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STUDY OF THE PERFORMANCE AND DETERMINANTS OF INITIAL COIN OFFERING

Keywords: determinants of ICO, performance, reputation of the founding team, quality of the information, market liquidity, regulatory compliance.

J E L Classification: G11, G15.

Abstract: The aim of the paper is to study the relationship between the performance and the determinants of initial coin offering. We use panel data and multiple regression models to measure the impact of the determinants of the initial coin offering on its performance. Based on a sample of 3,498 ICOs issued between January 2019 and December 2023, we find that the reputation of the founding team, the quality of the information materials provided to stakeholders, the market liquidity, and regulatory compliance are closely related to ICO Performance. The implications of these findings are indeed substantial, as they have far-reaching effects on all participants in the ICO market. For entrepreneurs, the results highlight that success in ICOs depends not only on innovative ideas but also on effective governance and transparent communication. This underscores the importance of factors beyond the core technology or concept in deter-

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mining the success of ICOs and emphasizes the need for comprehensive strategies that encompass governance and communication practices.

Introduction

ICOs have become a significant alternative to traditional financing methods, such as IPOs or raising funds from venture capitalists (Wisniewska, 2018; Aslan, Şensoy & Akdeniz, 2023; Wats, Joshi & Singh, 2024). They have enabled a large number of projects to raise capital quickly, often bypassing traditional regulatory mechanisms (Adhami, Giudici & Martinazzi, 2018; Andrés, Arroyo, Correia & Rezola, 2022; Florysiak & Schandlbauer, 2022). Still, they present challenges related to security, governance, and transparency.

Understanding the factors that determine the success or failure of ICOs is crucial for investors, entrepreneurs, and regulators. Hence, we aim to identify and analyze the variables and factors that play a role in ICO operation, providing specific recommendations for improving transparency, governance, and success in the ever-changing financial environment.

The related literature on ICO performance is relatively recent, and the main works reviewed highlight a range of empirical studies that have contributed to understanding the mechanisms of ICO performance (Fu, Koh & Griffin, 2019; An, Duan, Hou & Xu, 2019; Lyandres, Palazzo & Rabetti, 2022; Momtaz, 2019, 2020). Each piece of research adds a unique piece to a complex, constantly evolving puzzle, emphasizing the dynamic nature of the field and the ongoing efforts to unravel the factors that shape ICO success and performance.

Recent works of Kuppuswamy and Bayus (2018), Zhang, Mukai, Naeem, Dhuna, Parveen and Kim (2019), and Wang, Fisch and Momtaz (2020) provide valuable insights into the factors influencing ICO performance. Kuppuswamy and Bayus (2018) emphasize the significance of initial returns in shaping investor perception and participation, while Zhang et al. (2019) highlight the importance of the white paper quality, community size, and transparency of the founding team in influencing investor perception and sustaining positive momentum after listing. Still, Wang et al. (2020) call for further research to explore the complex interactions between white paper quality, community size, and technical characteristics underscoring the need for a comprehensive understanding of ICO performance determinants.

Recently, Bai and Zhang (2024) used the automated machine learning method to offer valuable insights into the potential determinants of ICO success

and found that projects that have secured presale funding, coupled with comprehensive token sale information, exhibit a markedly increased likelihood of achieving ICO success.

The contribution of our study to this existing literature is twofold. First, we identify and analyze the variables and factors that are important in ICO operation. By doing so, the study can offer practical guidance to investors and project holders in navigating the evolving financial landscape. Furthermore, the empirical analysis and the discussion will seek to validate and understand the significance of these factors in determining ICO performance. We will examine how these interconnected variables contribute to the effectiveness of ICOs and discuss their implications for the ICO market. Second, we provide specific recommendations for improving transparency, governance, and the success of ICO in a demonstration of a comprehensive approach.

We find that the interconnected factors that determine the success or failure of an ICO are the quality of information provided to stakeholders, market liquidity, and regulatory compliance. We provide a holistic understanding of these factors and their complex interplay in influencing ICO success.

Certainly, the focus of our study on identifying the factors that contribute to the success or failure of ICOs is crucial, as it holds significant implications for investors, entrepreneurs, and regulators. By seeking to understand these factors, our study can offer valuable insights that may help stakeholders navigate the complexities of ICOs and make informed decisions in the rapidly evolving financial landscape.

The remainder of the paper is organized as follows. The second section analyzes the different models and data used in the empirical part of the paper. It defines all the used variables. The third section presents the results of the empirical analysis and discusses the implications of these results. Finally, the fourth section will provide a conclusion to the paper, summarizing the main findings and discussing their implications for the ICO market.

The research methodology and the course of the research process

Methodology

Our data is in the form of panel data, we try to apply the fixed effect or the random effect but because of the data we find we are obliged to use pool data.

The panel data method with "pool data" is an analytical approach that combines the advantages of panel data (or longitudinal data) with the notion of "pooling" or aggregating data from multiple sources. Panel data consists of observations collected on the same unit (such as a company, an individual, or a country) at several points in time. Data pooling, on the other hand, involves bringing together data from different units or sources.

The robustness and generalizability of results can be enhanced by combining two concepts that create a methodology suited to the analysis of panel data from different sources and groups.

Model presentation

To shed light on the different facets of ICOs, we have developed three distinct econometric models.

The first model explores key metrics such as Return (R), Excess Weighted Return (EW), and Weighted Market Value (VW). These measures enable us to deepen our understanding of the financial performance of ICOs and their impact on investors.

The second model looks at time to market and potential delisting. By analyzing these factors, we seek to unveil how the timing of ICO launch and listing duration can influence their long-term success and acceptance on exchange platforms.

Finally, our third model looks at the total amount raised during the ICO (ICO Gross Proceed) and the Nominal Return. This approach allows us to probe how the size of the initial funding and the nominal return influence the performance and perception of ICOs. By examining these different angles, we hope to provide a comprehensive and balanced view of the factors shaping the landscape of ICOs and their relevance in the modern economy.

Models of first-day returns:

$$R_{it} = C + \beta_1 * ERC20_{it} + \beta_2 * CEO\ Legacy_{it} + \beta_3 * ICO\ Gross\ Proceed_{it} + \varepsilon_{it} \quad (1)$$

$$EW_{it} = C + \beta_1 * ERC20_{it} + \beta_2 * CEO\ Legacy_{it} + \beta_3 * ICO\ Gross\ Proceed_{it} + \varepsilon_{it} \quad (2)$$

$$VW_{it} = C + \beta_1 * ERC20_{it} + \beta_2 * CEO\ Legacy_{it} + \beta_3 * ICO\ Gross\ Proceed_{it} + \varepsilon_{it} \quad (3)$$

Models of Time to market and delisting:

$$Time\ to\ market_{it} = C + \beta_1 * Team\ Size_{it} + \beta_2 * CEO\ Legacy_{it} + \beta_3 * KYC_{it} + \varepsilon_{it} \quad (4)$$

$$Delisting_{it} = C + \beta_1 * Team\ Size_{it} + \beta_2 * CEO\ Legacy_{it} + \beta_3 * KYC_{it} + \varepsilon_{it} \quad (5)$$

Models of Nominal Return and ICO Gross Proceed:

$$Nominal\ Return_{it} = C + \beta_1 * KYC_{it} + \beta_2 * ICO\ Gross\ Proceed_{\ it} + \beta_3 * ERC20_{it} + \beta_4 * Major\ Cryptocurrencies_{it} + \beta_5 * ICO\ Duration_{it} + \beta_6 * U.S.A\ Restriction_{it} + \varepsilon_{it} \quad (6)$$

$$LICO\ Gross\ Proceed_{it} = C + \beta_1 * KYC_{it} + \beta_2 * ICO\ Gross\ Proceed_{\ it} + \beta_3 * ERC20_{it} + \beta_4 * Major\ Cryptocurrencies_{it} + \beta_5 * ICO\ Duration_{it} + \beta_6 * U.S.A\ Restriction_{it} + \varepsilon_{it} \quad (7)$$

With i is a particular ICO token t is the period, C the constant, β_1, β_2, β_3, β_4, β_5 and β_6 are the estimated coefficients and ε is the error term.

ICO performance data and variables

Data

The data for our empirical analysis was collected from ICO marks sites that form our 3,498 ICOs issued between January 2019 and December 2023.

The data we've gathered plays a vital role in allowing us to dive deep into the ICO landscape, exploring it from a variety of perspectives. Our data collection is like a jigsaw puzzle made up of key elements, each of which is crucial to getting the full picture. We took care to collect information on early-day returns, which gives us an insight into the initial performance of ICOs as they hit the market. In parallel, we also scrutinized Launch Time and any Withdrawals, which helps us to understand how timing decisions influence the dynamism of ICOs. To add a complementary touch, we also assembled a databank of Gross ICO Proceeds and Nominal Returns, providing a perspective on the size of initial funding and the long-term evolution of projects.

ICO performance variables

INDEPENDENT VARIABLES

1. First-Day Raw Return: Raw returns refer to the gains or losses realized on the first day of trading of a company resulting from an Initial Coin Offering (ICO). They are calculated by subtracting the first opening price from the first closing price, i.e. ($P_{i,1}$ - $P_{i,0}$). This measure makes it possible to assess the variation in share price from the first day of trading.

$$R_i = \frac{P_{i,1} - P_{i,0}}{P_{i,0}} \tag{8}$$

2. First-Day Abnormal Return (EW): The Equalized Abnormal Return (EWARi) of an ICO company i refers to the correction of company i's first-day return, Ri, to the equalized average return of all other listed crypto-currencies, j = 1, . ., n, on the initial trading day of ICO company i's token, t. This measure assesses the ICO company's relative performance to the overall cryptocurrency market on its first day of trading. By adjusting the performance of company ICO

$$EWAR_i = R_i - \frac{1}{n} \sum_{j=1, j \neq i}^{n} \frac{P_{j,t} - P_{j,t-1}}{P_{j,t-1}} \tag{9}$$

3. First-Day Abnormal Return (VW): The value-weighted abnormal return (VWARi) of an ICO company i is determined by calculating the difference between ICO company i's first-day return, R_i, and an average market return on the first trading day, t, of token i. This average return is weighted by the market capitalization, $MC_{j,t}$, of all other exchange-listed crypto-currency tokens j = 1,..., n. This measure assesses the relative performance of the ICOi company compared to the overall cryptocurrency market at the time of its IPO.

By adjusting the performance of the company ICO i according to the market capitalization of the other tokens.

$$VWAR_i = R_i - \sum_{j=1, j \neq i}^{n} \left[\frac{MC_{j,t}}{\sum_{j=1}^{n} MC_{j,t}} \times \frac{P_{j,t} - P_{j,t-1}}{P_{j,t-1}} \right] \tag{10}$$

4. ICO Gross Proceeds: The total amount of funds raised through the ICO, expressed in thousands of USD.

5. Time-To-Market: The difference in days between the start of the ICO and the project creation date.

6. Nominal Return: "Nominal Returns" for an ICO can be defined as the observed trading price variations of a token from the initial coin offering (ICO). These returns reflect the difference between the opening price on the first day and the closing price on the last day of token trading. They provide a measure of an ICO's initial financial performance, indicating realized gains or losses over the entire listing period.

7. Delisting: Dummy variable equal to one if a listed project has been delisted on one or more token exchange platforms, and zero otherwise.

DEPENDENT VARIABLES

Positive First-Day Raw Return: This is a dummy variable that takes the value of one if the first-day raw return is positive, and takes the value of zero otherwise.

Positive First-Day Abnormal Return (EW): This is a dummy variable that takes the value of one if the abnormal first-day return (EW) is positive, and takes the value of zero otherwise.

Positive First-Day Abnormal Return (VW): This is a dummy variable that takes the value of one if the first-day abnormal return (VW) is positive, and takes the value of zero otherwise.

CEO Legacy: This is a dummy variable defined as one when the CEO has been involved in another crypto-currency project, and zero otherwise.

Team Size: The number of project team members.

ERC20: The ERC20 standard represents a set of technical rules for developers wishing to create smart contracts on the Ethereum blockchain. It is a dummy

variable defined as one when the ICO tokens have been created in compliance with the ERC20 standard, and zero otherwise.

Major Cryptocurrencies: This is a dummy variable defined as one when the project has accepted only the major cryptocurrencies (Bitcoin, Ethereum, Litecoin) during the ICO, and zero otherwise.

ICO Duration: Duration of the ICO in days.

U.S.A Restriction: This is a dummy variable equal to one if U.S. investors have been admitted to participate in the ICO, and zero otherwise.

KYC: KYC involves the collection of official identification documents, such as ID and proof of address, to guarantee the authenticity of customers before granting them financial services. This is a dummy variable equal to one if the project used a know-your-customer (KYC) process during the ICO.

Whitelist: In the context of ICOs and blockchain-based projects, a whitelist is often used to identify pre-approved participants or investors who are authorized to take part in the ICO or receive specific benefits, such as access to token sales or exclusive bonuses. Individuals or entities registered on the whitelist are considered "approved" and benefit from certain privileges or restricted access. This is a dummy variable equal to one if the project has used a whitelist during the ICO.

The research process results and discussion

Descriptive analysis

Table 1, 2 and 3 reports descriptive statistics for all the variables used in our work.

Table 1. Descriptive statistics

	N	Mean	Min	Max	Std.Dev.	p25	p75	t-value
R	3,498	.03	-.935	9.32	.270	-.027	.010	3.000
EW	3,498	0.02	-.953	9.45	.277	-.060	.055	0
VW	3,498	0.04	-3.025	9.333	.314	-.037	.027	.851
Positive R	3,498	.352	0	1	.444	0	1	31.900
Positive EW	3,498	.352	0	1	.472	0	1	37.170
Positive VW	3,498	.385	0	1	.47	0	1	37.866
ICOgrossproceedsra~d	3,498	18483522	0	14300000	2473980	0	2343000	34.01
Nominal return		.975	-.998	37.5	3.942	-.814	.098	10.333

S o u r c e : authors' calculation from sample data.

Table 2. Descriptive statistics

	N	Mean	Min	Max	Std.Dev.	p25	p75
Time to market	3,498	99.022	0	320	98.31	17	180
Delisting	3,498	.932	0	1	.44	1	1

S o u r c e : authors' calculation from sample data.

Table 3. Descriptive statistics

	N	Mean	Min	Max	Std.Dev.	p25	p75
CEOlegacy	3,498	.20	0	1	.3	0	0
Team size	3,498	9.767	4	20	5.800	6	14
ERC20	3,498	.633	0	1	.442	0	1
Majorcryptocur-renc~s	3,498	.80	0	1	.590	0	1
USA restriction	3,498	.200	0	1	.471	0	1
KYC	3,498	.487	0	1	.499	0	1
Whitelist	3,498	.257	0	1	.442	0	1

S o u r c e : authors' calculation from sample data.

Table 1 displays that the mean First-Day Raw Return (R) of 0.03 is statistically different from zero. The median R is significantly lower at 0.27, suggesting that the distribution is positively skewed. The First-Day Raw Return (R) at the 25th percentile is negative -0.027, while it is positive 0.010 at the 75th percentile too, with a negative minimum value of -0.935 and a maximum value of 9.32.

The average First-Day Abnormal Return (EW) is 0.02. The median EW is significantly lower 0.28. The First-Day Abnormal Return (EW) at the 25th percentile is negative -0.060, while it is positive 0.055 at the 75th percentile too, with a negative minimum value of -0.953 and a maximum value of 9.332.

The average First-Day Abnormal Return (VW) is 0.04. The median VW is significantly lower at 0.31. The First-Day Abnormal Return (VW) at the 25th percentile is negative -0.037, while it is positive 0.027 at the 75th percentile too, with a negative minimum value of -3.025 and a maximum value of 9.333.

The average ICO gross proceed is 124835227 so it is very strong and remarkable which allows us to conclude that the revenue from ICO tokens and very important over the whole period.

The ICO gross proceeds at the 25th percentile is 0, while the ICO gross proceeds at the 75th percentile is 23430000, also with a minimum value of 0 and a maximum value of 14300000.

The nominal return is a variable that represents the token's return over the entire period that remains valid on the market. The average of this variable is 0.975, very close to 1, which shows that the nominal return of the majority of tokens is positive, and also that the majority of tokens have a closing price at the end of the period that is higher than the opening price over the entire observation period, which is 6 months. The median nominal return is 3.942. Nominal returns at the 25th percentile are negative -0.814, while they are positive 0.098 at the 75th percentile, with a minimum negative value of -0.998 and a maximum positive value of 37.5.

In Table 2, the variable time to market gives the duration in days between the token start date and the project creation date. The average is almost 100 days, so we can conclude that the average difference between the two dates is very large. The median time to market is 98 days longer. The time to market at the 25th percentile is positive by 17 days, while it is also positive by 180 days at the 75th percentile, with a minimum value of 0 days and a maximum positive value of 320 days.

Delisting is a variable that lets you know which tokens or projects are delisted on one or more platforms or which are not delisted. The average delisting is 0.932. The median Delisting is equal to 0.44. Delisting at the 25th percentile is 1, and at the 75th percentile is the same, with a minimum value of 0 and a maximum value of 1, since it is a binary variable.

Table 3 displays statistics for the dependent variables, most of which are binary except for team size.

The CEO legacy mean is 0.1. The CEO legacy median is 0.3. CEO legacy at the 25th percentile is 0, and the same at the 75th percentile, with a minimum value of 0 and a maximum value of 1.

The mean ERC20 is 0.633. The median ERC20 is 0.440, the ERC20 at the 25th percentile is 0, while it is 1 at the 75th percentile, also with a minimum value of 0 and a maximum value of 1.

The average for Major Cryptocurrencies is 0.8. The median Major Cryptocurrencies is 0.59, the Major Cryptocurrencies at the 25th percentile is 0, while it is 1 at the 75th percentile too, with a minimum value of 0 and a maximum value of 1.

The average USA restriction is 0.200. The median USA restriction is 0.471, the USA restriction at the 25th percentile is 0, while it is 1 at the 75th percentile with a minimum value of 0 and a maximum value of 1.

The average KYC is 0.487. The median KYC is 0.499; the KYC at the 25th percentile is 0, while it is 1 at the 75th percentile, with a minimum value of 0 and a maximum value of 1.

The average White list is 0.257. The median White list is 0.442; the White list at the 25th percentile is 0, while it is 1 at the 75th percentile too, with a minimum value of 0 and a maximum value of 1.

To conclude with the last variable, Team size, the average Team size is 9.767. The median Team size is 5.800, the Team size at the 25th percentile is 6, while it is 14 at the 75th percentile, with a minimum value of 4 and a maximum value of 20.

Empirical analysis

Performance on the First Day returns

Table 4. First-day returns

	(1) R	(2) EW	(3) VW
ERC20	.047	.021	.02
	(.870)	(.350)	(.610)
CEO legacy	.01	.006	0
	(.224)	(.159)	(-.002)
ICO gross proceed~d	0**	0***	0***
_cons	(-4.878) .244*** (9.797)	(-4.839) .164*** (5.619)	(-7.884) .18*** (6.820)
R-squared	.009	.005	.006

t-values are in parentheses

***p<.01,**p<.05,*p<.1

S o u r c e : authors' calculation from sample data.

Table 4 reports results for the regressions results of First day returns for dependant variables ER20, CEO legacy and ICO grossproceed. Three different models are used. Model (1) looked at gross returns (R), model (2) based on abnormal returns corrected weighted benchmark (EW), and finally, model (3) used abnormal returns corrected by the value-weighted benchmark (VW).

In model (1) and model (3), we observed an interesting result concerning ICO Gross proceeds. Although its value is zero, it has a positive and significant impact at the 10% level on first-day returns (R and VW). This suggests that, even though ICO Gross Proceed has no value in itself, it has a positive effect on initial ICO performance. In contrast, the CEO Legacy and ERC20 variables showed positive but significant coefficients on first-day return (R).

In model (2), which looks at abnormal returns corrected by the Equal Weighted Benchmark (EW), we also find that ICO Gross Proceed, CEO Legacy,

and ERC20 have positive coefficients, but they are not significant for first-day returns (EW).

Time to market and delisting

Table 5. Time to market and delisting

	Time to market	Delisting
Team size	-3.88*** (-8.496)	.010*** (6.322)
CEO legacy	-32.322***	.302***
KYC	(-6.050) 55.885*** (16.02)	(18.203) .294*** (22.752)
_cons	160.002***	.562***
	(20.29)	(31.56)
R-squared	.178	.242

t-values are in parentheses

*** p<.01, ** p<.05, * p<.1

S o u r c e : authors' calculation from sample data.

The results presented in Table 5 of our regressions are instructive for understanding the relationships between several key variables. In model (1), we observed that "Team size" and "CEO legacy" are both negative but significant at the 1% level for "Time to market". This suggests that larger teams and CEOs with prior experience tend to reduce the time it takes to bring a product to market. In other words, a larger team and experienced leadership can speed up the development and marketing process.

On the other hand, the "KYC" (Know Your Customer) variable, which represents stricter customer identity verification procedures, is positive and significant at the same level as "Time to market". This indicates that stricter KYC procedures can lead to a longer time-to-market. This relationship can be explained by the fact that more stringent KYC procedures can slow down the customer verification process, which can have an impact on time to market.

In model (2), we found that "Team size", "CEO legacy" and "KYC" are all positive with a significant effect at the 1% level on the "Delisting" variable. This suggests that, in this model, a larger team, a CEO with previous experience, and stricter KYC procedures are associated with an increased risk of delisting.

It is important to note that the control variables in both models showed positive and significant effects at the 1% level. This indicates that these variables play an essential role in the observed relationships. In summary, our results highlight complex relationships between "Time to market" and project delisting with factors such as the size of the team, CEO experience, and KYC procedures, while emphasizing the importance of control variables in these interactions.

ICO gross proceeds and nominal return

Table 6. ICO gross proceeds and nominal return

	Nominal	LICO gross proceed
KYC	2.522*** (129.52)	
ICO gross proceed	0* (1.562)	
ERC20		2.170*** (9.785)
Major cryptocurrency		-1.569*** (-10.754)
ICO duration		.004*** (6.215)
USA restriction		2.447*** (10.546)
_cons	-.022 (-.75)	8.855*** (15.856)
R-squared	.038	.450

t-values are in parentheses

*** p<.01, ** p<.05, * p<.1

Source: authors' calculation from sample data.

Table 6 displays results for the whole variables used in our work. Results of our analysis reveals important information about the factors influencing nominal returns for investors in ICOs. We found that the "KYC" (Know Your Customer) variable, which represents stricter customer identity verification procedures, is positive with a significant effect at the 1% level on "Nominal return". This suggests that more stringent KYC procedures may be associated with higher nominal returns for ICO investors. In other words, when investors are confident that token holders are authenticated, this can increase their confidence and will to invest, resulting in higher nominal returns.

On the other hand, it's interesting to note that the Gross Proceed ICO, even though its value is zero, is significant at the 10% level in this model. This indicates that even if the gross proceeds of the ICO have no value in them, they can have an impact on nominal returns.

However, the other variables in the model, such as "ERC20", "Major Cryptocurrencies", "ICO duration" and "USA restriction", did not produce significant results. This means that they have no statistically significant impact on "Nominal return" in this model. As for the control variables in model (1), they were negative and had no significant effect on "Nominal return".

Model (2) of our analysis focuses on the factors influencing the total amount raised in an ICO, the ICO Gross Proceed. We observed that variables such as "ERC20", "ICO duration" and "USA restriction" are positive with a significant effect at the 1% level on ICO Gross Proceed. This suggests that ERC20 compliance, ICO duration, and USA restriction may play an important role in determining the funds raised in an ICO. On the other hand, the "Major Cryptocurrencies "variable is negative but significant at the 1% level, indicating that the presence of these major crypto-currencies may negatively influence the total amount raised during an ICO.

However, the "KYC" variable did not yield significant results in this model, suggesting that it has no statistically significant effect on ICO Gross proceeds.

The control variables in the model (2) were positive and had a statistically significant effect at the 1% level.

In conclusion, our results suggest that during ICOs, KYC can positively affect nominal returns for investors. In addition, factors such as ICO duration, ERC20 compliance, US restrictions, and the presence of major crypto-currencies are also potentially influential on the amounts raised. It is also important to note that control variables played a significant role in these models.

Discussion

According to our analyses, the results vary depending on the models we use:

In our models (1) and (3), we observed that the total amount raised at an ICO, represented by the ICO Gross Proceed, had a positive and significant impact on day-one returns (R and VW). This suggests that the amount raised at the ICO has a positive effect on these returns, meaning that ICOs that have successfully raised significant funds tend to generate higher returns.

However, the "CEO legacy" variables and "ERC20" did not show any significant impact on these returns. We, therefore, reject the hypothesis that CEO legacy and ERC20 significantly influence ICO performance.

In model (2), no variable had a significant impact on first-day returns (EW). Therefore, in this particular model, we reject the hypothesis that these variables influence ICO performance. In summary, our analyses suggest partial acceptance of the hypothesis that ICO Gross Proceed positively influences ICO performance, but reject the significant effect of CEO legacy and ERC20 on ICO performance. It is important to note that the results vary according to the statistical model used, highlighting the complexity of the relationship between these variables and ICO performance.

In model (1), we found that ICOs with larger teams and experienced CEOs tended to reduce the time taken to bring their product to market. However, this did not translate into superior overall performance in terms of returns. In model (2), we found that larger teams, experienced CEOs, and stricter KYC procedures were associated with an increased risk of asset delisting, which runs counter to the idea that ICOs that avoid delisting are more efficient. In summary, our results suggest that speed to market and avoidance of delisting are not necessarily determinants of ICO performance. Therefore, in the context of our models, the hypothesis that these factors lead to overall superior performance can be rejected.

In model (1), our analysis suggests that strict KYC procedures are associated with higher nominal returns, supporting the hypothesis. However, the impact of ICO Gross Proceed on nominal returns is not significant, suggesting a partial rejection of the hypothesis. In model (2), the positive effect of KYC procedures on nominal returns is confirmed, supporting the hypothesis. In addition, ICO duration, ERC20 compliance, and US-related restrictions have a significant impact on fundraising (ICO Gross Proceed), strengthening the hypoth-

esis. However, the presence of major crypto-currencies has a negative effect, suggesting a partial rejection of the hypothesis. In summary, the hypothesis that strict KYC procedures are linked to higher nominal returns is accepted in both models. However, the relationship between total fundraising and nominal returns is complex and varies according to factors specific to each model. It is therefore not possible to conclude categorically that higher returns always lead to higher fundraising.

Conclusion

This study complements the growing academic literature on ICOs. Indeed, our study shows that many factors play a role in determining the success or failure of an ICO. These factors are interconnected in complex ways and need to be understood holistically to fully appreciate their impact on performance.

The reputation of the founding team, the quality of the information provided to stakeholders, as well as market liquidity and regulatory compliance, emerged as key factors determining the effectiveness of the work.

The findings have significant implications for all participants in the ICO market. Investors, facing risks due to the lack of investor protection in the largely unregulated ICO market, should take into account various ICO features like expert ratings, project team members, campaign duration, and the percentage of tokens offered for public sale before making investment decisions in an ICO. Additionally, entrepreneurs can use these findings to improve their chances of success in launching a successful ICO project. Ultimately, collaboration between investors, entrepreneurs, and regulators is crucial in ensuring the long-term sustainability and growth of the ICO market. They should continue to monitor and regulate the market to protect investors and ensure transparency and accountability among ICO projects.

Investors are encouraged to pay particular attention to these factors when considering participating in an ICO. Ultimately, regulators have a central role in maintaining the integrity and security of the ICO market.

It's essential to recognize the limitations of our study. The data we're using covers a specific period and the ICO market is not odiously volatile. Still, because blockchain technology is a very secure technology and doesn't find easy access to data.

However, our in-depth understanding of the determinants of ICO performance provides important insights for those interested in the future of digital finance.

The ICO research field has great potential. Market trends and regulatory developments will continue to influence performance factors.

Future studies could examine these evolving trends and the impact of new technologies, providing further insight into this ever-changing field.

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