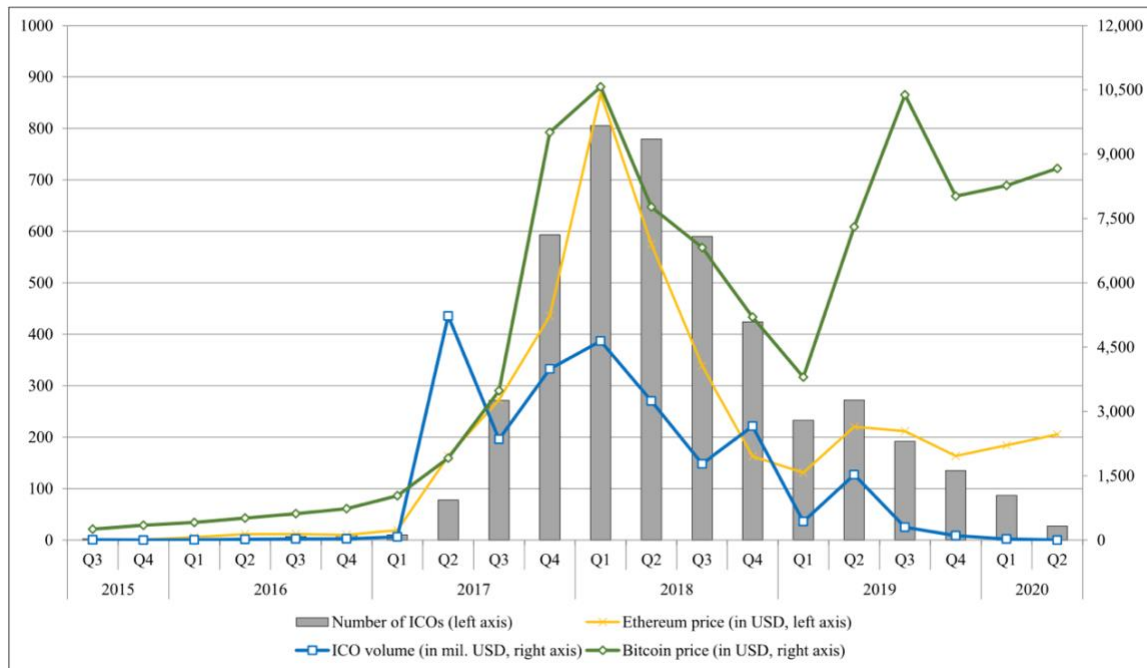
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[4] As of April 8th, 2021. https://coinmarketcap.com/currencies/bitcoin/

Exhibit 2

The Evolution of the number of ICOs, ICO volume, Bitcoin and Ethereum Price[5]

4. RESEARCH METHODOLOGY

4.1 Dataset

The first dataset of this study is organized by hand-collecting information of ICO projects registered in Hong Kong from *ICObench.com*. This website is widely recognized as one of the few ICO exchange websites which serve as a reliable and exhaustive source for ICO data. To avoid fraudulent ICO projects, this study sorts out 51 projects by adopting the "ICO KYC Passed" filter available on the website. As mentioned earlier, the KYC service stands for "know your client", which imposes compliance requirements and identity authentication for token issuers by the website. In terms of the current procedures of passing KYC process, the website requires at least two members from an ICO project to show proof of identity using a passport or ID card in order

[5] This exhibit is from the research conducted by Bellavitis et. al (2020).

to be validated. Based on these 51 projects, I further construct a data sample which consists of 18 ICO projects which are information complete in terms of key factors like the start/close date of ICO projects, the amount of USD raised during the ICO period, the name of token ticker as well as the website's rating. Detailed individual project information can be found in the Figure 1 in the appendix. Other projects are excluded from this data sample due to their absences of key information like the total amount raised in USD and the website's rating scores.

My second dataset is drawn from *coindesk.com.* This website is considered one of the most accurate data sources to obtain prices of all cryptocurrencies. I obtain daily price information of Bitcoin and Ethereum from January 1, 2018 to December 31, 2020 from this website. In addition, the third dataset used in this research is collected from *coinmarketcap.com*. This website is used to check whether an ICO project with its issued token is still listed in any exchange platforms at the time of this study. This website aggregates data sources in the cryptocurrency market and provides accurate and timely information like cryptocurrency prices and trading volume on different exchange platforms. At the time of this study, it contains 4646 cryptocurrencies that are spanning 306 cryptocurrency exchange platforms.

4.2 Empirical Methodology

This study uses cross-sectional analysis to investigate the relationships between website ratings and ICOs' success both in the short-term and long term. I measure the short-term success of the ICO with the dependent variable *CapitalRaised* in equation (1). The variable *CapitalRaised* equals the logarithmic dollar amount of the investors' total purchases achieved at the end of the ICO stage. The OLS regression model is adopted in the analysis of website ratings' effects on ICOs' short-term success as shown in equation (1) below:

(1) $CapitalRaised = \alpha + \beta_1 * Ratings + \delta_1 * Bitcoin + \delta_2 * ETH + \varepsilon$

The independent variable *Ratings* refers to the rating scores given by the *ICObench.com* website, which ranges from 0 to 5. The higher rating implies the more requirements that an ICO project has achieved based on the website's unique rating system mentioned above. The *Bitcoin* and *ETH* prices serve as the control variables to account for the market sentiment and price momentum effects. The data sample is tested to be heteroskedastic and thus heteroskedasticity-robust standard errors are adopted in analyzing the results of the multilinear regression model.

In terms of measuring the long term success of ICO, a binary dependent variable *Listed* is adopted. The rationale comes from the fact that if a token is still being listed on any cryptocurrency exchange platform and can be transacted among public investors, the ICO project should be developed into a mature and successful state in order to meet the admission conditions of those crypto-exchange platforms. Otherwise, being excluded from such platforms means there is no open market for such tokens and it thus implies a project failure. This proxy for long-term ICO success will take 1 if the ICO token is still listed on a cryptocurrency exchange platform tracked by *coinmarketcap.com* and will take 0 if the ICO token has quitted the market stage without being listed anywhere. Considering the binarity of dependent variable *Listed*, a logit linear model is adopted to analyze the relationship between website ratings and ICO project's long-term success. The model is show in the equation (2) below:

$$(2) \quad E_{Listed} = \frac{e^{\alpha + \beta_1 * Ratings + \delta_1 * Bitcoin + \delta_2 * ETH + \varepsilon}}{1 + e^{\alpha + \beta_1 * Ratings + \delta_1 * Bitcoin + \delta_2 * ETH + \varepsilon}}$$

5. EMPIRICAL RESULTS

5.1 Descriptive Statistics

This section provides descriptive statistics for the data sample which consists of 18 ICO projects registered in Hong Kong that pass KYC certification and are. The projects span from a

period between March 1 2018 to November 20 2019. Their amount of total raised capital reaches around 156.5 million USD. The highest amount reached by a single ICO project is 47.3 million USD by HybridBlock while the ICO project called Refine Medium raises the lowest amount of 42000 USD. During the time period of the data sample, the cryptocurrency market also experiences large volatility. Bitcoin price ranges from 4529 USD to 9282 USD, which is more than twice the former price. Similarly, the Ethereum price even witnessed more drastic changes with the highest price at 761 USD and the lowest price at 137.8 USD.

Exhibit 3

Summary Statistics of Data Sample

Variables	Observations	Mean	Median	Max	Min
CapitalRaised($)	18	8,692,836	3,765,534	47,830,000	42,000
TeamSize	18	10.5	8.5	24	2
Ratings	18	3.79	3.8	4.5	2.9
Bitcoin($)	1095	7408	7777	9282	4529
ETH($)	1095	453.4	515.5	761	137.8

5.2 Regression Results

The result of the multilinear OLS regression model provides evidence to support hypothesis H1 that the ratings given by the website serve as good predictors of ICOs' short-term success. The independent variable *Ratings* has a statistically significant positive effect on predicting the short-term success of ICO projects measured by the amount of capital raised during the ICO period. However, in terms of the long-term success of ICOs, the ratings given by the

ICObench website do not serve as a good predictor. There is no support for H2 with the coefficient on *Ratings* having the predicted sign but with no statistical significance. The regression results provide mixed support on the predictive power of *Ratings* given by the ICO exchange website/communication intermediary in predicting ICO success. Though the ratings from the *ICObench.com* could play as a credible signal to predict the total amount of fund raised in the short-term, this rating could not inform of the long-term success of ICO projects (still being listed or not). The regression results further suggest that investors should treat such ratings carefully and analyze market signals from ICO communication intermediaries with caution.

Exhibit 4

Ratings' Effects on ICO Success

Hypothesis	Variable	Predicted Sign	OLS Model	Logit Model
	Intercept		58.72307 (5.302e-08 ***)	6.99232 (0.7878)
H1	*CapitalRaised (~Ratings)*	+ve	**2.80347 (3.604e-05 ***)**	
H2	*Listed (~Ratings)*	+ve		0.82585 (0.6784)
	Bitcoin		-8.32388 (7.335e-10 ***)	-1.17349 (0.7406)
	ETH		3.27681 (2.2e-16 ***)	-0.10998 (0.9330)
Adjusted R-Squared			0.6398	
Number of observations			18	18

t-values are in parentheses. *p < 0.05, **p<0.01, ***p<0.001

6. LIMITATION & CONCLUSION

The nature of this study is exploratory due to the emerging and evolving characteristics of the research topic on Initial Coin Offerings (ICO) and as a consequence of the limited quality of data sources from ICO exchange websites. The main limitation of this research comes from the difficulty in collecting a more representative data sample that could include more ICO projects registered in the Hong Kong market. After checking nine ICO exchange websites *(ICObench, ICO Transparency Monitor, ICOrating, ICObazaar, ICOhotlist, ICOdrops, CoinSchedule, Cryptorated, ICOwatchlist)*, only two websites *(ICObench.com and ICOrating.com)* collect ICO projects information based on their registration countries. However, the website *ICOrating.com* only includes six observations of ICO projects in the Hong Kong market which are complete in key information and thus is excluded from this research. In fact, the poor availability of data sources brings a big challenge to this research and this paper could be better improved if more observations could be collected in the future.

In all, by constructing a data sample which includes 18 ICO projects from the well-recognized ICO exchange website *ICObench.com*, this paper examines the relationship between expert ratings given by ICO communication intermediary and ICO projects' success. With a special focus in the Hong Kong market, the empirical results from this research only partially confirm the argument mentioned by existing literature that the ratings or scores given by ICO exchange websites indeed provide predictive power of ICO project's success. Specifically, this research find evidence that there is a positive relationship between the website rating and the ICO's total money raised; However, it does not find any evidence when trying to measure the ICO success by examining whether an ICO token is still being listed on a crypto-exchange platform in the long-term. This result could be helpful for potential investors during investment decision-making

process. Although investors might face challenges when identifying the true quality of ICO projects, the ratings given by ICO exchange websites should not be taken as a quick fix to solve the problem of information asymmetry in ICO investments. Investors should treat such ratings carefully and analyze market signals from ICO communication intermediaries with caution.

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Appendix

Figure 1

Project Name	Token	Listed	CapitalRaised	PreICO	TeamSize	AdvisorSize	TotalSize	WhitePaper	Ratings	Start Time	Ended Time	Website
BETEX	BETEX	0	10233480	1	8	7	15	0	3.8	2018/3/1	2018/4/15	https://icobench.com/ico/betex
Midex	MDX	0	22000000	0	21	0	21	1	4.5	2018/1/15	2018/4/15	https://icobench.com/ico/midex
300cubits TEU	TEU	0	1453740	0	6	0	6	0	3.7	2018/4/12	2018/5/12	https://icobench.com/ico/300cubits
LikeCoin	LIKE	1	5323604	0	11	4	15	1	3.9	2018/5/7	2018/5/21	https://icobench.com/ico/likecoin
FIXY NETWORK	FXY	0	480350	1	2	0	2	0	2.9	2018/5/16	2018/5/31	https://icobench.com/ico/fixy-netw
Kora Network	KNT	1	12000000	1	8	2	10	0	3.3	2018/5/18	2018/6/1	https://icobench.com/ico/kora-net
HybridBlock	HYB	0	47830000	1	17	15	32	0	4.2	2018/5/23	2018/6/6	https://icobench.com/ico/hybridblc
Faxport	FAS	0	193000	1	7	9	16	0	3.4	2018/4/25	2018/6/10	https://icobench.com/ico/faxport
LocalCoinSwap	LCS	1	12150000	1	8	5	13	1	4.3	2018/4/15	2018/6/15	https://icobench.com/ico/localcoin
Sword Coin	SWDC	0	20660000	0	9	0	9	0	3.8	2018/6/1	2018/8/15	https://icobench.com/ico/sword-cc
Tombola	TBL	0	2850000	1	9	4	13	0	3.8	2018/8/1	2018/8/31	https://icobench.com/ico/tombola
EMMARES	EMA	0	2365000	1	14	8	22	1	3.7	2018/5/5	2018/9/30	https://icobench.com/ico/emmares
Alehub	ALE	0	4681068	1	20	3	23	0	3.7	2018/7/25	2018/11/24	https://icobench.com/ico/alehub
Fiii	Fiii	1	10708813	1	24	5	29	0	3.8	2018/11/1	2018/12/31	https://icobench.com/ico/fiii
Coupon Chain	CCT	1	2000000	0	9	0	9	1	4	2018/8/1	2019/3/31	https://icobench.com/ico/coupon-c
IOTW	IOTW	0	750000	0	5	8	13	0	3.6	2019/4/28	2019/4/29	https://icobench.com/ico/iotw
Authpaper	AUPC	0	750000	0	3	0	3	1	4.1	2019/3/10	2019/8/16	https://icobench.com/ico/authpape
Refine Medium	XRM	0	42000	0	8	0	8	1	3.8	2019/10/19	2019/11/20	https://icobench.com/ico/refine-m