

News Contagion, Investors' Decisions, and ICOs' Success

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News Contagion, Investors' Decisions, and ICOs' Success

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Abstract

Our research explores the influence of news and comments, specifically those circulated by reliable sources such as the Financial Times, on the ability of firms undertaking an Initial Coin Offering (ICO) to achieve their target fundraising goal, known as the soft-cap. We employ contagion theory as a framework to investigate whether an increased volume or a more favorable net sentiment of such news and comments enhances the likelihood of token issuers meeting the soft-cap, by steering investor decision-making processes. Our findings indicate a positive, yet non-linear, impact of reliable news sources, which significantly bolsters the odds of reaching soft-cap, from 0.4 to up .9. We propose that reliable news and commentary operate through three primary channels: initially, they serve to raise awareness and legitimize the ICO, while over the long term, they play a more informational role.

Keywords: ICOs, News, Complex Contagion, Information Asymmetry

1. Introduction

The emergence of novel technologies has given start-ups and small businesses additional ways to finance their activities, such as crowdfunding and, more recently, Initial Coin Offerings (ICOs). By exploiting the power of blockchain technology (Pilkington, 2015), ICOs enable firms to access capital by directly engaging with investors, bypassing the involvement of financial intermediaries (Kher, Terjesen, and Liu, 2020). In return for their investment, participants receive tokens that grant them either a share in the enterprise (security token) or access to a specific service offered by the venture (utility token) (Adhami and Giudici, 2019; Adhami, Giudici, and Martinazzi, 2018; Colombo *et al.*, 2022) so that ICOs exhibit similarities to both crowdfunding since it allows small-scale investors to participate in funding start-ups (Belleflamme, Lambert, and Schwienbacher, 2014; Cumming

and Hornuf, 2022; Lukkarinen *et al.*, 2016; Mollick, 2014), and Initial Public Offerings (IPOs) since the tokens issued in ICOs may be traded as cryptocurrency assets on secondary market platforms (Cook, Kieschnick, and Van Ness, 2006; Fisch *et al.*, 2021; Kajtazi and Moro, 2019). However, ICOs imply a greater investment risk compared to traditional IPOs due to the presence of uncertainties concerning the project, its potential outcomes, the fundraising process, and the absence of regulatory oversight (Benedetti and Kostovetsky, 2021; Momtaz, 2021; Moro and Wang, 2020; Šapkauskienė and Višinskaitė, 2020; Shrestha *et al.*, 2021). Unlike IPOs, which operate under the regulation and stringent compliance requirements of stock market authorities, ICOs function within an unregulated environment (Collomb, De Filippi, and Sok, 2019). Furthermore, ICOs do not require detailed prospectuses and information disclosure as in the case of investment banks' underwriting services (Belghitar and Dixon, 2012). ICOs primarily rely on white papers that outline the project's concept and technology, although the levels of transparency and reliability may present considerable variations (Thewissen *et al.*, 2022; Samieifar and Baur, 2021).

Given the crucial role of information in investment decision-making, previous studies have examined the influence of white papers' content on the success of Initial Coin Offerings (ICOs), yielding mixed findings. Research finds evidence suggesting a positive relationship between technically-oriented white papers and the likelihood of ICOs successfully raising funds (Florysiak and Schandlbauer, 2022). Similarly, Samieifar and Baur (2021) and Zhang *et al.* (2019) find that linguistic attributes of white papers, such as readability and narrative tone, serve as effective predictors of successful ICO. Thewissen *et al.* (2022) explore the thematic content of white papers and offer partial evidence regarding their usefulness for investors. Their findings indicate that the thematic content of white papers is only associated with ICO performance during the initial month of token trading, with a diminishing relationship observed in the subsequent post-ICO periods (i.e., six months and twelve

months). However, Adhami, Giudici, and Martinazzi (2018) report no significant association between the availability of white papers and the probability of reaching the soft-cap, suggesting that the mere presence of a white paper does not guarantee fundraising success. Furthermore, Florysiak and Schandlbauer (2022) differentiate between informative and standard content based on disclosure norms. They find no direct relationship between the informative content of white papers and the amount raised during the ICO process.

The heterogeneous findings concerning the influence of white papers' content on the success and performance of Initial Coin Offerings (ICOs) can be partially ascribed to inherent limitations associated with white paper documents. Firstly, these documents frequently lack comprehensive and detailed information that investors necessitate to make informed decisions (Thewissen et al., 2022; Samieifar and Baur, 2021). Secondly, the absence of independent regulatory oversight raises doubts regarding the reliability and comprehensiveness of white papers (Hacker and Thomale, 2018; Collomb, De Filippi, and Sok, 2019). Consequently, investors face a significant level of uncertainty in their decision-making process.

However, ICO investors might also rely on more reliable alternative sources of information, such as well-regarded financial newspapers and magazines, which can serve as valuable resources for investors aiming to gain a comprehensive understanding of the ICO phenomenon. Surprisingly, to the best of our knowledge, the existing literature has not yet explored the role of reliable non-company-specific information sources that can provide more objective insights into the ICO phenomenon, such as reputable media outlets.

Our study aims to investigate the influence of highly reputable and general information provided by newspapers known for their rigorous control, evaluation, and verification procedures and very good analysis on the ability of a token issuer to secure the funds they aim to obtain. We model the influence of reputable media by relying on the

contagion theory framework (Granovetter, 1985, 2005), which posits that information dissemination can propagate through communities akin to viral contagion. We propose that investors may become “infected” by general but reliable information provided by reputable newspapers, so that it impacts their investment decisions concerning tokens. Investors’ decision to invest in an ICO, in turn, shapes the success of the fundraising activities (reaching the softcap) of firms issuing the token (Centola, 2008, 2011, 2018; Centola and Macy, 2007). More precisely, we argue that for investors to be persuaded in their investment choices, they require repeated exposure to reliable news concerning the ICO phenomenon (Centola, 2008, 2011, 2018; Centola and Macy, 2007). This repeated exposure is crucial as news and information from credible sources must exert additional influence on investors to overcome the barriers associated with the elevated risks intrinsic in ICO investments.

Our analysis is based on a comprehensive sample comprising 1,576 ICOs spanning the period from 2016 to 2021 and on articles published in the Financial Times about the ICO phenomenon. The results of our study indicate that both the number of articles issued during the token sale and their net sentiment positively influence investors’ decision-making processes, thereby increasing the likelihood of the firm successfully reaching its target funds (i.e., soft-cap). In addition, our findings suggest a non-monotonic relationship, wherein excessive news coverage can diminish interest in investing in ICOs. Moreover, we also investigate the role of the stock of news accumulated before the token sale (i.e. the overall number of articles and their overall sentiment up to the closing date of the token sale) to explore the long-term effects of media coverage and find that the entirety of the news accumulated before the token sale significantly affects the probability of successfully securing funds. Also, we calculate the marginal effects to estimate the economic role of contagion beyond its statistical significance and find a very relevant impact of the number of published news/articles that move the probability of being successful from .4 to up to .9 (up

to .7 in the case of net sentiment). Our results are robust to alternative estimation methods and potential endogeneity issues related to reverse causality, simultaneity, and omitted variables.

Being the first study that looks at the role of reliable non-company information in a firm's ability to secure funds via a token sale, our work adds to the current conversation on ICOs in two ways: a) it expands the current research on ICOs by showing the relevant role of general but reliable news/analysis sources in investors' decisions and in ICOs' ability to secure funds; b) it adds to finance research by showing the possibility to rely on the contagion framework as a tool to explain the behaviour of investors and the ability of firms to secure funds.

2. ICOs, information asymmetry, and contagion

An ICO allows start-ups to raise funds by directly engaging a large number of small investors (Adhami *et al.*, 2018; Fisch, 2019; Moro and Wang, 2020). These investors, through a small financial commitment, have the opportunity to invest in new and highly innovative ventures at a low cost since no financial intermediaries are involved (Fisch *et al.*, 2021). Furthermore, at variance to equity crowdfunding (Cumming and Hornuf, 2022; Lukkarinen *et al.*, 2016), the issued tokens can be traded in secondary markets, typically managed by privately owned and largely unregulated platforms that facilitate token transferability, thereby adding an intriguing speculative motive for investors (Adhami and Guegan, 2020; Benedetti and Kostovetsky, 2021; Hacker and Thomale, 2018; Kajtazi and Moro, 2019). ICOs promise to enhance the fundraising capabilities of young high-tech start-ups (by opening a market traditionally restricted to venture capitalists and business angels to nonprofessional investors) and to broaden the ability of start-ups to raise funds (Kher, Terjesen, and Liu, 2020; Roosenboom, van der Kolk, and de Jong, 2020).

However, ICOs carry a significant level of risk (Benedetti and Kostovetsky, 2021; Moro and Wang, 2020; Fisch, 2019). Blockchain-based projects are very often early movers, exhibit a highly innovative nature that poses technical challenges, and face uncertain demand (Philippi, Schuhmacher, and Bastian, 2021; Moro and Wang, 2020). Furthermore, these projects often introduce services or products for markets that do not yet exist. Consequently, ICOs suffer from information asymmetry (Jensen and Meckling, 1976), which exceeds the typical information asymmetry faced by small entrepreneurial firms (Van Caneghem and Van Campenhout, 2012; Colombo *et al.*, 2022; Cumming and Johan, 2017; Moro, Fink, and Kautonen, 2014) since white papers and additional project documentation provided by the token issuers frequently lack comprehensive details and verification (Thewissen *et al.*, 2022). The result is that investors face critical gaps in understanding the project so the accurate assessment of risks and rewards associated with an ICO is very difficult. In such a context, the availability of non-company-specific information about the ICO phenomenon, as disseminated through reputable media sources, may play a key role in shaping investors' decisions to invest or refrain from investing (Bhattacharjee and Singh, 2017). This external information may be used to partially bridge the gap faced by investors, as it provides additional insights into the phenomenon.

Previous research, particularly within the fields of sociology and politics, has extensively examined the dynamics of information dissemination and its influence on individual behavior by drawing upon biological contagion models and the spread of infectious diseases (Granovetter, 1985, 2005): an individual who is “infected” with information has the potential to transmit it to susceptible individuals, after a brief period of latency. However, the spread of information through social networks is a much more complex phenomenon than the transmission of viruses or bacteria. Granovetter (2005; 1985) emphasizes the significance of ties or relationships between individuals within a social

network. He distinguishes between weak ties (connections between individuals who are not close friends or family members) and strong ties (tightly knit connections such as immediate family members, close friends, or colleagues) and argues that weak ties play a more crucial role in the dissemination of information because they allow for the flow of information between different social groups or diverse backgrounds. More recent studies have highlighted that the aforementioned framework may not fully capture the complexities of human behavior change (Centola, 2018) since it is essential to distinguish between exposure to information and the subsequent decision to modify behavior based on that information. Because the decision to alter behavior entails taking action, it is important to differentiate between contagion scenarios in which a simple exposure to information can exert influence on behavior, as the necessary action is relatively effortless and scenarios in which individuals need to invest additional effort to enact change. In the latter scenario, it is expected that individuals would require reinforcement for information to effectively impact their habits and behavior.

In this respect, Centola (2011, 2018) introduces a conceptual framework that distinguishes between two types of contagion: simple contagion and complex contagion. Simple contagion occurs when exposure to new information or ideas immediately influences the behavior of the infected individual due to the ease of adjustment involved. In contrast, complex contagion arises when individuals need to exert additional effort to align their behavior with the new information (Centola, 2011). In such a framework, the more demanding the adjustment, the greater the importance of repetitive exposure to the same information since it reinforces the message. Through multiple encounters with the information, susceptible individuals are more likely to internalize the message, overcome the resistance to change associated with the effort required, and, ultimately, adjust their behavior (Centola, 2008, 2011, 2018; Centola and Macy, 2007).

Both simple and complex contagion mechanisms can significantly influence investor decision-making processes and, consequently, impact a firm's ability to secure funds. In situations involving relatively small investments and the presence of high-quality firm-specific information (Belghitar and Dixon, 2012; Hanley and Hoberg, 2010), simple contagion can assume a relevant role. In such instances, investors can swiftly act upon the information they have accessed and make investment decisions accordingly. Conversely, in contexts characterized by uncertain and unreliable information (Van Caneghem and Van Campenhout, 2012; Moro *et al.*, 2014) or when large sums have to be invested (Chemmanur and Chen, 2014; Cressy, 2006), additional stimuli are necessary to motivate investors to commit funds. In these scenarios, complex contagion becomes crucial. Investors require repeated exposure to information from various sources, allowing for the reinforcement of the message and increasing its influence on their decision-making (Centola, 2011). All in all, it can be argued that complex contagion mechanism is core in contexts characterized by high levels of information asymmetry and substantial investment requirements. In these situations, where trust and confidence are critical (Duan *et al.*, 2020; Howorth and Moro, 2006; Maxwell, Jeffrey, and Lévesque, 2011), repetitive exposure to information from multiple sources becomes vital in overcoming the challenges posed by information asymmetry and convincing investors to commit their resources to the firm.

The phenomenon of ICOs presents distinctive and complex characteristics: the availability of reliable and specific information relating to the firm or project involved in an ICO is often limited, if not absent (Florysiak and Schandlbauer, 2022). Consequently, the reliance on complex contagion mechanisms becomes essential to convince investors to take investment decisions, thereby enabling firms to secure the necessary funds. Given the lack of firm-specific information, repeated exposure to the available general but reliable information becomes relevant in shaping investor behavior and cultivating a sense of confidence in the

underlying venture (An *et al.*, 2019; Duan *et al.*, 2020). At the same time, the relatively modest investment amounts required in ICOs mitigate the potential negative impact in the event of a loss so that the diminished financial risk inherent in ICO investments potentially diminishes the hesitancy and caution typically associated with ventures of higher risk, thereby facilitating investment decision-making. Consequently, it suggests that simple contagion mechanisms may exert influence in motivating investors to engage in ICO investments and facilitating firms in getting the necessary funding.

Given the substantial information asymmetry characteristic of token investments, it is expected that the reduced investment amount does not sufficiently overcome the barriers associated with the lack of specific information. Consequently, it is expected that the availability of general and reliable information, in the form of news from reputable sources (such as major financial journals like the Financial Times), plays a significant role in shaping investors' decisions and influencing a firm's ability to secure the necessary funds. However, such information requires reinforcement to effectively impact investor behavior (Centola, 2011). Initially, news from reputable sources raises awareness among potential investors regarding the investment opportunity presented by ICOs. This news stimulates their interest and expands their general knowledge of the ICO phenomenon. However, to successfully convince investors to invest in ICOs, the dissemination of additional news acts as a form of reinforcement. This serves to address any doubts or questions investors may have while further stimulating their interest in this asset class. Thus, our first hypotheses are:

H1a: There is a positive association between the number of articles published about ICOs in reliable financial newspapers (FT) during the ICO period and the probability of ICOs reaching the soft-cap.

H1b: There is a positive association between the sentiment of articles published

about ICOs in reliable financial newspapers (FT) during the ICO period and the probability of ICOs reaching the soft-cap.

However, it is essential to note that the news influencing investors' decisions is not limited to the period when a particular firm is actively pursuing an ICO. Investors rely not only on the ICO general information available at the time but also on news disseminated in the past before the specific ICO has been launched. Therefore, investors may draw upon the entire pool of information and ideas previously made available by reputable newspapers and magazines. This implies that the likelihood of an investor making an investment and a firm reaching its soft-cap may also depend on the cumulative stock of news and their associated sentiment. Thus, we state the following hypothesis:

H2a: There is a positive association between the cumulated number of articles published about ICOs in reliable financial newspapers (FT) and the probability of ICOs reaching the soft-cap

H2b: There is a positive association between the cumulated sentiment of articles published about ICOs in reliable financial newspapers (FT) and the probability of ICOs reaching the soft-cap

The aforementioned arguments emphasize the significance of reinforcement in terms of the number of articles and the intensity of positive sentiment regarding ICOs. However, it is important to note that an excessive amount of information can lead to a fatigue effect, which may discourage action from the “infected” individuals (Moro, Radić, and Truong, 2023). Investors may perceive the abundance of news as exerting excessive pressure, causing them to react negatively to the investment opportunity. This negative response could be driven by

their dislike of such pressure or suspicions arising when the accessible information overwhelmingly supports one direction (e.g. if the majority of news portrays ICOs as exceptionally profitable investments). Thus, the impact of high-quality news is expected to be non-monotonic, meaning its effect on investors is not consistently positive across all levels of reinforcement. Instead, there may be a positive effect for lower levels of reinforcement, but this effect could become negative for higher levels of reinforcement. This suggests that an optimal balance in terms of the amount and intensity of news coverage is crucial to maintaining investor engagement and fostering positive attitudes toward ICOs. Accordingly, we hypothesise that

H3a: There is a non-monotonic (inverted U-shaped curve) association between the number of articles published about ICOs in reliable financial newspapers and the probability an ICO reaches the soft-cap

H3b: There is a non-monotonic (inverted U-shaped curve) association between the sentiment of articles published about ICOs in reliable financial newspapers and the probability an ICO reaches the soft-cap

3. Data and Methodology

3.1. Data

Scholars conducting empirical examinations of nascent enterprise initiation frequently grapple with methodological challenges, including survival bias (Gudmundsson and Lechner, 2013) and retrospective bias, also known as hindsight bias (Cassar and Craig, 2009). The former refers to the issue that archival records primarily document ventures that have achieved success (Strang and Aldrich, 2002), thereby potentially skewing analyses towards a limited scope of business development. The latter bias pertains to the inaccuracies in

recollections of failed business founders, often leading to misrepresentations of the conditions that precipitated their business failures (Dimov, 2007). Moreover, census data that would ideally offer a comprehensive overview of new venture creation is scarcely accessible for scholarly research, thereby placing constraints on the accuracy of new venture analysis. Given this predicament, it becomes crucial for researchers to meticulously choose samples that embody the target population, and employ sophisticated statistical methodologies to mitigate the effects of selection bias (Winship and Mare, 1992). This methodological rigor is essential to uphold the integrity of empirical studies examining new venture creation, facilitating a more accurate understanding of the phenomenon.

Under certain conditions, the procurement of near-census data becomes a feasible endeavor, particularly when the sample framework is considerably compact, allowing for comprehensive observation of a particular phenomenon (Flint, Woodruff, and Gardial, 2002). This is distinctly applicable in the case of Initial Coin Offerings (ICOs), owing to their finite number and the indelible digital trails they leave behind, irrespective of their success or brevity of existence. Consequently, data acquisition and analysis for ICOs promises to yield greater accuracy in comparison to other economic sectors.

This research relies on near-census data, employing a modified four-stage systematic literature review methodology as delineated by Tranfield, Denyer, and Smart (2003), with the objective of systematically pinpointing and assessing pertinent data sources. This widely adopted approach, as articulated by Fink (2014), is characterized as a systematic, explicit, and replicable blueprint for identifying, appraising, and deciphering documented evidence. The utilization of this method in the present research will specifically cater to identifying and evaluating data sources, in lieu of pre-existing knowledge, to facilitate an accurate examination of the ICO phenomenon.

The process of data collection for this study spanned from January to September 2021 and commenced with a meticulous literature survey of all accessible publications in academic databases. The search encompassed all articles where the phrase “initial coin offering” was featured in the title, abstract, or keywords, disregarding factors such as publication date, peer-reviewed status, or language. The search yielded 319 results, translating into 254 distinct, full-text available publications. We employed text analysis software to extract all web links embedded in these articles, which were subsequently sorted and categorized manually. This method led to the identification of 134 distinct ICOs and 34 online platforms, inclusive of rating and news websites, and additional resources listing ICOs. Further exploratory multimedia searches on Google, web forums, and social media platforms utilizing keywords such as «ICO list», «ICO database», and «ICO rating» revealed 69 more online resources that contained lists of ICOs. The online database «similarweb.co» aided in identifying similar online resources, adding another 18 links, and cumulating a total of 121 web domains. Of these, 23 were irrelevant or did not list ICOs, and 43 were no longer active. A manual collection of ICO entries from the remaining 55 online resources was conducted, including eight websites that were active but had not been updated since the ICO surge between 2017 and 2020. We also retrieved data from 16 defunct websites through web archives or their still-active social media accounts. This laborious process enabled the compilation of an exhaustive list of ICOs, even incorporating short-lived and unsuccessful projects unattainable on current trading platforms.

The compilation of media reports concerning Initial Coin Offerings (ICOs) was accomplished through a similarly rigorous and systematic process. Primarily, the esteemed financial newspaper, the Financial Times, was identified as the data source due to its early and extensive reporting on ICOs, combined with its solid and high-quality financial analysis. Moreover, the newspaper commands a considerable reputation and appeals to a wide

readership demographic that aligns with the ICOs target audience interested in financial products. Subsequently, an archival retrieval was employed to load all the Financial Times articles that reported on ICOs. Given the acronym ICO can also refer to the Information Commissioner Officer in the UK, we cross-check the articles retrieved to be sure to retain only those referring to the Initial Coin Offering phenomenon. The time frame of these reports stretched from early 2017 up until the conclusion of our observational period in 2021. A subsequent quantitative evaluation was conducted to ascertain the frequency of articles within each temporal segment, followed by a qualitative appraisal utilizing an in-text sentiment analysis. This combination of methodologies facilitated a multifaceted exploration of the discourse surrounding ICOs within the media landscape.

3.2. Methodology

Given that our dependent variable is a dummy (reaching soft-cap), we estimate our regressions using probit regression with robust standard errors to deal with potential heteroskedasticity issues. We estimate the model by including the number of articles and the net sentiment separately to avoid collinearity issues arising from the correlation between the two independent variables. To explore non-monotonicity, we estimate the model by also including the square values of our independent variables. Moreover, we investigate the economic impact of the relationships by estimating the marginal effects and producing plots for the entire spectrum of the values of the independent variables.

Our specifications may suffer from endogeneity in the form of reverse causality or simultaneity (the amount of news and their sentiment can be the result of how successful securing funds is since the popularity of a financing tool can attract interest from the media affecting both the number of articles and their sentiment). To address these issues, we re-estimate the specifications by using the lagged number of articles and lagged news sentiment. Moreover, we cannot rule out that our model suffers from endogeneity because we are

omitting a variable that affects both news (number of articles and their sentiment) and reaching the soft-cap so that the relation shown by our original specifications is, in fact, spurious. To deal with such an issue, we re-estimated our model by instrumenting the independent variables with Google searches on a general topic not related to the ICO realm in a way similar to Moro, Radić, and Truong (2023). We posit that a general topic can distract newspaper interest in covering ICOs so that there is a negative relation between our instrument and the independent variables. We use Google searches on Brexit. This variable is unrelated to our dependent variable (both in terms of causality and in terms of association) so it satisfies the exclusion criteria. This point is also supported by the additional endogeneity test we perform (detailed information later).

3.3. Dependent Variables, Independent Variables, and Controls

The analysis focuses on whether the venture can reach its soft-cap or not. Thus, we use a dummy for the dependent variable with a value of 1 in case the soft-cap is reached and 0 otherwise.

The first independent variable we consider is the number of Financial Times articles published during the period when the firm is selling tokens. Financial Times (together with the Wall Street Journal) is one of the most prominent financial newspapers. It provides very broad coverage of financial and financial-related topics, it is very popular all around the world, and it is well respected in terms of the quality of the news and analysis published. Thus, it is considered a good proxy to measure the dissemination of general and reliable information about ICOs. The second independent variable is the net sentiment (number of positive less negative words) of the articles published by the Financial Times during the period when the token is on sale.

We include a set of controls, both venture and context-specific. Among the venture-specific controls, we used dummies that identify the industry the ICO operates in (Crypto,

Fintech, Consulting, Entertaining, Health, and Social), whether the venture implements a KYC (know your customer) or an MVP (minimal viable product), restrictions on its ICO sales, offers of bonuses, and whether it maintains a whitelist. All these variables signal quality and thus are expected to positively impact the amount raised. We also include the type of currency accepted since greater flexibility in accepting currencies may make the investment simpler and, thus, may result in a greater probability of reaching the soft-cap. To account for contextual factors, we include dummies for the area where the ICO is incorporated (split between EU, Europe non-EU, North America, Central America and the Caribbean, South America, Pacific Basin, and Asia – Africa). We also include information about ICOs’ social media community (Twitter and Telegram followers) as well as the intensity of visits to ICOs’ websites. Finally, we include information about the leading team (e.g. experience and competencies of the CEO, CTO and CFO).

4. Descriptive Statistic

Table 1 reports the descriptive statistics of the dataset used (overall 2,707 ICOs).

TABLE 1 HERE

Around 40% of the firms in the sample reach the soft-cap and thus, are considered successful in raising the funds needed. The split at the geographical level suggests a larger number of firms from the European Union (22%) followed by non-European Union firms (15%). This group includes token sales associated with firms registered in the UK and the countries of the European Economic Area not belonging to the EU. The area with the smallest proportion of firms is the Pacific Basin (3.4%). Around 37% of the firms offer the possibility to pay also with cryptos and 15% of the firms limit the payment to fiat money

(typically USD, GBP, and to a minor extent GBP). A good number of firms implement KYC or are subject to some regional restriction on the sale of the token (respectively 47% and 43%). Firms tend also to interact with the community of people interested in the project they pursue via Telegram and Twitter (up to almost 100,000 Telegram followers) and all of them have a website quite intensively visited (on average 1,400 visits). The average dimension of the team is 10 people and CEO appears to be the person with the longest average experience in such a leading role (on average 1,200 days).

We do not report the correlation table for reason of space. However, the Pearson correlation coefficient of Financial Times articles with the dummy success is .1966 and is significant. In the case of net sentiment, the coefficient is slightly lower (.1428) and is also highly significant. Other variables that are highly correlated to the dummy success are those related to social media (e.g. Telegram is .2242, Twitter. 2461), searches using firms' names (.2493), and team size (.2154). All the other covariates have correlations below those of the two independent variables suggesting a first, support to our hypos: the correlation between the dependent variable and our two independent variables is quite high and significant, particularly when compared to other variables included in the analysis. By inspecting the Pearson correlation coefficient among the covariates, there are high correlations among variables that identify the geographic area and among those that look at some characteristics of the ICO (e.g. between Geographic restriction and the implementation of white papers). These correlations suggest that it is important to check for possible collinearity issues even if they are mainly related to additional controls. Since the analysis and the regression are estimated on a smaller dataset we check whether there is any issue related to the selection bias by comparing the probability of success as well as the team size and the amount obtained of the cases included in the regressions and those that have been excluded because of missing observations in other variables included in the regressions. The two samples are not

statistically different.

Figure 1 reports the number of articles and the net sentiment through time by date and the cumulated values.

FIGURE 1 HERE

The graphs show a similar pattern between the number of articles and net sentiment. More interestingly they show a first period till mid-2019 when there is a quite intense conversation about ICO followed by a second period where the discussion reduces. There can be a possible alternative explanation for the evolution. It can be argued that in late 2019 and particularly the beginning of 2020 Covid became a wildly discussed topic that, in some way, constrained the conversation on ICOs. It could also be that after an initial period, Financial Times' interest in this new asset class decreased. However, any reason for the decrease in the intensity of the conversation on ICOs in The Financial Times is beyond the scope of the present research.

5. Results

The results are reported in different tables. Table 2 reports the regression including the controls only. Then, from Table 3 onwards, we present the regressions on the independent variables. For the reason of space, we do not report the controls that are, nevertheless, included in the estimation process. The inclusion of the independent variables does not generate any major change in the significance level of the controls.

TABLE 2 HERE

The regression based on 1,576 observations is highly significant ($P < .000$) with a pseudo R^2 of .121. It suggests that geographic location does not have a major role in securing success in obtaining funds. Only Non-EU and North American variables are marginally significant. The possibility to pay using fiat money reduces the probability to be successful as well as the implicit constraints linked to implementing a whitelist (that implies extra activities/disclosure of more sensitive information for the investors) or the KYC (that entails extra work for the firm but also additional requests of information to the investor). At the same time, offering a bonus increases the possibility to secure funds. More interesting is the role of social media variables: the navigating activity on the firm's website as well as the dimension of the community of Telegram and Twitter followers increases the probability to secure funds. Unexpectedly, the characteristics of the leading team (skills and experience) do not have any effect on securing funds.

Table 3A reports the regression including the independent variables.

TABLE 3A HERE

The regressions do not suffer from collinearity (VIF values well below the thresholds) and the inclusion of the dependent variables improves model's Mc Fadden's R square from .121 to .149 (in the case of Financial Times articles) and .133 (in the case of net sentiment). More importantly, in line with the first evidence we obtained by looking at the correlation coefficients, both the number of articles and the sentiment are positively and significantly related to the success in securing funds (columns 1 and 2): the reliable and general information spread by Financial Times positively influences investment decisions of investors so that, in turn, firms are more likely to successfully close the sale of their tokens. Our hypotheses are supported.

As discussed in the literature review section and evidenced by past research, too much information may have a negative effect on people. To check for the non-monotonicity of the relationship between the independent variables and the success, we retest the model by including the square of the original variable. In both regressions (3 and 4), the original variables are significant and positive while their square is significant but negatively related to success in securing funds. This suggests the contagion has an inverted U shape: news increases the probability of success by influencing the investors, but too intense conversation (too many articles or too high positive sentiment) has a negative effect, decreasing the interest and adversely affecting the probability of success.

The discussed results focus on the significance of the relationship. However, it is interesting to explore the economic effect of the independent variables on securing funds and its evolution. Thus, we estimate the marginal effects of different levels of the independent variable on the probability of success. Figure 2 reports the evolution of marginal effects on probability of success in securing funds for different levels of number of articles and net sentiment through the entire spectrum of the values (i.e. from the lowest to the highest value of the spectrum).

FIGURE 2 HERE

In the case of the number of articles, the probability of success moves from .3779 for those firms that enjoy the cover of only one article during the sale of the token to .9712 for those with a cover of 150 articles during the token sale. Interestingly, the probability increases as the number of articles increases but it happens with a decreasing effect for a larger number of articles (suggesting a non-monotonic economic effect of the complex contagion). In the case of the net sentiment the range goes from .4039 (firms with a net

sentiment at -4) to .7493 (firms with a net sentiment of 400). The economic impact of the increase of the net sentiment has a more linear relationship effect on the probability of the firm securing funds. All in all, the evidence suggests that the economic effect of contagion is slightly different when it turns to the number of articles and their sentiment.

So far, we looked at the Financial Time number of published articles/net sentiment during the period of the token sale without considering what happened before. As discussed above, the intensity of the news before the token sale period can facilitate the role of the news during the sale: following the logic of the complex contagion, if a subject has been already exposed to the topic, additional information is more likely to influence their behaviour. To explore this aspect, we estimate our original regressions by looking at three subsamples according to the quartiles so that each subsample includes only those token sales that had a cumulated number of article/net sentiment up to the upper limit of the quartile. Results are reported in Table 3B.

TABLE 3B HERE

In the case of regression including token sales with little exposure before the sale (i.e. including only the first quartile), both the number of Financial Times articles and their net sentiment are not significant. They turn out to be significant in those regressions that include token sales with greater exposure. The result suggests the importance of previous contagion in influencing investor decision to invest and thus, the ability of the firm to reach the soft-cap: to be effective, the contagion during the token sale also builds on a previous contagion so that the articles/sentiment can affect investors' behaviour by reinforcing messages that are already available to the potential buyer.

The ICO phenomenon faced a first stage of increasing token offers (till mid-2019)

that implied increasing competition among firms to secure the support of investors, followed by a period of decreasing token offers. It can be interesting to explore whether the role of news contagion changed according to the competition that tokens' sales faced: maybe news and their sentiment could have had a more relevant role during a period of harsher competition. To explore this aspect, we split our dataset into two subsamples according to whether the token sales were in a growing sale period or a decreasing sale period. The results are reported in Table 3C.

TABLE 3C HERE

Interestingly, the regressions show no difference in the role of news/sentiment according to different time windows. In both periods, the contagion linked to the number of articles and their net sentiment is positive and significant. This is also supported by the analysis of the marginal effects of the two periods (Figure 3).

FIGURE 3 HERE

However, in the case of the number of articles, only for a very low number of published articles during the token sale, their role is (significantly) greater during the period with a growing number of token sales. In other words, news coverage is more important during the increasing competition than when the competition was decreasing. The same pattern can be spotted in the case of net sentiment, but in this case, the different marginal effect is greater. The impact of sentiment was significantly larger during the period of increasing number of token sales. Only for higher levels of net sentiment, the difference is not significant anymore (at 95% level). All in all, it can be concluded that complex contagion

is more important during periods when there is an increase in the token on sale (and possibly greater competition) and when there is a relatively small amount of exposure to the news.

This result is in line with the results about the non-monotonicity of the role of the news.

Finally, we performed an additional analysis. We reestimate the regressions in subgroups by years. Thus, we estimate the regression including only the ICO launched before 31st December 2017, then those between 1st January 2018 and 31st December 2018, and so on and so forth. Interestingly, in all the subsamples, the variables number of articles and their sentiment remains significant suggesting that there is no change in the role of the Financial Times' cover of the phenomenon through time.

5.1 Robustness test

We also performed a set of robustness tests. First, we estimate our basic models by using the logs of the independent variables. This allows us to smooth any effect of outliers and the fact that (as suggested by the regressions with the square of the values) the relationship is non-monotonic. The results (not reported for reason of space) are in line with those obtained in the original model.

Secondly, we explore the possibility that our analysis suffers from reverse causality or simultaneity: we cannot rule out that the popularity of the sales of the token can generate interest in the press and increases press coverage. If this is the case, the probability that a token sale is successful affects the amount of news (and their sentiment). Thus, we estimate the original model using lagged independent variables at one week and two weeks. Reassuringly, the results (not reported for reason of space) remain unchanged. We also test alternative lags (e.g. 30 days and 60 days) to explore possible longer reverse effects (results not reported here but available on request). However, the results remain as in the original model: lagged variables remain significant and positively related to the probability of success.

Finally, we cannot exclude that our model suffers from endogeneity because of omitted variables. To check for this, we instrument our independent variable using the intensity of Google Search on Brexit worldwide in a way similar to Moro, Radić, and Truong (2023). We argue that greater interest in alternative topics affects the number of articles that are published on a specific topic. In our case, the ongoing discussion about Brexit adversely affected the space Financial Times allocated to ICOs and token sales suggesting there should be a negative relationship between Brexit Googles searches (i.e. general interest in Brexit) and Financial Times articles on ICOs. At the same time, there is no reason for searches on Brexit to influence investors' decision to invest in ICOs and, therefore, the probability that a firm is successful in securing funds. In other words, from the logical point of view, Brexit's Google searches pass the exclusion criterion test. The examination of the correlations between the dependent variable (success in reaching the soft-cap), the independent variables (number of Financial Times articles and their net sentiment), and the Google Trend index on Brexit support our argument: the dummy catching the success of a firm in securing funds has a very low correlation with the instrument (-.0746) while Financial Times articles and the net sentiment correlation with Brexit is -.3337 and -.2903 respectively and highly significant. The results of the instrumented regressions are not reported for reason of space.

The instrument is, as expected, negatively and significantly related to the dependent variables. The F test on the first step (i.e. the F value of the instrumenting regression) suggests that the regression is highly significant ($p < .000$). In the second regression (the instrumented one) the estimated number of Financial Times articles as well as the estimated net sentiment remain significant suggesting that our results do not suffer from endogeneity.

We also check the validity of the proposed instrumented regressions. Given that the reduced form for the endogenous explanatory variable is linear, we used the diagnostics that are available in the linear case by estimating the linear version of the model (we use the

ivreg2 command in Stata). This allows us to test for under- and over-identification as well as for weak identification. For the regression looking at the number of articles, the Anderson Canonical test (136.826) allows us to reject the hypothesis of under identification and the Sargan statistic suggests that we do not suffer from overidentification. In addition, the weak identification test (146.979) is well above the Stock-Yoko weak test critical value at 10% suggesting a very low probability that the instrument is a weak instrument. In the case of the regression looking at the net sentiment, the Anderson Canonical test (129.659) allows us to reject the hypothesis of under identification and the Sargan statistic suggests that we do not suffer from overidentification. Again, the weak identification test (138.593) is well above the Stock-Yoko weak test critical value at 10% suggesting a very low probability that the instrument is a weak one.

We also made attempts by using alternative instruments. First, we use the change in the searches instead of the average number of searches (possibly the change in the number of searches better catches the evolution of the interest on the topic). In addition, we used searches (average and change in number of searches) on alternative keywords, namely Trump and Covid. All the alternative instruments appear to be not as good as the Brexit one: they have a lower correlation with the independent variables and are less able to explain the variance of the number of articles/net sentiment (first step regression with lower R^2). However, the results we obtained using the alternative instrument are qualitatively identical to those obtained by using the Brexit variable.

6. Discussion and Conclusion

ICOs are a very recent phenomenon but have already attracted a lot of interest. So far research focused attention on the characteristics of the project (i.e. MVP, KYC, etc.), the characteristics of the team (experience, education, etc.), as well as how the firm disseminates

information (white papers, social media, etc.). Intriguingly enough, the common theme behind these different research areas is the information asymmetry and how investors may overcome it.

Our study explores an additional way through which investors can access information to make informed decisions regarding their investments: the general but highly reliable information disseminated by newspapers or magazines regarding the ICO phenomenon. We find evidence suggesting that the intensity and sentiment of discussions surrounding the ICO phenomenon have a substantive influence on investors' decision-making processes and, consequently, the ability of firms to reach their soft-cap funding targets. The marginal effects analysis stresses the substantial economic impact that news can have on increasing the probability of successfully securing funds during an ICO campaign: we find a shift in the probability to secure funds from 0.4 for the lowest levels of article count or net sentiment, to 0.7 for the highest level of sentiment, and even to 0.9 for the highest level of article count. This emphasizes the crucial role that news, sourced from respected and reliable outlets, can play in shaping investor behavior. We argue that news about the ICO phenomenon disseminated by these well-regarded and dependable sources can influence investors through three channels. These channels may include awareness of the ICO phenomenon, legitimization of ICOs as an asset class, and the increased ability to assess and evaluate ICO projects more effectively.

Firstly, reputable financial newspapers and magazines may play a crucial role in creating awareness about the ICO phenomenon. During the initial years of our dataset, ICOs were relatively unknown and enjoyed only limited popularity. Notably, our data reveals that major newspapers like the Financial Times began covering the topic only at the beginning of 2017. The absence of news coverage in prominent publications significantly limited public awareness of this investment opportunity, primarily attracting a niche group of geeks and

specialized investors seeking unconventional investment avenues. However, the coverage provided by the Financial Times since January 2017 has contributed to raising awareness among a broader investor base (Bhattacharjee and Singh, 2017; Guiso and Jappelli, 2005), encouraging them to consider and potentially invest in ICOs. Secondly, the exploration and analysis of the ICO phenomenon by esteemed newspapers serve to legitimize it (Frydrych *et al.*, 2014; Suchman, 1995; Suddaby, Bitektine, and Haack, 2016). Renowned publications such as the Financial Times, Wall Street Journal, The Economist, and Time do not give their attention to topics that are considered marginal or irrelevant. Their objective is to provide high-quality information to a wide audience so that they cover subjects that hold relevance for a substantial portion of their readership. The recognition of ICOs as a relevant and noteworthy phenomenon by reputable newspapers and magazines implicitly gives legitimacy to this investment class (Suddaby *et al.*, 2016). Thirdly, as previously discussed, investors in ICOs encounter significant challenges in accessing reliable information to evaluate specific investment opportunities. The absence of due diligence processes and the reliance on white papers, which primarily present the project from the firm's perspective without independent and objective assessments, further exacerbate these information gaps (Chen, 2019; Courtney, Dutta, and Li, 2017). While general high-quality news may not facilitate a comprehensive evaluation of individual projects, they provide a broader understanding of whether ICOs, as an investment class, hold potential. This can assist investors in making informed decisions about investing in ICO and, for the token issuer, in reaching the soft-cap.

The three channels discussed thus far raise questions regarding their relative importance and potential evolving roles as the ICO phenomenon progresses. While we lack the detailed data necessary to conduct a comprehensive analysis that definitively answers these questions, certain insights can be gathered from our findings. Specifically, the significant impact of the number of Financial Times (FT) articles and the net sentiment even

in the early stages of the phenomenon suggests that reliable news plays a crucial role in creating investor awareness about ICOs (Bhattacharjee and Singh, 2017; Guiso and Jappelli, 2005). Furthermore, the enduring significance of news coverage as the phenomenon evolves and gains momentum, even when investors are presumed to already be aware of ICOs, suggests that reliable news may also fulfill an important role in legitimizing ICOs (Suddaby *et al.*, 2016). Indeed, the discussion and analysis of the ICO phenomenon in reputable newspapers and magazines serve as a signal to investors that tokens can represent an appealing asset class worthy of consideration or inclusion within their investment portfolios, as shown by the mostly positive sentiment of the articles. However, as the ICO market becomes increasingly popular and well-known among investors, the significance of the legitimization process is expected to diminish. When an asset class gains recognition, there is a reduced need to rely on third-party endorsements for its legitimacy (Massa Saluzzo and Alegre, 2021).

The continued positive impact of both the number and sentiment of news articles in more recent years indicates that news also serves an informative role. By providing investors with reliable, albeit general, insights into the ICO phenomenon and its evolution, news outlets contribute to their understanding and decision-making processes

In summary, while a comprehensive analysis of the relative importance and evolving roles of the different channels—awareness, legitimization, and information provision—is beyond the scope of our current study, our findings suggest that reliable news plays a multifaceted role in the ICO landscape. It can generate awareness and legitimization during the early stage of the phenomenon. The fact that they maintain a relevant role later when the phenomenon has gained momentum, suggests they are also relevant as a source of general information about the context. This information can, then, be used to take investment decisions implying a greater probability that the token issuer can reach a soft-cap.

Our work suffers from some shortcomings that can open further research areas. We rely on a sample. Thus, it could be interesting to replicate our analysis with different samples to check for the robustness of our results. This also suggests that it could be interesting to replicate the analysis at the industry and area levels. We control for both aspects but it can be interesting to explore at a deeper level for any difference news can have at different levels. Moreover, because of the reason of space, we limit our analysis to the number of articles and the net sentiment. Future research can explore the role of the different content/themes in the articles and their impact on the investors' decisions and, then, on the ability of firms to secure funds. An additional area of analysis is the comparison of the role of general news in the context of ICOs and the context of traditional investment, to explore any difference general news and analysis can have on different asset classes.

Notwithstanding the quoted limitations, our research, by exploring an area previously neglected, namely the role of general news in the context of firms financing their activities by issuing a token, expand our past knowledge of the role of high-quality news and analysis in the venture/investor relationship.

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Table 1 – Descriptive Statistics

Variable	Obs.	Mean	Std. Dev	Min	Max
Dummy success	2,707	0.3975	0.4895	0	1
European Union	2,707	0.2213	0.4152	0	1
Non-European Union	2,707	0.1515	0.3586	0	1
North America	2,707	0.1060	0.3079	0	1
Central America and Caribbean	2,707	0.0532	0.2245	0	1
South America	2,707	0.0111	0.1047	0	1
Pacific Basin	2,707	0.0369	0.1887	0	1
Asia	2,707	0.0480	0.2139	0	1
Bitcoin	2,707	0.3687	0.4825	0	1
Fiat money	2,707	0.1533	0.3603	0	1
ICO with Whitelist	2,707	0.2933	0.4554	0	1
Restriction in ICO sale	2,707	0.4392	0.4964	0	1
ICO implementing Know Your Customer	2,707	0.4762	0.4995	0	1
ICO implementing Minimum Viable Product	2,707	0.2390	0.4266	0	1
ICO offering bonus	2,707	0.3816	0.4859	0	1
Natural Log of ICO Hits on Name	2,707	7.2175	3.4151	0	18.6438
Natural Log of ICO Hits on URL	2,688	5.9409	3.0258	0	21.0308
Natural Log of ICO Telegram followers	1,661	6.9709	2.0485	1.0986	11.5129
Natural Log of ICO Twitter followers	1,888	1.1914	0.9566	0.0020	5.6337
CEO management skills (log)	2,707	1.3424	1.8138	0	6.3279
CEO entrepreneurial skills (log)	2,707	0.5333	1.3229	0	5.2933
CFO management skills (log)	2,707	0.2545	0.9027	0	5.6021
CFO Finance skills (log)	2,707	0.1908	0.8186	0	5.6904
CTO management skills (log)	2,707	0.6227	1.3160	0	6.1527
CTO technology skills (log)	2,707	1.1247	1.7542	0	6.2066
Number of members of the team	2,707	10.3746	5.8492	1	20
CEO experience	2,707	1199.0040	1412.0530	0	16102
CTO experience	2,707	672.8829	1203.9240	0	15553
CFO experience	2,707	268.9642	896.6983	0	14064
Number of FT articles on ICOs	2,707	19.0196	17.5410	0	125
Net FT articles sentiment - lag 0	2,707	80.9501	68.8916	-4	414

Figure 1: Number of articles and Net sentiment through time

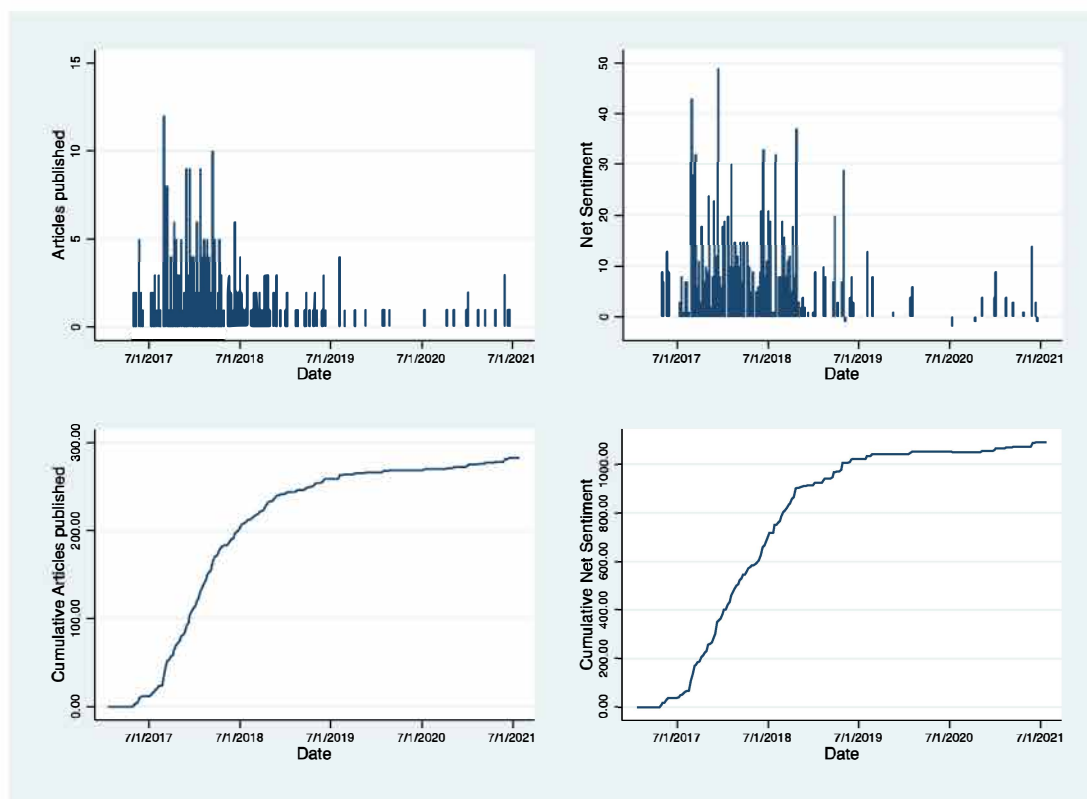


Table 3 – Controls

Dependent variable: Dummy Success in securing funds.

Controls: Geographic location (whether the firm is headquartered in EU, Europe non-EU, North America, Central America, South America, Pacific Basin or Asia); Currency accepted (bitcoin, fiat money); Firm's characteristics (if the firm implements a white list, if the firm implements KYC, if the firm has restrictions on the sale of the token, if the firm implements an MVP if the firm offers a bonus); Social media visibility (websites hits by name and by URL, Twitter, and Telegram followers); team skills (CEO managerial and entrepreneurial skills, CTO managerial and technical skills, CFO managerial and finance skills, number of the members of the team), experience (CEO, CTO, and CFO past experience in days)

VARIABLES	1 Controls
Geographic Region	European Union
	0.0037 (0.092)
	Non-European Union
	-0.1780* (0.103)
	North America
	-0.2243* (0.123)
	Central America and Caribbean
	-0.2029 (0.144)
Currency	South America
	-0.1847 (0.346)
Firm	Pacific Basin
	-0.2114 (0.181)
Social Media	Asia
	0.0681 (0.155)
Team Skills	Bitcoin accepted
	0.1166 (0.075)
Firm	ICO offering payment in fiat money
	-0.1967** (0.096)
Social Media	ICO with Whitelist
	-0.1848** (0.080)
Team Skills	Restriction in ICO sale
	0.0560 (0.089)
Firm	ICO implementing Know Your Customer
	-0.2191** (0.099)
Social Media	ICO implementing Minimum Viable Product
	0.0694 (0.078)
Team Skills	ICO offering bonus
	0.3371*** (0.070)
Firm	Natural Log of ICO Hits on Name
	0.0117 (0.010)
Social Media	Natural Log of ICO Hits on URL
	0.0863*** (0.012)
Team Skills	Natural Log of ICO Telegram followers
	0.0658*** (0.020)
Firm	Natural Log of ICO Twitter followers
	0.1757*** (0.042)
Social Media	CEO management skills (log)
	-0.0231 (0.020)
Team Skills	CEO entrepreneurial skills (log)
	-0.0303 (0.028)
Firm	CFO management skills (log)
	0.0183 (0.045)
Social Media	CFO Finance skills (log)
	0.0474 (0.050)
Team Skills	CTO management skills (log)
	-0.0041 (0.029)
Firm	CTO technology skills (log)
	0.0025 (0.022)
Social Media	Number of members of the team
	0.0364*** (0.007)

Team Experience	CEO experience	0.0000 (0.000)
	CTO experience	-0.0000 (0.000)
	CFO experience	-0.0001* (0.000)
Constant		-1.6774*** (0.177)
Observations		1,576
p		0.0000
r2_p		0.121
N		1576
Robust standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

Table 3A – Basic Regression

Dependent variable: Dummy Success in securing funds.

Controls: Geographic location (whether the firm is headquartered in EU, Europe non-EU, North America, Central America, South America, Pacific Basin or Asia); Currency accepted (bitcoin, fiat money); Firm's characteristics (if the firm implements a white list, if the firm implements KYC, if the firm has restrictions on the sale of the token, if the firm implements an MVP if the firm offers a bonus); Social media visibility (websites hits by name and by URL, Twitter, and Telegram followers); team skills (CEO managerial and entrepreneurial skills, CTO managerial and technical skills, CFO managerial and finance skills, number of the members of the team), experience (CEO, CTO, and CFO past experience in days)
Independent variables: number of articles on FT, the net sentiment of articles on FT, the square of the number of articles on FT, the square of the net sentiment of articles on FT

VARIABLES	1 FT articles	2 Net sentiment	3 Non-linearity FT articles	4 Non-linearity Sentiment
Number of FT articles on ICOs	0.0170*** (0.002)		0.0305*** (0.005)	
Net FT articles' sentiment		0.0026*** (0.001)		0.0063*** (0.001)
Square of the FT articles on ICOs			-0.0002*** (0.000)	
Square of the Net Sentiment				-0.0000*** (0.000)
Constant	-2.0879*** (0.189)	-1.9106*** (0.184)	-2.2306*** (0.195)	-2.0629*** (0.192)
Geographic Region	Yes	Yes	Yes	Yes
Currency	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes
Social Media	Yes	Yes	Yes	Yes
Team Skills	Yes	Yes	Yes	Yes
Team Experience	Yes	Yes	Yes	Yes
Observations	1,576	1,576	1,576	1,576
p	0.0000	0.0000	0.0000	0.0000
r ² _p	0.149	0.133	0.154	0.137
N	1576	1576	1576	1576

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Figure 2 Marginal Effects for Number of Articles and Net Sentiment

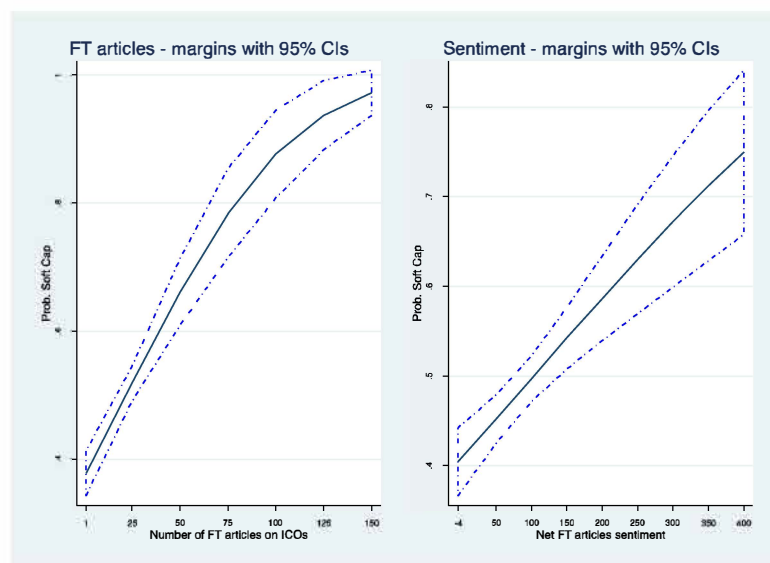


Table 3C: Regressions by Quartile

Dependent variable: Dummy Success in securing funds.

Controls: Geographic location (whether the firm is headquartered in EU, Europe non-EU, North America, Central America, South America, Pacific Basin or Asia); Currency accepted (bitcoin, fiat money); Firm's characteristics (if the firm implements a white list, if the firm implements KYC, if the firm has restrictions on the sale of the token, if the firm implements an MVP if the firm offers a bonus); Social media visibility (websites hits by name and by URL, Twitter, and Telegram followers); team skills (CEO managerial and entrepreneurial skills, CTO managerial and technical skills, CFO managerial and finance skills, number of the members of the team), experience (CEO, CTO, and CFO past experience in days)

Independent variables: number of articles on FT, the net sentiment of articles on FT

	1	2	3	4	5	6
VARIABLES	First Quartile - articles	Second Quartile - articles	Third Quartile - articles	First Quartile - the net sentiment	Second Quartile - the net sentiment	Third Quartile - the net sentiment
Number of FT articles on ICOs	0.0015 (0.004)	0.0130*** (0.003)	0.0146*** (0.003)			
Net FT articles sentiment - lag 0				0.0012 (0.001)	0.0025*** (0.001)	0.0019*** (0.001)
Constant	-1.9211*** (0.458)	-2.0458*** (0.272)	-2.0244*** (0.217)	-1.8356*** (0.359)	-1.9049*** (0.264)	-1.8201*** (0.212)
Geographic Region	Yes	Yes	Yes	Yes	Yes	Yes
Currency	Yes	Yes	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes	Yes	Yes
Social Media	Yes	Yes	Yes	Yes	Yes	Yes
Team Skills	Yes	Yes	Yes	Yes	Yes	Yes
Team Experience	Yes	Yes	Yes	Yes	Yes	Yes
Observations	323	767	1,196	458	767	1,196
p	1.19e-10	0.0000	0.0000	0.0000	0.0000	0.0000
r2_p	0.305	0.187	0.157	0.265	0.175	0.141
N	323	767	1196	458	767	1196

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 3C: Regressions by sub-periods

Dependent variable: Dummy Success in securing funds.

Controls: Geographic location (whether the firm is headquartered in EU, Europe non-EU, North America, Central America, South America, Pacific Basin or Asia); Currency accepted (bitcoin, fiat money); Firm's characteristics (if the firm implements a white list, if the firm implements KYC, if the firm has restrictions on the sale of the token, if the firm implements an MVP if the firm offers a bonus); Social media visibility (websites hits by name and by URL, Twitter, and Telegram followers); team skills (CEO managerial and entrepreneurial skills, CTO managerial and technical skills, CFO managerial and finance skills, number of the members of the team), experience (CEO, CTO, and CFO past experience in days)

Independent variables: number of articles on FT, the net sentiment of articles on FT

VARIABLES	1	2	3	4
	Growing Sub-Period	Decreasing Sub-Period	Growing Sub-Period	Decreasing Sub-Period
Number of FT articles on ICOs	0.0159*** -0.005	0.0142*** -0.003		
Net FT articles' sentiment			0.0021*** -0.001	0.0022** -0.001
Constant	-2.6218*** -0.328	-1.9511*** -0.242	-1.7601*** -0.236	-2.5577*** -0.324
Geographic Region	Yes	Yes	Yes	Yes
Currency	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes
Social Media	Yes	Yes	Yes	Yes
Team Skills	Yes	Yes	Yes	Yes
Team Experience	Yes	Yes	Yes	Yes
Observations	636	940	940	636
p	0.0000	0.0000	0.0000	0.0000
r2_p	0.193	0.167	0.151	0.189
N	636	940	940	636

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Figure 3 – Marginal Effects for Number of Articles and Net Sentiment in Sub periods

