

WORKING
PAPERS IN
RESPONSIBLE
BANKING &
FINANCE

**Governance and Success in U.S.
Securities-Based Crowdfunding**

*By Douglas J. Cumming, Sofia
Johan, and Robert S. Reardon*

Abstract: We examine the relevance of four governance mechanisms for securities-based crowdfunding campaign success through mitigating pronounced information asymmetries and agency problems. First, unlike IPOs for which the effect of Delaware incorporation has declined or disappeared over time, we propose Delaware incorporation matters a great deal for success in the new setting of securities-based crowdfunding. Second, we propose that the disclosure of two years of financial statement information has an immaterial effect on crowdfunding success due to limited forecasting ability. Third, we propose that the choice of security type is a critical determinant for securities-based crowdfunding success. Last, we propose that platforms as intermediaries between entrepreneurs and investors play an important role in mitigating and sometimes exacerbating information asymmetries and agency problems. The population of securities-based crowdfunding campaigns from market inception in May 2016 to December 2021 in the United States provides strong support for these propositions.

WP N° 24-016

2nd Quarter 2024

Governance and Success in U.S. Securities-Based Crowdfunding *

Douglas J. Cumming
College of Business
Florida Atlantic University
777 Glades Road
Boca Raton, Florida, 33431, USA
cummingd@fau.edu

Sofia Johan
College of Business
Florida Atlantic University
and Innolab, University of Vaasa
777 Glades Road
Boca Raton, Florida, 33431, USA
sjohan@fau.edu

Robert S. Reardon
College of Business
Florida Atlantic University
777 Glades Road
Boca Raton, Florida, 33431, USA
rreardon2020@fau.edu

May 24, 2023

* We owe thanks to the seminar participants at the 2021 Economic Freedom of the World Network Conference, the Third Workshop on Governance in Private Firms, the Academy of Sustainable Finance, Accounting, Accountability, & Governance (ASFAAG) Conference, Financial Management Association (FMA) Europe Conference, European Financial Management Association (EFMA), Academy of Management (AOM) Annual Conference, Eastern Academy of Management International (EAOM-I), Southern Economic Association (SEA) Annual Meeting, Institute of Financial Services (Zug IFZ) FinTech Colloquium, Financial Markets and Corporate Governance Conference (FMCG), Second International Workshop on Global Sustainable Innovation, Florida Atlantic University, University of Southern California, University of Cork, Nottingham University, Kobe University, Swansea University, University of Aberdeen, University of Essex, University of Liverpool, La Trobe Business School, SKEMA Business School, and specifically Alice Rossi, Silvio Vismara, Chris Florakis, Florencio López de Silanes, Jeroen Verbouw, Armin Schwienbacher, William R. McCumber, and Rebel Cole for their helpful comments and suggestions.

Governance and Success in U.S. Securities-Based Crowdfunding

Abstract

We examine the relevance of four governance mechanisms for securities-based crowdfunding campaign success through mitigating pronounced information asymmetries and agency problems. First, unlike IPOs for which the effect of Delaware incorporation has declined or disappeared over time, we propose Delaware incorporation matters a great deal for success in the new setting of securities-based crowdfunding. Second, we propose that the disclosure of two years of financial statement information has an immaterial effect on crowdfunding success due to limited forecasting ability. Third, we propose that the choice of security type is a critical determinant for securities-based crowdfunding success. Last, we propose that platforms as intermediaries between entrepreneurs and investors play an important role in mitigating and sometimes exacerbating information asymmetries and agency problems. The population of securities-based crowdfunding campaigns from market inception in May 2016 to December 2021 in the United States provides strong support for these propositions.

Keywords: Equity Crowdfunding, Governance, Delaware Incorporation, Fintech, COVID-19

JEL Codes: G21, G28, G51

1. Introduction

Entrepreneurship creates jobs, improves productivity, and spurs innovation and economic growth (Audretsch et al., 2006). Thus, we are motivated to analyze the underlying conditions enabling entrepreneurship to flourish. Governance is particularly important in entrepreneurial finance. Small firms have tremendous growth opportunities. Without proper governance structures, there is massive scope for agency problems whereby the entrepreneur can take actions to enrich herself at the expense of the investors. For example, various possible agency costs are associated with fixed claim investments in the form of non-convertible debt and preferred equity, including risk-shifting, underinvestment, and asset stripping (Green, 1984; Eisdorfer, 2008).

Among different forms of entrepreneurial finance, the potential costs associated with information asymmetry and agency problems are perhaps the most pronounced in the case of securities-based crowdfunding (Ahlers et al., 2015; Belleflamme et al., 2014; Buttice and Vismara, 2021; Coakley and Lazos, 2021; Johan and Zhang, 2020, 2021; Kleinert, Mochkabadi, 2021; Vismara, 2016). Securities-based crowdfunding is a catchall term that describes crowdfunding campaigns where investors receive security instruments such as debt, common equity, preferred equity, SAFEs (simple agreement for future equity; see Para and Winter, 2021), or other instruments in exchange for their capital investment. The securities sold are highly illiquid, and entrepreneurs offer minority stakes that typically do not exceed 25% (Cumming, Meoli, and Vismara, 2019). Further, there are minimal disclosure requirements or other mandated standards of governance in securities-based crowdfunding. In consequence, there are pronounced adverse selection costs such that lower-quality entrepreneurs, on average, tend to gravitate toward the market (Walthoff-Borm et al., 2018; Blaseg et al., 2021).

The securities-based regulation crowdfunding (CF) market in the United States (U.S) is growing. The market saw \$25 million of capital raised in 2016, and it has grown to \$468 million in 2021.¹ Evidence from other countries shows similar trends. For example, in the United Kingdom, the world's largest equity crowdfunding market with a long history dating back to 2010, equity crowdfunding volumes increased from £272 million in 2016 to £549 million in 2020.² The growing size and importance of crowdfunding markets increase the need to assess the effectiveness of alternative governance mechanisms in facilitating successful fundraising.

The U.S. regulation crowdfunding market offers a unique setting to study the role of different governance mechanisms associated with funding success in four primary ways. First, the U.S offers many different incorporation statutes from which entrepreneurs can select; that is, law is a product, and entrepreneurs select the governance features of different elements of corporate law by incorporating in a desired state (Romano, 1985). Historically, Delaware has been the preferred incorporation jurisdiction in the United States for venture capital-backed companies (Waisman, Wang, and Wuebker, 2009), IPOs (Daines, 2001, 2002), and mature publicly traded companies (Romano, 1985; Bebchuk et al., 2002; Bebchuk and Cohen, 2003). Nevertheless, there is evidence that the importance of a Delaware incorporation for IPOs has declined or disappeared over time (Subramaniam, 2004), partly attributable to many of the other contractual and legal governance mechanisms in the IPO market. However, a crowdfunding campaign differs from an IPO, so we cannot infer from prior work that Delaware should be irrelevant to securities-based crowdfunding, particularly as there are fewer legal and governance

¹ <https://business.fau.edu/equity-crowdfunding-tracker/>

² <https://www.jbs.cam.ac.uk/wp-content/uploads/2021/06/ccaf-2021-06-report-2nd-global-alternative-finance-benchmarking-study-report.pdf>. By comparison, the U.K. venture capital market in 2016 was only £272 million in 2016.

mechanisms that can substitute for the choice of jurisdiction of incorporation in the crowdfunding setting.

Second, the theory of financial information disclosure highlights the important role that disclosure plays in minimizing the information asymmetry between investors and the entrepreneurial firm. In the U.S., firms must report two years of financial statement information to the SEC in a crowdfunding offering. Because crowdfunding firms are generally start-ups with limited operating histories and large fluctuations in their financial statements from year-to-year, we test against the hypothesis that the financial statement data may have a material effect on crowdfunding outcomes.

Third, in the U.S., entrepreneurs select which security they offer in a crowdfunding campaign from a wide array of types, including common stock, debt, and hybrid or future forms of equity. The richness of this setting allows us to investigate which securities may better mitigate information asymmetries, adverse selection, and agency costs. We conjecture that equity securities mitigate these risks, while debt finance exacerbates them. Therefore, we expect debt crowdfunding to be relatively less successful than common equity campaigns. Further, we hypothesize that common equity campaigns will more often facilitate successful offerings than future equity security campaigns because of their familiar terms, minimal transaction costs, and ease to follow-on funding and exit opportunities.

Fourth, we posit that the unique characteristics of securities-based crowdfunding platforms exert significant influence on the dynamics between entrepreneurs and their investors. Underwriting commissions charged by these platforms represent a cost to the capital raised by firms, potentially diminishing the appeal of their offerings to capital-limited entrepreneurs. While these commissions, averaging approximately 6% in the U.S., mirror those of IPOs (typically around 7%; Chen and Ritter, 2000), capturing their full

extent is challenging due to their often gradated structures. Additionally, platforms may acquire financial interests in firms they promote, a practice that could either signal conflicts of interest or be viewed as an endorsement of quality. Furthermore, platforms engage in due diligence and offer valuable guidance to entrepreneurs (Cumming and Johan, 2019; Dushnitsky et al., 2016, 2018; Dushnitsky and Matusik, 2019; Rossi et al., 2018; Zunino et al., 2019). Although not all of these contributions are directly observable, they underscore the importance of incorporating fixed-effects at the platform level in our analysis.

We test these propositions with the population of regulated CF offerings in the U.S. from its inception in May 2016 to December 2021. We make use of very detailed data from the Securities and Exchange Commission (SEC). The data comprise 4,851 offerings and enable rich details in what is known about each offering. The securities-based crowdfunding data from the SEC offer robust support for each of our four main propositions. First, the data indicate that controlling for other things being equal, Delaware incorporation allows pre-revenue crowdfunders to raise 90% more capital and increases the probability of successful fundraising (achieving the desired capital goal) by 5.1% on average.³ Second, the detailed financial information in the prior two years of the offering has only a limited relationship in explaining the amounts raised and funding success of campaigns. Third, equity securities (common stock, class a, class b, and non-voting shares) increase the probability of a successful offering by 4.7%. In comparison, debt reduces the probability of a successful offering by 4.5% and a simple agreement for future equity (SAFE) reduces the probability by 5.6%. Common equity increases the

³Regulation crowdfunding in the U.S. follows an “all or nothing” rule, where the entrepreneur does not keep the capital raised unless their stated fundraising goal is achieved. The rationale is that it puts the risk on the entrepreneur and takes the risk away from the crowd that an underfunded project is allowed to go ahead (underfunded projects are less likely to develop the business or innovation successfully). See Cumming, Leboeuf, and Schwiendbacher, (2020).

amount raised by 91.5% relative to the average amount raised, while debt and future equity security types have a negative effect on the amount raised. These findings are consistent with the view that there are pronounced agency costs associated with debt for start-ups in this marketplace, including risk shifting, underinvestment, adverse selection, and asset stripping, which investors recognize. Forth, the relative underwriting fee platforms impose has a negative relationship on campaign success.

Further, as governance variables are ‘choices’ or endogenous, we assess their impact using instrumental variables. In particular, we consider mimicking variables based on the most similar matched campaign in the prior quarter by platform, size, and age. The instrumental variable regression results are incredibly robust in terms of statistical significance and increase the estimated size of the effects.

The Covid-19 pandemic induced a shift in entrepreneurial opportunities in the United States. Recent empirical literature exhibits that crowdfunding activity accelerated during this time (Cumming & Reardon, 2022). Our analysis confirms these studies and provides other notable findings related to broader market conditions. For example, securities-based crowdfunding success is positively correlated with the U.S. stock market.

Our paper contributes to a growing literature on crowdfunding. Prior work, however, has been focused on European (e.g., Vismara, 2017) or Australian (e.g., Ahlers et al., 2015) markets. Earlier research on success in equity crowdfunding outside the U.S. was possible because those markets have had a longer history of operations. Those studies show evidence of the importance of select signals in crowdfunding success, including offering low equity shares to investors, offering voting rights, and well-worded text descriptions of campaigns (Cumming and Johan, 2019; see also Roma et al., 2021, and Sewaid et al., 2021, for different signals in rewards crowdfunding contexts). In the U.S. context, there is one prior paper (Rossi et al., 2021) that compares the U.S. and U.K.

equity crowdfunding markets. The authors examine patents and equity retention as predictors of fundraising targets and success.⁴ Our paper advances this literature by analyzing the expansive set of securities-based crowdfunding campaigns and previously unexplored campaign-level measures such as the state of incorporation, firm financials, and platform underwriting commission, among other variables. We contribute to theory by determining the key mechanisms that facilitate corporate governance and, ultimately crowdfunding success.

This paper is organized as follows. Section 2 provides information on the U.S. institutional setting and the main hypotheses. Section 3 introduces the data and provides comparison tests for the primary hypotheses. Section 4 presents the multivariate analyses. The last section concludes and discusses limitations and extensions that could be possible in future work.

2. Institutional Setting and Hypotheses

Securities-based crowdfunding represents a unique financial frontier teeming with nascent ventures, offering both pronounced risks and promising rewards. This financial ecosystem, characterized by smaller, early-stage capital raises, diverges significantly from traditional financial avenues such as venture capital, private equity, and public offerings. This fundraising approach hinges on a delicate balance of regulatory oversight and governance, allowing young companies to mobilize capital without being burdened by excessive disclosure mandates. However, the minimally regulated environment doesn't imply a total lack of governance, making striking the right equilibrium a critical

⁴ That is, we are not aware of other work on the topic. New crowdfunding studies are being released at a remarkable pace, so we acknowledge we may have overlooked prior work. Please feel free to email us if we have inadvertently overlooked any of this work.

issue for academics, policymakers, and practitioners. Central to this discussion is the exploration of the factors that drive success in securities-based crowdfunding, including the legal rules governing offerings, the relevance of financial information disclosure by entrepreneurs, the signaling and governance implications associated with different types of securities, and the governance framework offered by crowdfunding platforms. We delve into these aspects, contextualizing them within the U.S. setting, in subsections 2.1-2.4 of this paper.

2.1. Delaware Incorporation

The landscape of securities-based crowdfunding is a complex arena fraught with risks for investors. The inherently illiquid nature of the securities purchased, coupled with the lack of a thriving secondary market, makes these investments a high-stakes gamble. Despite efforts to cultivate secondary markets, the issue of illiquidity persists, largely due to significant information asymmetries (Lukkarinen & Schwenbacher 2020). Beyond illiquidity, investors also face potential capital loss if firms fail due to fraud, incompetence, or negligence. It is in the face of these risks that legal mechanisms for efficient investor protection, such as the jurisdiction of incorporation, become vital.

The United States offers firms the flexibility to choose their place of incorporation, distinct from their physical business location. This decision is influenced by variables like cost, taxation, and corporate laws that vary across states. Delaware has emerged as a favored choice, bolstered by empirical evidence suggesting that Delaware enhances firm value. For example, when firms reincorporate in Delaware, seminal work shows that their share prices significantly increase (Romano, 1985).

Despite varied findings on the specific effect of Delaware incorporation on firm value at the time of an IPO, a consensus has emerged highlighting the distinct advantages that Delaware law confers, especially for smaller firms that face greater informational opacity.

Daines (2001) undertook a detailed analysis of firms' Tobin's Q, discovering that Delaware-incorporated firms were generally more valuable. This conclusion was drawn from an extensive dataset of firms spanning the period from 1981 to 1996. Daines attributed this enhanced value to superior corporate governance which seemed to appeal to investors. However, Gompers et al. (2003) found conflicting results in their research. Their study, which included a governance index - a summation of takeover defenses⁵ - uncovered a statistically significant and negative Delaware effect after controlling for endogeneity and other variables. Gompers et al. acknowledged that this divergence in findings may stem from variances in sample selection, temporal considerations, and the chosen control variables. Similarly, Bebchuk et al. (2002) found no correlation between Delaware incorporation and higher Tobin's Q values at the end of 1999, presenting another contrasting viewpoint on the impact of Delaware incorporation. Further extending the dialogue, Subramanian (2004) refined Daines model by differentiating firm size and widening the sample time by an additional six years to include 1997 to 2002. In his findings, larger firms – those generating over \$50 million in net sales – did not show a significant “Delaware effect” from 1991 to 2002. However, he discovered that smaller firms – those earning less than \$50 million in net sales – incorporated in Delaware were

⁵ Some of these Gompers et al. (2003) governance measures can be pertinent in the crowdfunding context; however, in general, Gompers et al. findings apply to already public firms and therefore do not necessarily apply to crowdfunding firms. Many of the governance index components are adopted by firms later in their life or upon exit into public secondary markets. Also, the measures that comprise the Gompers et al. (2003) governance index are only publicly available for firms trading on stock exchanges; thus, we cannot incorporate them directly into our study.

valued more than their non-Delaware counterparts from 1991 to 1996. Interestingly, this specific Delaware effect seemed to dissipate after this time period.

As we venture into the domain of equity crowdfunding, the role of Delaware law assumes renewed importance. The lack of mandated prospectus-level disclosure standards, high illiquidity of shares, and the novice nature of crowdfunding entrepreneurs make these risks more pronounced than in IPOs. Therefore, the legal framework provided by jurisdictions like Delaware is of increased significance. The benefits of Delaware incorporation for crowdfunding investors can be condensed into five main reasons: (1) enhanced exit opportunities, (2) reduced managerial entrenchment, (3) legal efficiency, (4) signaling, and (5) legal familiarity.

First, Delaware's comprehensive legal framework plays a significant role in mitigating legal uncertainties during acquisition, merger, or initial public offering processes, thus creating potential exit routes for investors holding illiquid assets (Romano, 1985; Daines, 2002). Although Delaware does have some anti-takeover provisions that have spurred debate concerning the quality of its law over the past five decades, empirical evidence shows that prospective acquirers are likely to prefer Delaware corporations due to its familiar and efficient legal environment, which facilitates a swifter transaction process and reduced legal costs (Kahan and Kamar, 2002; Kahan and Rock, 2002). The Delaware General Corporation Law (DGCL) has provisions that are designed to make M&A transactions smoother, such as the short-form merger provision that permits a parent company to merge with a subsidiary without requiring the approval of the subsidiary's shareholders, provided the parent owns at least 90% of the subsidiary's shares (Steinberg, 2002). Moreover, potential investors of crowdfunded shares, including angel investors and venture capitalist, have exhibited a preference for Delaware-incorporated companies (Ibrahim, 2008; Waisman, 2009). This inclination is

also seen among investment bankers who favor Delaware incorporation before facilitating companies in going public (Carney et al., 2012).

Second, since Delaware incorporation enables mergers and acquisitions. Jagannathan and Pritchard (2017) argue this aspect of Delaware law helps mitigate managerial entrenchment by making it easier for control of the firm to change hands. In Delaware, a merger must be approved by a majority of voting shares, while in other states such as Texas and Ohio a two-thirds is needed.⁶ An efficient market for corporate control, facilitated by the laws and legal environment of Delaware, makes it harder for managers to become entrenched, as underperforming managers face the possibility of the firm being acquired by another firm that can manage the resources more efficiently. Thus, the potential for M&A serves as a disciplinary mechanism for managers, aligning their interests with those of the shareholders. Jagannathan and Pritchard provide empirical evidence which shows that Delaware firms are also more likely to terminate CEOs and directors, especially after a poor performance and, despite the termination risks, Delaware firms attract higher-quality CEOs and directors on average. More frequent changes in managers and directors can be especially valuable for early-stage ventures who must rapidly respond to changing market conditions, unexpected challenges, different life cycle stages, and new opportunities. Investors often look for flexibility in the management team as a positive sign that the company can adapt to changing circumstances. A company that is willing to make changes in its leadership to better meet its needs can be seen as more resilient and forward-thinking.

⁶ <https://corpgov.law.harvard.edu/2016/10/20/voting-standards-are-not-that-standard/>. Moreover, Delaware law allows different classes of stock to vote together on various issues, unlike other states; see, e.g., <https://www.wsgr.com/en/insights/delaware-court-of-chancery-issues-important-ruling-for-multi-class-companies-addressing-class-votes.html>

Third, Delaware boasts a specialized judiciary (the Court of Chancery) renowned for its proficiency in corporate law, ensuring a sound resolution to corporate disputes (Romano, 1985). The court frequently updates and clarifies corporate laws, providing necessary guidance and predictability to the corporate entities domiciled within its jurisdiction. The court's deep understanding of corporate legal nuances not only facilitates accurate decisions but also allows for expedited legal proceedings. This speed is particularly valuable for early-stage ventures, which often operate with tight resource constraints. In acknowledgement of these advantages, an overwhelming majority of companies proceed with an IPO choose to incorporate in Delaware. In fact, more than 90% of companies that launched IPOs in 2021 were incorporated in Delaware (Morabito, 2023). Delaware derives a substantial portion of its state budget from incorporation fees, signifying its commitment to maintaining high-quality legal services and ensuring judicial efficiency. This revenue model keeps Delaware incentivized to uphold its position as the premier state for business incorporations, further enhancing its appeal to potential corporations.

Fourth, Delaware incorporation operates as an indicator of a company's quality, principally due to the anticipation of elevated litigation risks and associated costs (Iacobucci, 2004). The entrepreneurial attorneys within Delaware's corporate law ecosystem are well-versed and experienced, leading to an increase in shareholder-initiated lawsuits. This influx of litigation poses a potent deterrent for companies of inferior quality, thereby providing an additional layer of investor protection (Macey & Miller, 1987). Moreover, Delaware's legal provisions enable shareholders to initiate lawsuits against directors and officers, regardless of their physical location outside the state (Delaware Code Title 10, Section 3114). Statutory rights further enhance investor protection by allowing shareholders access to inspect corporate books and records, thus

maximising the potential for litigation (Delaware Code Title 8, Section 220). Notably, the law doesn't impose a minimum holding period or share count prerequisite for shareholders to exercise their right to inspect, further enhancing transparency. Despite the existence of crowdfunding fraud cases (Cumming & Johan, 2019, Chapter 15), there is no comprehensive legal framework in the U.S. specifically tailored to tackle crowdfunding fraud (Heminway, 2021). Consequently, the jurisdiction of incorporation and its corresponding legal framework gain prominence. As the field of crowdfunding fraud and litigation is still nascent, incorporating in Delaware carries significant informational value in crowdfunding campaigns. It provides a signal of quality that low-quality firms would find challenging to replicate.

Last, the familiar legal framework provided by Delaware reduces uncertainty for investors. This familiarity ensures that investors from a diverse set of states and even countries will be on more equal footing and share a common understanding of the structure and governance of Delaware firms (Romano, 1985; Daines, 2002).

Overall, in view of the legal certainty, familiarity, signaling, less pronounced managerial entrenchment, and ability to facilitate exit outcomes, we predict that Delaware law improves the probability of successful crowdfunding outcomes. It is posited as a quality signal among sophisticated investors aware of its utility, particularly those who anticipate future liquidity of their shares.

Hypothesis 1: *Incorporation in Delaware facilitates securities-based crowdfunding and improves the chances of achieving stated capital goals for a successful offering.*

2.2. Financial Statement Information

Financial information disclosure as a form of corporate governance is essential for creating a climate of investor confidence. Lee et al. (2014) contend that corporate governance can be significantly enhanced through accounting disclosure, which serves to level the playing field by decreasing the informational disadvantage faced by less sophisticated investors. Driven by this assertion, we aim to examine the relevance of the information contained within the obligatory financial disclosures of regulated crowdfunding firms as a predictor of fundraising success.

How necessary is financial statement information in securities-based crowdfunding? On the one hand, financial statement information could potentially offer substantial value to investors. For instance, in the context of an initial public offering (IPO), information drawn from financial statements empowers investors to project future revenues, costs, and profits, thereby facilitating a robust valuation model. Analogously, one could argue that financial statements might also prove insightful for forecasting the growth trajectory of crowdfunding firms.

On the other hand, the utility of financial statement information could be limited. Crowdfunding firms, typically have a relatively nascent operating history but must disclose two years of annual financial statement data to the SEC upon filing. This includes revenue, net income, total assets, short-term debt, long-term debt, cash equivalents, and taxes paid. For early-stage firms lacking a two-year financial history, the current balance sheet suffices. Yet, even for experienced investors, generating accurate forecasts based on merely two years of data presents a significant challenge.

There are also concerns about potential bias in these disclosures. Entrepreneurs might strategically schedule their offerings after two prosperous years, concealing the possibility of unfavorable future developments. Additionally, given the ambiguous nature of revenue recognition, firms could temporarily inflate their financial and operational

inefficiencies inherent within the firm. For instance, an empirical study based on German debt crowdfunding revealed an insignificant correlation between financial statement information and crowdlending success (Cumming and Hornuf, 2022). Instead, investors may find more value in other signals emanating from the platform such as the entrepreneurs' human capital or even the complexity of a firm's logo in gauging investment quality (Piva and Rossi-Lamastra, 2018; Mahmood et al., 2019).

Given the nebulous nature of crowdfunding investments, potential backers often seek as much reliable information as possible to mitigate their risk. As a key indicator of a venture's historical performance and financial health, the mandated two years of financial statement information may provide a credible signal to prospective investors. Against this backdrop, we propose our second hypothesis as follows.

Hypothesis 2: *Two years of financial statement information can increase investor trust and positively impact the chances of achieving stated capital goals for a successful offering.*

2.3. Security Design

Securities-based crowdfunding distinguishes itself from equity crowdfunding by including hybrid-equity and non-equity security types. Within the U.S., firms opting for regulation CF financing may extend offerings such as preferred stock, convertibles, SAFEs (simple agreements for future equity), bonds, crowd notes, revenue shares, membership units, or tokens, alongside common stock shares.⁷ Security design, unlike

⁷ Wroldsen, (2017) shows that voting rights are non-existent or largely irrelevant in equity crowdfunding contracts in the U.S.

financial information, can convey substantial insights regarding agency costs and growth potential in start-ups.

Companies resort to securities-based crowdfunding primarily because they typically lack the requisite collateral for bank loans, or they harbor operational risks that result in adverse selection problems (Walthoff-Borm et al., 2018; Blaseg et al., 2020). Startups, invariably associated with adverse selection, manifest significant uncertainty regarding the variability of returns risks, such that the risk of financing a ‘nut’ is more pronounced than the risk of financing a ‘lemon’ (Cumming, 2006).

The agency costs of debt financing a start-up are highly pronounced. They include risk shifting, underinvestment, and asset stripping, among others (Cumming and Johan, 2019, Chapter 2). Risk shifting pertains to debt-financed entrepreneurs straying from their business plan to embark on riskier ventures, thereby transferring anticipated wealth from bondholders to shareholders (themselves). Debt overhang, or underinvestment, emerges as a significant risk as entrepreneurs on the brink of bankruptcy are less likely to engage in positive NPV projects if substantial debts need to be covered before any value is realized from these initiatives. Moreover, entrepreneurs foreseeing potential bankruptcy may deplete the firm’s assets or award themselves substantial dividends before declaring bankruptcy. Common equity and convertible securities help mitigate these risks, while debt finance tends to amplify them. Consequently, we anticipate debt crowdfunding to be comparatively less successful than common equity.

Three primary reasons underpin our further expectation that common equity crowdfunding campaigns are more likely to result in successful offerings compared to hybrid equity (or future equity) security campaigns. First, common stock offers terms that are broadly understood by many retail investors (Cumming and Johan, 2019). Although recent innovations in the U.S. have introduced simple agreements for future equity

(SAFEs), crowd notes, and membership units in LLCs into crowdfunding campaigns, these contracts are relatively new and individually not as prevalent as common stock. Therefore investors might gravitate towards the familiarity offered by common equity.

Second, more complex securities entail higher transaction costs, even if the platform provides standard form investment contracts for those securities at the time of crowdfunding (Cumming and Johan, 2019; Wroldsen, 2017). These increased transaction costs surface at the point of exit for the crowdfunding investor's ownership interest. With a convertible or crowd note security, the legal rights and ownership stake between the crowdfunding investor and the new owner are contingent on the entrepreneurial venture's performance. In contrast, a simple common equity security has straightforward, easily negotiable terms.

Third, entrepreneurs engaged in equity crowdfunding offer their investors the opportunity to divest (illiquid) investments through an exit event, which is typically facilitated through common equity. Exit events or sales involve investors, such as angel investors, venture capitalists, or occasionally, IPOs.⁸ Mitigating agency problems and allowing new investors to absorb the firm's capital structure to continue maximizing value post-exit increases the likelihood of successful exit events. Convertible securities and contractual arrangements that separate ownership and control rights at the time of crowdfunding might deter future investors. A straightforward and proportional allocation of ownership and control through common equity held by crowdfunding investors can better facilitate sales to new venture capital and other investors seeking more flexibility in designing cash flow and control rights allocation. This is a reason why angel investors

⁸ For example, ReWalk went public on NASDAQ 18 months after obtaining equity crowdfunding on OurCrowd, a platform based in Israel. See Cumming and Johan (2019) for a discussion of this case, and other successful equity crowdfunding cases.

in the U.S. predominantly invest with common equity and eschew hybrid equity securities (Wong, 2009), as it facilitates exit to venture capitalists. Despite the fact that only a few crowdfunding investments culminate in an IPO, given the need for exceptional growth, common equity crowdfunding investments are better equipped to enable an IPO as other securities and contractual arrangements could lead to a redistribution of control from a high-performing entrepreneurial team to a dispersed group of investors. Likewise, common equity venture capital investments are more likely to result in IPOs (Cumming, 2008). Therefore, we hypothesize that common equity crowdfunding campaigns are likely to outperform hybrid-equity campaigns, as common equity better facilitates subsequent exit outcomes for venture capitalists and other subsequent investors.

Hypothesis 3: *Crowdfunding campaigns offering common stock are more likely to achieve the stated capital goal for a successful offering, compared to crowdfunding campaigns offering a form of future equity or debt.*

2.4. Platform effects

All transactions under regulation crowdfunding are required to occur online via an SEC-registered and FINRA-registered intermediary, which could be either a broker-dealer or a funding platform. Emerging from the financial technology industry's evolution over the past two decades, these platforms act as intermediaries bridging entrepreneurs and crowdfunding investors. They offer investors a wide range of campaigns to invest in and furnish detailed insights into each startup campaign, including information on the management team, business plan, social media presence, and current fundraising totals, among others. Since 2016, more than 80 securities-based crowdfunding platforms have

emerged in the U.S. market, each unique in their operational specifics (Dushnitsky et al., 2016, 2018; Dushnitsky and Matusik, 2019; Rossi et al., 2018; Zunino et al., 2019).

Platforms may conduct due diligence to varying degrees, including third-party and other background checks, to validate the viability of the company for platform listing (Cumming et al., 2019). For instance, campaign applications to SeedInvest undergo multiple layers of scrutiny, which includes a third-party due diligence check and a meeting between the firm's management team and SeedInvest's Screening Committee. In contrast, Wefunder, the largest regulation crowdfunding platform in the U.S., performs only basic fraud screenings without assessing the ideas themselves.

Furthermore, platforms may provide guidance to entrepreneurs to aid in successful campaigns, covering aspects such as financial strategy and marketing advice. Studies by Cumming et al. (2019) and Rossi et al. (2018) suggest a positive correlation between due diligence, advice provided, and the average performance on the platform. For instance, SeedInvest's third-party partner, Crowdcheck, assists firms in filing their initial Form C to the SEC. We utilize the SEC's available information on platform underwriting fees and financial interests to analyze the platforms' observable governance role, but will also account for unobservable platform roles such as due diligence screening and advice in our econometric specification.

Most U.S.-regulated crowdfunding platforms charge short-term-oriented underwriting fees in exchange for listing a campaign, while some may also obtain longer-term-oriented ownership stakes (financial interests) in the companies too. These fee structures are chosen by the platform and may be modified over time.

Predominantly, U.S.-regulated crowdfunding platforms charge short-term-oriented underwriting fees for listing a campaign, with some also securing longer-term-

oriented ownership stakes (financial interests) in the companies. These fee structures are chosen by the platform and can be revised over time. Underwriting fees impose costs on crowdfunding firms as they may receive less capital than anticipated due to these fees. These costs can potentially hamper the short-term performance of capital-constrained companies. Consequently, investors might be deterred from investing in companies listed on platforms with higher underwriting fees (Barry et al., 1991). However, our sample indicates that the most popular platforms often charge above-average underwriting fees. Investors might overlook these costs out of loyalty to a specific platform. Additionally, larger platforms, which spend more on compliance, are more likely to apply due diligence (Cumming et al., 2019). After controlling for platform popularity and the relative impact of higher platform fees on the capital-raising firm, we expect to find a negative relationship between underwriting fees and campaign success. Thus we present hypothesis four as follows:

Hypothesis 4: *Higher platform underwriting fees relative to a firm's target amount and size decrease the chances of achieving stated capital goals for a successful offering.*

Excluding a few outlier campaigns, platform ownership stakes typically vary between 0% and 7%. Platform ownership stakes in companies may have corresponding costs and benefits. On one hand, after thorough due diligence, a platform might choose to take an ownership stake in a company perceived to be a profitable venture. In this scenario, the platform's financial interest could be seen by crowdfunding investors as a positive signal of company quality (Kleinert et al., 2021).

On the contrary, ownership stakes might deter crowdfunders due to potential conflicts of interest in listing these companies. Platforms might excessively promote companies in which they have partial ownership or list them with minimal due diligence

checks. Investors, wary of these potential agency costs, might be less inclined to invest in these companies.

Considering these counterbalancing theoretical arguments concerning ownership stakes' trade-offs, we propose a two-part fifth hypothesis:

Hypothesis 5a: *Higher platform ownership stakes relative to a firm's target amount and size increase the chances of achieving stated capital goals for a successful offering due to increased investor confidence and the alignment of interests between the platform and investors.*

Hypothesis 5b: *Higher platform ownership stakes relative to a firm's target amount and size decrease the chances of achieving stated capital goals for a successful offering due to potential concerns about equity dilution and control.*

3. Data and Comparison Tests

In this section, we define the sources of our analysis variables and provide descriptive statistics and insights into how U.S. securities-based crowdfunding activity varies across different states, incorporation domiciles, firm characteristics, security types, and platforms. We discuss each in turn in subsections 3.1 to 3.7., respectively.

3.1. Description of Data

Our dataset is primarily sourced from the SEC's repository of regulated CF campaigns. We examine the regulated CF market from its inception on May 16th, 2016, through December 31st, 2021. We provide an up-to-date version of this data online

through The Equity Crowdfunding Tracker at Florida Atlantic University⁹. The tracker provides interactive graphs on the number of campaigns, amount raised, success rate, security type, firm, and platform characteristics.

Securities-based crowdfunding, an alternative financing process that facilitates broader public participation in financing entrepreneurs, start-ups, and small-business, proliferated in Europe and Australia in the late 2000s and early 2010s (Cumming and Johan, 2019). However, in the United States, it did not start until the JOBS Act was passed with bipartisan support and signed into law on April 5th, 2012. This Act aimed to promote small business growth by easing existing regulatory restrictions in a staged fashion. Title III, which took effect in September 2015, expanded securities-based crowdfunding in the United States beyond just accredited investors to all investors and allowed firms to start raising regulated crowdfunding capital as of May 16th, 2016.

Once approved by an SEC-registered financial intermediary platform, firms must submit an offering statement (Form C) to the SEC. As part of the securities-based crowdfunding market regulation, the SEC collects and reports on all U.S. regulation crowdfunding offerings quarterly. Our data collection process was guided by Rossi et al. (2021)¹⁰ and involved examining Form C filings from the Electronic Data Gathering Analysis and Retrieval System (EDGAR). Information about the firm's financials, characteristics, offering features such as the offering amount security type, and chosen platform for campaign listing were extracted.

Our dataset also addresses anomalies such as withdrawn campaign offerings and duplicated Form-C submissions. We elect to count withdrawn campaign offerings as

⁹ The Equity Crowdfunding Tracker at Florida Atlantic University can be accessed at the following address: <https://business.fau.edu/equity-crowdfunding-tracker/>

¹⁰ The sample used by Rossi et al. (2021) consists of 2,194 equity-only campaigns. Our sample includes those transactions and more recent ones, comprising a total of 4,851 campaigns of all security types.

failed campaigns in which any fundraising totals are returned to investors unless the associated Form C-W (withdrawal-type) is filed within a couple of days of the original registration, in which case we remove the campaign altogether.¹¹ Per SEC regulations, each firm must file a Form C-U to provide an update on the progress of a campaign within 5-days of the campaign, reaching 50% and 100% of its target amount offered. There should be one last filing when the campaign is closed, whether funding was successful or not. In the case of unreported Form C-U's and ambiguous funding amounts for campaigns still open for investment, we supplemented our dataset with secondary sources, including the subscription-based website KingsCrowd and manually collected data from various platform websites.

We ensured data reliability through extensive data validation and cleaning processes, checking for inconsistencies and missing values. Nevertheless, we note that some limitations exist in our dataset, primarily due to some campaigns still being open to funding as of our cut-off date of August 1st, 2022. Consequently, the total amount raised may exceed that reported in this paper.

Our final dataset for analysis comprises a cross-sectional population of 4,851 campaigns launched from May 2016 to December 2021. Preliminary analysis indicates that the average campaign raised \$218,713, with a median amount raised of \$53,975. This comprehensive dataset provides a robust basis for our exploration of governance mechanisms in crowdfunding campaign success.

¹¹ Per the “all or nothing” rule, the entrepreneur does not keep the capital raised unless their stated fundraising goal is achieved. Campaigns with a C-W filed just a couple of days after the initial filing are removed under the assumption that the entrepreneur changed their mind about the listing and never allowed the campaign to be either successful or unsuccessful.

3.2. *Dependent Variables*

In Table 1, we detail each variable alongside its respective data source (refer to Appendix Table A1 and A2 for the summary statistics). Our primary dependent variable, *Amount Raised*, is the total dollar amount raised measured at the campaign level and amalgamated to the quarter in which the firm filed the initiating Form C for public investment. It's worth noting that while a majority of campaigns collect most of their funds within the initial quarter, some campaigns remain active for multiple quarters or even years. Figure 1 aptly portrays the evolution of the securities-based crowdfunding market in the United States. The graph plots the number of newly initiated campaigns and the aggregate amount raised each quarter over time. Both measures depict an almost consistently increasing trend. Between Q2 2016 and Q4 2021, the aggregate total amount raised surpassed one billion dollars. Of particular interest is the marked acceleration following the onset of the Covid-19 pandemic. Crowdfunding appears to have weathered the pandemic better than other markets, such as U.S. bank consumer lending (Cumming et al. 2021). Accordingly, we aim to investigate the impact of Covid-19 on crowdfunding success throughout our analysis.

[Table 1 and Figure 1 About Here]

Figure 2 highlights how much fundraising totals are heavily influenced by campaigns that manage to raise over one million dollars. Specifically, we compare Q2 2021 with the second quarter of each of the preceding five years. Prior to March 15th, 2021, the maximum fundraising cap per campaign stood at \$1,070,000. However, changes to SEC regulation increased this limit to \$5 million for ongoing and newly launched campaigns. Entrepreneurs seem to have capitalized on this policy change, with amounts raised in excess of \$1 million in Q2 2021 demonstrating a disproportionate increase compared to other quarters. From our dataset, six firms reached the new cap of

\$5,000,000, while 214 and 326 firms raised more than \$1,070,000 and \$1,000,000, respectively. The complete distribution is depicted in Figure 3.

[Figures 2-3 About Here]

Our second dependent variable, campaign funding *Success*, aligns with Ahlers et al.'s (2015) definition, classifying a campaign as successful when it meets or exceeds its target amount of capital (offering amount). From our dataset of 4,851 campaigns, 3,075 (63.4%) achieved their fundraising goals. In Figure 4, we illustrate the average success rate per quarter, revealing a consistent upward trend from Q2, 2016 to Q4, 2021. Remarkably, the average campaign success rate has remained above 65% for the past seven consecutive quarters.

[Figure 4 About Here]

3.3. State (Physical Location) Comparison

Although national crowdfunding platforms reduce many distance-related market frictions, prior rewards-based crowdfunding literature suggests that local demand still has a vital role in the success of early-stage entrepreneurial firms (Agrawal et al., 2015; Chan et al., 2018). We also find anecdotal evidence that securities-based crowdfunding campaigns physically located in highly populated states tend to raise more and be more successful than their peers. This might suggest that investors from populous states can better assess actual demand for a project's goods or services based on their preferences and the preferences of their social network; therefore, they are more likely to invest. In Table 2, we report fundraising amounts, the number of campaigns, and the success rate of campaigns in each state plus Washington D.C. To illustrate some of the findings of the table, we present Figure 5, a heat map of fundraising density in the United States. The top 5 states in total fundraising amounts are California, New York, Texas, Florida, and

Massachusetts. Likewise, each of California, New York, Texas, and Massachusetts have an average success rate above 63.4%, the mean of the entire sample. In an effort to control for state-level confounding factors, we add state fixed effects to our multivariate analysis.

[Figure 5 and Table 2 About Here]

3.4. Delaware Incorporation

Transitioning from our exploration of the firm's physical location, we now scrutinize the significance of the firm's legal domicile, or the jurisdiction under which it is incorporated. Figure 6 underscores the prominence of Delaware incorporation, which accounts for a substantial 45.9% (2,229 of 4,851) of the campaigns in our sample. We contrast the quarterly average success rate of Delaware-incorporated firms with firms incorporated in other states. Consistent with Hypothesis 1, firms domiciled in Delaware demonstrated superior success rates in 17 of the 21 surveyed quarters. Only in Q2, 2016, Q2, 2017, and the Q3-Q4, 2018 period did firms incorporated in other states exhibit marginally higher success rates.

[Figure 6 About Here]

3.5. Firm Characteristics & Financial Statement Information

Table 3, offers a comprehensive view of sample means, drawing comparisons between successful and unsuccessful campaigns across all offering characteristics (for supplementary descriptive statistics and those for un-transformed variables, refer Appendix Tables A1 and A2). We performed t-tests on the mean difference of these characteristics, finding a positive correlation between crowdfunding success and firm age and size (measured by employee count). On average, successful firms were 7.4 months older and had 1.49 more employees than unsuccessful ones, indicating U.S. investors' preference for more mature and larger ventures (correlations corroborated in Table A3 in

the Appendix). Prior studies have observed that younger, smaller firms often face more constraints in accessing external capital and are associated with an increased risk of failure (Ouimet and Zarutskie, 2014; Hornuf et al., 2018). Consequently, we control for and explore firm age and employee count in our regressions.

Table 3 further reveals that firms with lower fundraising targets and revenue-generating firms demonstrate a higher likelihood of overall success. Entrepreneurs determine the offering amount at the campaign's inception. Given that larger target sums necessitate more investment capital for success, it is unsurprising that campaigns with higher targets typically underperform. To control for offering amount, we apply a log transformation of the variable in our regression models.

Contrary to expectations, investors do not appear deterred by unfavorable financial metrics, such as lower net profit margins and returns on assets. This is likely due to the fact that exactly half of the firms in our sample are pre-revenue, meaning that they have not yet generated any revenue. As a result, the financial performance of these firms varies widely and is susceptible to large outliers. To improve the normality of the financial ratio variable distributions we have winsorized each of the key financial ratio variables at the 5% level.¹²

Lastly, firms listed when the stock index exceeded its average value during the sample period exhibited higher success rates. This finding suggests that crowdfunding is intertwined with broader financial market sentiment, reaffirming the intricate ties between individual investments and larger economic indicators.

[Table 3 About Here]

¹² We also tested winsorizing our financial variables at the 1% and 10% level and the results did not change in any significant way.

3.6. *Security Type*

Regulation crowdfunding campaigns provide a diverse array of securities. When filing with the SEC, companies must specify the security type classification, choosing between ‘common stock’, ‘preferred stock’, ‘debt’, and ‘other’. Drawing on the descriptions offered for ‘other’ security types, we can further differentiate among convertible, SAFE, crowd note, membership units, revenue shares, tokens, preferred stock, class A shares, class B shares, and non-voting common stock security types.

Convertibles are a form of a future equity security that converts to stock during a liquidity event and may include an interest rate and expiration date.

A SAFE is an agreement that provides the investor with a future equity stake based on the amount invested and if a triggering event occurs, such as an additional financing round. American technology startup accelerator YCombinator created the SAFE security type in 2013. Originally the SAFE was used to as a way to accelerate fundraising into a future pricing round, but has since evolved and now triggers ownership once all the SAFE money has been accounted for in a specified funding round. In the event of firm liquidation or acquisition, the SAFE holder can either receive back the original amount paid (liquidation preference) or convert the SAFE into common stock at a valuation cap and sell the shares.

Crowd notes are unique to crowdfunding and can only be found on certain platforms. Crowd notes are essentially convertible notes without a maturity date or a conversion milestone, meaning they can sit off a startup’s cap table for longer than traditional convertible securities.

In order to make more straightforward comparisons across security types, we elect to group common stock with the similar equity security types of class A, class B, and non-

voting common stock shares. Further we group convertibles, SAFEs, and crowd notes as “Future Equity.” Based on these groupings, the majority of campaigns in our sample fall into either the equity (common stock) grouping (27%), or the future equity grouping (32%). 24% of campaigns offer a debt security, 8% offer preferred stock, and the remaining 9% is split amongst the membership unit, revenue share, token, and hybrid security types. Table 4 examines the amount raised, the number of campaigns, the success rate, and the percentage of firms incorporated in Delaware for each type of security. In line with Hypothesis 3, we find that equity(common stock), preferred stock, and future equity campaigns are much more successful on average than debt campaigns (common stock: 67%; preferred stock: 71.5%; future equity: 67%; and debt: 55%).

[Table 4 About Here]

3.7. *Platforms*

Table 5 delves into crowdfunding activity across the multitude of platforms. Leading platforms in U.S. regulated crowdfunding include Wefunder (hosting 26.3% of all campaigns), StartEngine (20.4%), MainVest (9.3%), Republic (9.1%), SeedInvest (5.7%), and Netcapital (5%). Other platforms comprise the remaining 24.2% of securities-based crowdfunding activity in the United States. Average offering amounts diverge greatly across platforms; for instance, StartEngine’s average offering stands at \$16,782, while Angel Studios, a film-centric platform with only 13 campaigns to date, presents an average offering of \$485,753. We observe substantial disparities in average offering amounts across various platforms. Platforms typically charge entrepreneurs an underwriting fee ranging from 4.1% (MicroVentures) to 9.1% (NextSeed).

Success rates also fluctuate across platforms. Among the top 10 platforms, Republic and NextSeed boast the highest success rates, each averaging above 86%.

Moreover, Republic, StartEngine, and Wefunder each command a market share exceeding 16% in terms of total amount raised. Republic's success may also be driving investors to the platform, as its market share in terms of the number of new campaigns has increased dramatically from 8% in 2020 to 17% through Q2 in 2021. To control for confounding effect of platform popularity, we create a variable which measures the number of successful campaigns in the previous half-year for the platform on which the campaign is listed. Moreover, we also adjust the underwriting and financial interest variables relative to a firm's size (measured by total assets) and the desired target raise. These variables are also winsorized at the 5% level, and transformed by the natural logarithm function to arrive at a more normal distribution. Additionally, the necessity to control for platform-fixed effects arises due to potential unobserved heterogeneity across different platforms, which may inadvertently confound our analysis if not appropriately controlled for.

[Table 5 About Here]

4. Multivariate Tests

In this section, we present our multivariate tests, which serve to evaluate the four central governance mechanisms we identified as potentially significant for success of securities-based crowdfunding campaigns. Our primary research model includes several factors that serve as key components of our analyses: the relevance of Delaware incorporation, the impact of financial statement disclosures, the choice of security type, and the influence of platform governance mechanisms. In section 4.1 we discuss the results of our OLS analyses of total fundraising amounts and linear probability analyses of successful fundraising. In section 4.2, we offer alternative specifications to show

robustness. In section 4.3, we test macroeconomic factors, including Covid-19, and SEC regulation change that increased the total amount that can be raised and a broader stock market index. Finally, in section 4.3, we control for selection effects as we carry out instrumental variable regressions.

4.1. Baseline Regressions

Our Ordinary Least Squares (OLS) regressions on Amount Raised and a linear probability regression on Success are summarized in Tables 6-7. Intriguingly, the data suggests that for pre-revenue firms, incorporation in Delaware enables entrepreneurs to attract a larger pool of capital. This effect is significant at the 5% or 1% level across different specifications and indicates an increased likelihood of a successful campaign. The economic significance of this effect is striking. In our base model specification (regression 1), which includes a comprehensive suite of control variables along with state-, platform-, and time-fixed effects, Delaware incorporation results in a 90% increase in capital raised and enhances the probability of successful fundraising (i.e., achieving the desired capital goal) by an average of 5.1%.

The variables associated with the financial statement ratio, generally, do not demonstrate statistical significance, thereby aligning with Hypothesis 2. However, a notable exception is seen in certain specifications (at the 10% or 5% level) revealing a positive association between a firm's return on assets (ROA) and the amount of capital raised. This observation suggests investors are more inclined towards firms they perceive as profitable, and a favorable ROA is indicative of reduced investment risk, thereby making the firm more attractive. However, the economic impact is relatively modest; in Table 6 (regression 1), a one unit increase in ROA boosts the amount raised by 6.2%,

assuming other variables remain constant. To complement our base regressions, we conducted unreported F-tests to jointly assess the significance of the financial statement variables. The F-tests resulted in F-statistics of 1.56 and 1.78 for our primary models, with associated p-values of 0.18 and 0.13, respectively. Taken together, these results imply that financial statement ratios, whether evaluated individually or collectively, do not materially influence either the amount raised or the campaign's success. Consequently, Hypothesis 2, which posits that two years of financial statement information could enhance investor confidence and positively affect the odds of achieving stated capital goals for a successful offering, lacks support.

In contrast to the financial information explanatory ratios, the design of the security significantly impacts the achievement of stated capital goals for a successful offering. Specifically, offering common stock securities amplifies the amount raised by 92% and the probability of a successful offering by 4.7% (regressions 1 and 6), depending on the specification. These effects consistently demonstrate significance at the 5% level across various specifications. Similarly, preferred stock securities boost the amount raised by 167% and the likelihood of a successful offering by 9.7% (regressions 2 and 5). Conversely, future equity (regressions 3 and 7) and debt (regressions 4 and 8) marginally decrease the probability of a successful offering by 5.6% and 4.5% respectively, although this effect is not consistently significant across all specifications. The reference category for these regressions comprises all other security types not represented by the grouping dummy in each regression. Collectively, these results robustly support Hypothesis 3, suggesting that crowdfunding campaigns offering common stock are more likely to achieve the stated capital goal for a successful offering compared to those offering future equity or debt.

Evaluating the observable platform governance, we find a negative relationship between the relative underwriting fee and both the amount raised and campaign success. This relationship, significant at the 5% and 1% levels, lends support to Hypothesis 4, positing that higher platform underwriting fees, relative to a firm's target amount and size, could diminish the chances of achieving stated capital goals for a successful offering.

However, we find no support for either Hypothesis 5a or Hypothesis 5b. Instead, we draw the equivocal conclusion that the relative platform financial interest can exert both positive and negative influences on firm fundraising outcomes at this early stage of fundraising.

As anticipated, many of our control variables bear significant outcomes. For instance, larger entrepreneurial firms, as indicated by the number of employees, tend to attract more capital and are more likely to succeed. Furthermore, the offering amount shows a negative relationship with crowdfunding success.

[Tables 6-7 About Here]

4.2. Robustness Checks

Our findings remain consistent across numerous robustness checks, as documented in Table 8. First, we conducted a test excluding campaigns from our sample that remained open for fundraising during our data collection period (regression 9).

Next, we consider the impact of a temporary regulatory amendment. On May 4, 2020, the SEC announced a temporary and conditional relief policy aimed at established companies impacted by COVID-19. Under this temporary amendment, firms offering securities within a 12-month period, ranging from more than \$107,000 to no more than \$250,000, and having been formed at least six months prior to the commencement of the offering without any prior solicitation for capital, are exempt from certain financial

statement review requirements. Eligible firms would most notably be allowed to temporarily omit financial statement information from their filing. This temporary amendment remained effective until August 31, 2020. We identify 74 firms that met the eligibility criteria of this amendment. By excluding these firms in regression 10, we found that our financial ratio variables maintained their insignificance.

In regression 11, we utilize a Poisson pseudo-likelihood regression with multilevel fixed effects applied to our dependent variable of *Amount Raised*. As suggested by Cohn et al. (2022), researchers should prefer using a fixed effects Poisson model instead of a logarithmic transformation of the dependent variable.¹³ We also examined a logit methodology for our *Success* dependent variable in regression 11. We chose the linear probability model for our primary regression due to a loss of observations that occurs when platform- or state- fixed effects perfectly predict success.

[Table 8 About Here]

4.3. Event Indicators

Two significant events occurred over the sample period that we have controlled for using dummy variables instead of time-fixed effects in the regressions on Table 9. First, the data indicate that since the onset of the Covid-19 pandemic, securities-based crowdfunding outcomes have improved (probability of success increased 12%) confirming the result found by Cumming et al. (2021) (see also Figure 1). Second, the data indicate that the March 15, 2021, regulatory change allowing a larger amount of capital raised up to \$5 million (discussed above in section 3) also increased the success of capital raises by 5.7% (significant at the 1% level). In this table, we also investigated

¹³ The Poisson model was calculated using `ppmlhdfc` command in STATA, as recommended by Cohn et al. (2022)

the relationship between the performance of the stock market index and crowdfunding success, positing that the broader financial market conditions could influence investor sentiment and behavior in crowdfunding activities. Our analysis revealed a positive correlation between the two variables, significant at the 1% level. This suggests that as the stock market index rises, indicating favorable overall market conditions, the probability of crowdfunding success increases as well. This phenomenon could be attributed to the fact that in a thriving stock market, investors generally exhibit increased confidence and risk appetite, making them more likely to invest in high-risk but potentially high-reward opportunities such as crowdfunding campaigns.

[Table 9 About Here]

4.4. Instrumental Variables

The instrumental variable regressions are presented in Tables 10 and 11. Our instrumental variables are selected using the “mimicking variable” strategy used in other crowdfunding studies (e.g., Cumming, Meoli, and Vismara, 2019). In particular, we match based on platform, assets, and age crowdfunding firms in the prior quarter. We only match to successful prior offerings, with the view that current offerings will not want to mimic past unsuccessful offerings (although using the full sample of successful and unsuccessful offerings generated very similar results). We take the average amounts from similar prior offerings, with the view that the current offering will base their decisions on things like a Delaware incorporation, offering amounts, and security offered based on prior decisions of similar firms that listed on the same platform. These mimicking variables satisfy the exclusion restriction because past offerings of other campaigns bear no direct relation to the factors that influence the amounts raised and the success of the current offering. We checked robustness using different matching strategies and found no material differences in the results.

[Tables 10-11 About Here]

Our instrumental variable analyses focus on three of the more important potentially endogenous variables: amount sought, common equity, and Delaware incorporation. These variables are choice variables and could be selected in expectation of success. There are other alternative endogenous variables that could have been included in Table 10 and 11 as well. For example, the other security variables are endogenous. We could perform a similar mimicking analysis with each of those other variables, but the number of instruments and controls eventually become somewhat convoluted and correlated. Hence, in the spirit of keeping it simple and to check robustness, we present regressions checking the results of the three main variables pertinent to our analyses. Other specifications are available on request.

Table 10 shows that the mimicking variables serve as significant instruments. The Delaware mimicking variable predicts future Delaware offerings, and this effect is significant at the 1% level of significance. The economic size of the effect is such that the increase in the likelihood of incorporation in Delaware based on past offerings goes up by 14%. Similarly, previous use of common equity gives rise to future mimicking use of common equity, and this effect is significant at the 1% level. The economic implication of this is an 8% increased likelihood of common equity usage. Lastly, past offering sizes accurately predict future offering sizes, with this effect being positive and statistically significant at the 1% level.

The second-stage outcome regressions presented in Table 11 show similar statistical significance supporting our primary hypotheses. Adhering to a conservative approach and aiming to present largely innocuous econometrics, we choose to concentrate on our more conservative estimates in Tables 6 and 7, without delving further into the instrumental variable estimates in this discussion.

5. Conclusions

This paper thoroughly examines key governance characteristics in the development and performance of securities-based crowdfunding campaigns within the United States. The U.S authorized regulated securities-based crowdfunding in Title III of the Jumpstart Our Business Startups (JOBS) Act of 2012. The adoption of regulation crowdfunding led to significant investment amounts provided to nascent, high-risk startups without having to comply with the arguably onerous and costly rules and regulations governing traditional IPOs.

Using the complete sample of regulated crowdfunding offerings in the U.S. market from origination in May 2016 through 2021, we examine four principal governance mechanisms integral to facilitating success: Delaware incorporation, financial statement information, security design, and the role of crowdfunding platforms.

Our first key finding establishes the ability of entrepreneurs to opt for more stringent legal standards, such as Delaware incorporation, as an indicator of legal quality, clarity, and certainty. This choice has been found to be instrumental in securing entrepreneurial finance. Considering the ongoing debate about Delaware law's value to more mature firms, our research uniquely demonstrates its significance within the crowdfunding sector. We find that the most opaque firms, such as firms with less employees and pre-revenue generating have the most to gain by incorporating in Delaware. Additionally, the advantages conferred by Delaware incorporation could potentially provide incentives or protections for investors, thus encouraging more investment in innovative, high-risk startups and stimulating economic growth and job

creation. Future research could extend this analysis globally assessing alternative legal mechanisms' impact on funding outcomes for entrepreneurs.

Our second observation reveals that legal stipulations requiring the disclosure of two years of financial statement history do not considerably aid investors or promote successful crowdfunding. This limited temporal scope seems insufficiently informative in predicting success. Therefore, potential policy changes could include standardizing or improving the due diligence process across platforms. For instance, the creation of standard evaluation metrics or compelling platforms to disclose specific information about the firms they host, along with the fees and ownership stakes they collect, could enhance the crowdfunding process's transparency and trustworthiness.

Third, our research imparts valuable insights to entrepreneurs and their investors regarding the crucial role of security choice in crowdfunding success. Debt securities often exacerbate risk shifting, underinvestment, and asset-stripping problems, leading to less successful campaigns and reduced capital raising compared to campaigns issuing a form of equity. Consequently, we propose the establishment of educational policies or initiatives targeted at both investors and entrepreneurs. Investors could benefit from more comprehensive information about crowdfunding's specific risks and potential rewards. Simultaneously, entrepreneurs might gain from guidance on designing a successful campaign, choosing the optimal security type, and selecting a suitable platform.

Finally, we discern that crowdfunding platforms play a pivotal role in maintaining market quality by performing due diligence and preventing low-quality entrepreneurs from entering the market. However, the nature of their contractual arrangements and the ownership stakes they take in entrepreneurial firms can spotlight potential conflicts of interest. Our analysis finds that platforms inhibit successful offerings when their underwriting commission relative to the amount raised and total assets of the

entrepreneurial firm is higher, but future research could delve deeper into the characteristics of these platforms. For instance, the selection process that firms undergo when choosing among platforms, the factors that contribute to the success of certain platforms over others, and the longer-term impact that underwriting fees and financial interests have on crowdfunded firms.

Securities-based crowdfunding is still in its infancy, presenting numerous unexplored intersections of finance, entrepreneurship, management, and law. Future research avenues could include a broader examination of the entire crowdfunding ecosystem, encompassing entrepreneurs, investors, intermediaries such as legal or consulting services, regulators, and even additional stakeholders like consumers or employees. Furthermore, future studies could explore the post-crowdfunding success of firms in raising new capital, such as from angels, venture capitalists, and IPOs; however, this type of work is sometimes tricky because while we know the complete population of securities-based crowdfunding in the U.S., there is much less complete information and records with angel investors who often prefer to not disclose their deal information, alongside attrition and backfilling bias (Mason, 2016). This work would complement earlier significant studies on the topic (Signori and Vismara, 2018; Hornuf et al., 2018). The implications of our findings on the success of equity securities could also extend to other investment channels, further expanding the breadth of our research.

References

- Agrawal, A., Catalini, C., & Goldfarb, A. (2015). Crowdfunding: Geography, social networks, and the timing of investment decisions. *Journal of Economics & Management Strategy*, 24(2), 253-274.
- Ahlers, G.K., Cumming, D., Gunther, C., & Schweizer, D. (2015). Signaling in equity crowdfunding. *Entrepreneurship Theory and Practice*, 39(4): 955–98.
- Allen, F., Gu, X., & Jagtiani, J. (2021). A Survey of Fintech Research and Policy Discussion. *Review of Corporate Finance*, 1 (3-4), 259-339.
- Audretsch, D.B., Keilbach, M.C., & Lehmann, E.E. (2006). Entrepreneurship and economic growth. Oxford University Press.
- Barry, C.B., Muscarella, C.J., & Vetsuypens, M.R. (1991). Underwriter warrants, underwriter compensation, and the costs of going public. *Journal of Financial Economics*, 29(1), 113-135.
- Bebchuk, L., Cohen, A., & Ferrell, A. (2002). Does the Evidence Favor State Competition in Corporate Law?. *California Law Review*, 90, 1775.
- Bebchuk, L.A., & Cohen, A. (2003). Firms' decisions where to incorporate. *The Journal of Law and Economics*, 46(2), 383-425.
- Belleflamme, P., Lambert, T., & Schwienbacher, A. (2014). Crowdfunding: Tapping the right crowd. *Journal of Business Venturing*, 29 (5), 585-609.
- Bellemare, M. F., Barrett, C. B., & Just, D. R. (2013). The welfare impacts of commodity price volatility: evidence from rural Ethiopia. *American Journal of Agricultural Economics*, 95(4), 877-899.
- Black, L. S. (1999). *Why corporations choose Delaware*. United States Corporation Company.
- Blaseg, D., Cumming, D.J., & Koetter, M. (2021). Equity Crowdfunding: High-quality or Low-quality Entrepreneurs? *Entrepreneurship Theory and Practice*, 45 (3), 505-530.
- Butticè, V., & Vismara, S. (2021). Inclusive digital finance: The industry of equity crowdfunding. *The Journal of Technology Transfer*, forthcoming
- Carney, W.J., Shepherd, G.B., & Bailey, J.S. (2012). Lawyers, Ignorance, and the Dominance of Delaware Corporate Law. *Harvard Business Law Review*, 2, 123.
- Chan, C. R., Park, H. D., Patel, P., & Gomulya, D. (2018). Reward-based crowdfunding success: decomposition of the project, product category, entrepreneur, and location effects. *Venture Capital*, 20(3), 285-307.
- Chen, H.C., & Ritter, J.R. (2000). The seven percent solution, *Journal of Finance* 55 (3), 1105-1131.
- Coakley, J., & Lazos, A. (2021). New developments in equity crowdfunding: A review. *Review of Corporate Finance*, 1 (3-4), 341-405.
- Cohn, J. B., Liu, Z., & Wardlaw, M. I. (2022). Count (and count-like) data in finance. *Journal of Financial Economics*, 146(2), 529-551.

- Cole, C.W. (2009). Financing an Entrepreneurial Venture: Navigating the Maze of Corporate, Securities, and Tax Law, 78. *UMKC Law Review*, 473, 500-01.
- Cumming, D.J., 2008. Contracts and exits in venture capital finance. *Review of Financial Studies* 21, 1947-1982.
- Cumming, D.J., Dai, N., & Johan, S.A. (2015). Are hedge funds registered in Delaware different? *Journal of Corporate Finance*, 35, 232-246.
- Cumming, D.J., & Hornuf, L. (2022). Marketplace lending of small and medium sized enterprises. *Strategic Entrepreneurship Journal*, 16, 32-66.
- Cumming, D.J., & Johan, S.A. (2019). *Crowdfunding: Fundamental Cases, Facts, and Insights*, Elsevier Science Academic Press.
- Cumming, D.J., Johan, S.A., & Zhang, Y. (2019). The role of due diligence in crowdfunding platforms. *Journal of Banking & Finance*, 108, 105661.
- Cumming, D.J., Meoli, M., Vismara, S. (2019). Investors' choices between cash and voting rights: Evidence from dual-class equity crowdfunding, *Research Policy* 48 103740.
- Cumming, D. J., Martinez-Salgueiro, A., Reardon, R., & Sewaid, A. (2021). COVID-19 Bust, policy response, and rebound: Equity Crowdfunding and P2P vs. Banks. *Journal of Technology Transfer*. <https://doi.org/10.1007/s10961-021-09899-6>
- Cumming, D., & Reardon, R. S. (2022). COVID-19 and entrepreneurial processes in US equity crowdfunding. *Journal of Small Business Management*, 1-24.
- Daines, R. (2001). Does Delaware law improve firm value? *Journal of Financial Economics*, 62(3), 525-558.
- Daines, R. (2002). The incorporation choices of IPO firms. *NYU Law Rev.*, 77, 1559.
- Dushnitsky, G., & Fitza, M.A. (2018). Are we missing the platforms for the crowd? Comparing investment drivers across multiple crowdfunding platforms. *Journal of Business Venturing Insights*, 10, e00100.
- Dushnitsky, G., Guerini, M., Piva, E., & Rossi-Lamastra, C. (2016). Crowdfunding in Europe: Determinants of platform creation across countries. *California Management Review*, 58 (2), 44-71.
- Dushnitsky, G., & Matusik, S.F. (2019). A fresh look at patterns and assumptions in the field of entrepreneurship: What can we learn? *Strategic Entrepreneurship Journal*, 13 (4), 437-447.
- Eisdorfer, A., (2008). Empirical Evidence of Risk Shifting in Financially Distressed Firms. *Journal of Finance*, 63, 609-637.
- Gilson, R. & Schizer, D.M. (2003). Understanding Venture Capital Structure: A Tax Explanation for Convertible Preferred Stock. *Harvard Law Review*, 116, 874-.
- Gompers, P., Ishii, J. & Metrick, A. (2003). Corporate governance and equity prices. *The Quarterly Journal of Economics*, 118(1), pp.107-156.
- Green, R.C. (1984). Investment incentives, debt, and warrants. *Journal of Financial Economics*, 13, 115-136.

- Heminway, J.M. (2021). The Legal Regulation of U.S. Crowdfunding: An Organically Evolving Patchwork. In: Kleiner, C. (eds) *Legal Aspects of Crowdfunding. Ius Comparatum - Global Studies in Comparative Law*, vol 55. Springer, Cham. https://doi.org/10.1007/978-3-030-79264-0_10
- Hornuf, L., Schmitt, M., & Stenzhorn, E. (2018). Equity crowdfunding in Germany and the UK: follow-up funding and firm survival. *Corporate Governance International Review*, 26, 331-354.
- Ibrahim, D.M. (2008). The (not so) puzzling behavior of angel investors. *Vanderbilt Law Rev.*, 61, 1405.
- Iacobucci, E. M. (2004). Toward a signaling explanation of the private choice of corporate law. *American Law and Economics Review*, 6(2), 319-344.
- Jagannathan, M., & Pritchard, A.C. (2017). Do Delaware CEOs get fired? *Journal of Banking & Finance*, 74, 85-101.
- Johan, S.A., & Zhang, Y. (2020). Quality revealing versus overstating in equity crowdfunding. *Journal of Corporate Finance*, 65, article 101741.
- Johan, S.A., & Zhang, Y. (2021). Investors' industry preference in equity crowdfunding, *Journal of Technology Transfer*, forthcoming
- Kahan, M., & Kamar, E. (2002). The myth of state competition in corporate law. *Stan. L. Rev.*, 55, 679.
- Kahan, M., & Rock, E.B. (2002). How I Learned to Stop Worrying and Love the Pill: Adaptive Responses to Takeover Law. *The University of Chicago Law Review*, 69, 871-915.
- Kleinert, S., Bafera, J., Urbig, D., & Volkmann, C. K. (2021). Access denied: How equity crowdfunding platforms use quality signals to select new ventures. *Entrepreneurship Theory and Practice*, 10422587211011945.
- Kleinert, S., Volkmann, C., & Grünhagen, M. (2020). Third-party signals in equity crowdfunding: the role of prior financing. *Small Business Economics*, 54(1), 341-365.
- Kleinert, S., & Mochkabadi, K. (2021). Gender stereotypes in equity crowdfunding: the effect of gender bias on the interpretation of quality signals. *The Journal of Technology Transfer*, forthcoming
- Lee, E., Strong, N., & Zhu, Z. (2014). Did regulation fair disclosure, SOX, and other analyst regulations reduce security mispricing?. *Journal of Accounting Research*, 52(3), 733-774.
- Lukkarinen, A., & Schwienbacher, A. (2021). Secondary Market Listings in Equity Crowdfunding: The Missing Link? Available at SSRN: <https://ssrn.com/abstract=3725498>
- Macey, J. R., & Miller, G. P. (1986). Toward an Interest-Group Theory of Delaware Corporate Law. *Tex. L. Rev.*, 65, 469.
- Mahmood, A., Luffarelli, J., & Mukesh, M. (2019). What's in a logo? The impact of complex visual cues in equity crowdfunding. *Journal of Business Venturing*, 34(1), 41-62.
- Mason, C. (2016). Researching business angels: definitional and data challenges, *Handbook of Research on Business Angels*, Ch. 2, pp. 25-52. Edward Elgar.

- Morabito, C. (2023). Here's why more than 60% of Fortune 5000 companies are incorporated in Delaware. CNBC. <https://www.cnbc.com/2023/03/13/why-more-than-60percent-of-fortune-500-companies-incorporated-in-delaware.html>
- Ouimet, P., & Zarutskie, R. (2014). Who works for startups? The relation between firm age, employee age, and growth. *Journal of financial Economics*, 112(3), 386-407.
- Parra, A., & Winter, R.A. (2021). Early-Stage Venture Financing. Working Paper, UBC.
- Piva, E., & Rossi-Lamastra, C. (2018). Human capital signals and entrepreneurs' success in equity crowdfunding. *Small Business Economics*, 51, 667-686.
- Roma, P., Vasi, M., Kolympiris, C. (2021). On the signaling effect of reward-based crowdfunding: (When) do later stage venture capitalists rely more on the crowd than their peers? *Research Policy* 50, 104267.
- Romano, R. (1985). Law as a Product: Some Pieces of the Incorporation Puzzle. *Journal of Law, Economics, & Organization*, 1(2): 225-283.
- Rossi, A., Vanacker, T., & Vismara, S. (2021). Equity crowdfunding: New evidence from US and UK markets. *Review of Corporate Finance*, 1 (3-4), 407-453.
- Schwartz, A.A. (2020). Crowdfunding Issuers in the United States. *Wash. UJL & Pol'y*, 61, 155.
- Sewaid, A., Garcia-Cestona, M., Silaghi, F. 2021. Resolving information asymmetries in financing new product development: The case of reward-based crowdfunding, *Research Policy* 50, 104345.
- Signori, A., & Vismara, S. (2018). Does success bring success? The post-offering lives of equity-crowdfunded firms. *Journal of Corporate Finance*, 50, 575-591.
- Steinberg, M. I. (2002). Short-form mergers in Delaware. *Del. J. Corp. L.*, 27, 489.
- Subramanian, G. (2004). The disappearing Delaware effect. *Journal of Law, Economics, and Organization*, 20(1), 32-59.
- Vismara, S. (2016). Equity retention and social network theory in equity crowdfunding. *Small Business Economics*, 46(4), 579-590.
- Waisman, M., Wang, H., & Wuebker, R. (2009). Delaware incorporation matters for new ventures: evidence from venture capital investment and the going public process. *Venture Capital*, 11(3), 213-227.
- Walthoff-Borm, X., Vanacker, T.R. & Collewaert, V. (2018). Equity Crowdfunding, Shareholder Structures, and Firm Performance. *Corporate Governance: An International Review*, 26(5), 314-330.
- Wong, A., Bhatia, M. & Freeman, Z., (2009). Angel finance: the other venture capital. *Strategic Change*, 18, 221-230.
- Wroldsen, J. (2017). Crowdfunding Investment Contracts (September 12, 2016). *Virginia Law & Business Review*, 11, 543.
- Zunino, D., Dushnitsky, G., & van Praag, M. (2021). How Do Investors Evaluate Past Entrepreneurial Failure? Unpacking Failure Due to Lack of Skill versus Bad Luck. *Academy of Management Journal*, in press.

Table 1. Variable Definitions

Variable	Description	Source
Ln (Amount Raised)	The total dollar amount raised by a crowdfunding campaign	Multiple Sources
Success	A dummy variable = 1 for a campaign has raised an amount that meets or exceeds its offering amount	Multiple Sources
Ln (Offering Amount)	The target offering amount of a campaign; the amount raised can exceed the offering amount	SEC.gov
Ln (Firm Age)	The age of the firm in years at the time of filing	SEC.gov
Number of Employees	The number of employees at the firm at the time of filing. The variable is winsorized at the 5% level	SEC.gov
Delaware Incorporation	A dummy variable = 1 for a firm that files with incorporation jurisdiction of 'Delaware'	SEC.gov
Post-Revenue	A dummy variable = 1 for a firm that has reported positive revenue in the previous fiscal year at the time of filing.	SEC.gov
Delaware x Post-Revenue	An interaction term = 1 for firms that are incorporated in the state of Delaware and have reported positive revenue in the previous fiscal year at the time of filing.	SEC.gov
Net Profit Margin	A measure of how much net income is generated as a percentage of revenue in the previous fiscal year at the time of filing. The variable is winsorized at the 5% level.	SEC.gov
Return on Assets	A measure of net income as a percentage of total assets in the previous fiscal year at the time of filing. The variable is winsorized at the 5% level.	SEC.gov
Total Debt to Revenue	The short-term debt plus the long-term debt of the firm at the time of filing for the previous fiscal year and as a percentage of revenue. The variable is winsorized at the 5% level.	SEC.gov
Equity (Common Stock)	A dummy variable which indicates a campaign with either a 'Common Equity', 'Class A', 'Class B', or 'Non-Voting Common Stock' type of security offered	SEC.gov
Preferred Stock	A dummy variable which indicates a campaign with a 'Preferred Equity' type of security offered	SEC.gov
Future Equity	A dummy variable which indicates a campaign with a 'SAFE', 'Convertible', or 'Crowd Note' type of security offered	SEC.gov
Debt	A dummy variable which indicates a campaign with a 'Debt' type of security offered	SEC.gov

Relative Underwriting Fee	The percentage compensation to be paid to the intermediary/platform multiplied by the offering amount and as a percentage of total assets for the previous fiscal year. The variable is winsorized at the 5% level and a natural log transformation is applied.	SEC.gov
Relative Financial Interest Fee	The percentage of direct or indirect interest held by the intermediary/platform in a campaign (ownership stake) multiplied by the offering amount and as a percentage of total assets for the previous fiscal year. The variable is winsorized at the 5% level and a natural log transformation is applied.	SEC.gov
Platform Popularity	The number of successful campaigns in the previous two quarters (half-year) for the platform on which the campaign is listed.	SEC.gov
Post Covid-19	A dummy variable = 1 for a campaign on or after March 13 th , 2020, the date the president declared a national emergency concerning the coronavirus disease.	
Post-SEC Regulation Change	A dummy variable = 1 for a campaign on or after March 15, 2021	SEC.gov
Stock Index	Closing Price of S&P 500 Index on the campaign filing date or the most recent trading day	S&P 500 (^GSPC)

Table 2. State (Physical Location of Firm) Comparison

State	Amount Raised	% of Total	Number of Campaigns	% of Total	Success Rate
California	353.9M	33.3%	1,224	17.0%	67.5%
New York	96.8M	9.1%	499	6.6%	64.5%
Texas	95.1M	8.9%	359	4.9%	66.9%
Florida	62.5M	5.9%	324	3.7%	54.9%
Massachusetts	36.6M	3.4%	264	3.5%	64.4%
Colorado	32.0M	3.0%	136	2.0%	70.6%
Utah	28.7M	2.7%	71	1.0%	69.0%
Washington	23.3M	2.2%	106	1.4%	62.3%
Delaware	23.2M	2.2%	86	1.1%	64.0%
Georgia	21.5M	2.0%	106	1.2%	56.6%
Arizona	19.9M	1.9%	84	1.0%	56.0%
Pennsylvania	19.8M	1.9%	179	2.7%	73.7%
Nevada	19.1M	1.8%	92	1.0%	54.3%
Virginia	16.5M	1.6%	85	1.1%	61.2%
Illinois	16.0M	1.5%	117	1.3%	52.1%
New Jersey	15.7M	1.5%	98	1.0%	51.0%
Tennessee	15.7M	1.5%	59	0.7%	55.9%
Ohio	14.8M	1.4%	100	1.2%	59.0%
Hawaii	14.5M	1.4%	24	0.4%	70.8%
Oregon	12.1M	1.1%	65	0.8%	61.5%
Michigan	12.0M	1.1%	72	1.0%	68.1%
Minnesota	11.3M	1.1%	53	0.7%	60.4%
Idaho	10.3M	1.0%	29	0.5%	82.8%
Maryland	9.9M	0.9%	67	0.8%	55.2%
North Carolina	8.8M	0.8%	72	0.8%	52.8%
Connecticut	8.7M	0.8%	49	0.7%	71.4%

State	Amount Raised	% of Total	Number of Campaigns	% of Total	Success Rate
South Carolina	8.1M	0.8%	40	0.6%	67.5%
New Mexico	6.8M	0.6%	25	0.3%	64.0%
Missouri	5.9M	0.6%	37	0.4%	48.6%
U.S. Territories	5.9M	0.6%	12	0.2%	83.3%
Indiana	5.7M	0.5%	28	0.3%	50.0%
Alabama	3.9M	0.4%	24	0.2%	41.7%
Wisconsin	3.6M	0.3%	28	0.3%	57.1%
Washington DC	3.2M	0.3%	37	0.5%	67.6%
Maine	3.1M	0.3%	17	0.1%	41.2%
Vermont	2.9M	0.3%	11	0.2%	81.8%
New Hampshire	2.9M	0.3%	29	0.4%	69.0%
Kentucky	2.6M	0.2%	24	0.4%	75.0%
Louisiana	2.0M	0.2%	18	0.3%	77.8%
Rhode Island	1.8M	0.2%	15	0.2%	66.7%
Montana	1.0M	0.1%	8	0.1%	75.0%
Wyoming	877K	0.1%	31	0.2%	35.5%
Iowa	866K	0.1%	9	0.1%	55.6%
Oklahoma	704K	0.1%	9	0.1%	55.6%
Kansas	651K	0.1%	7	0.1%	72.4%
Alaska	637K	0.1%	2	0.0%	50.0%
Arkansas	530K	0.0%	7	0.1%	42.9%
West Virginia	523K	0.0%	4	0.0%	50.0%
North Dakota	373K	0.0%	2	0.0%	50.0%
Mississippi	190K	0.0%	5	0.0%	40.0%
South Dakota	124K	0.0%	1	0.0%	100.0%
Nebraska	62K	0.0%	2	0.0%	50.0%

Table 2 reports state-level funding characteristic differences. Column 1 reports the aggregate dollar amount raised by each state as of August 1st, 2022 (pre-Q1, 2022 campaigns only). Column 2 reports the aggregate dollar amount raised by each state as a percentage of the total overall amount raised. Column 3 reports the number of campaigns by each state as of August 1st, 2022 (pre-Q1, 2022 campaigns only). Column 4 reports the number of campaigns by each state as a percentage of the total overall number of campaigns. Column 5 reports the average success rate of campaigns in each state.

Table 3. Descriptive Statistics & Comparison of Successful vs. Unsuccessful Campaigns

	Full Sample		Successful Campaigns		Unsuccessful Campaigns		Mean Difference	p-value
Number of Observations	4,851		3,074		1,777			
<u>Deal Characteristics</u>	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev		
Ln (Amount Raised)	7.78	5.73	11.90	1.33	0.66	2.50	11.25	0.00***
Ln (Offering Amount)	10.38	0.48	10.24	1.05	10.62	1.21	-0.38	0.00***
<u>Firm Characteristics</u>								
Ln (Firm Age)	1.1	0.72	1.16	0.71	0.99	0.71	0.18	0.00***
Number of Employees	4.75	5.06	1.53	0.90	1.30	0.82	0.23	0.00***
Delaware Incorporation	0.46	0.50	0.50	0.50	0.38	0.49	0.12	0.00***
<u>Financials</u>								
Post-Revenue	0.50	0.50	0.54	0.50	0.42	0.49	0.12	0.00***
Delaware x Post-Revenue	0.24	0.43	0.28	0.45	0.18	0.39	0.10	0.00***
Net Profit Margin	-2.68	7.35	-2.91	7.55	-2.28	6.97	-0.64	0.00***
Return on Assets	-1.28	2.53	-1.32	2.50	-1.21	2.59	-0.11	0.15
Total Debt to Revenue	2.41	6.43	2.65	6.62	1.99	6.06	0.66	0.00***
<u>Security Type</u>								
Equity (Common Stock)	0.27	0.44	0.28	0.45	0.24	0.43	0.04	0.00***
Preferred Stock	0.08	0.27	0.09	0.29	0.06	0.24	0.03	0.00***
Future Equity	0.32	0.47	0.34	0.47	0.29	0.45	0.05	0.00***
Debt	0.24	0.43	0.21	0.41	0.30	0.46	-0.09	0.00***
<u>Platform Terms</u>								
Relative Underwriting Fee	6.27	1.88	1.68	3.01	2.73	3.54	-1.05	0.00***
Relative Financial Interest Fee	0.82	0.02	0.04	0.17	0.05	0.18	-0.01	0.06*

Platform Popularity	46.96	44.01	52.15	44.79	37.99	41.13	14.16	0.00***
Event Indicators								
Post-Covid-19	0.52	0.50	0.57	0.46	0.43	0.50	0.14	0.00***
Temporary Covid-19 Amendment	0.38	0.23	0.02	0.13	0.02	0.12	0.00	0.89
Post-Regulation Change	0.26	0.44	0.29	0.45	0.22	0.41	0.07	0.00***
Stock Market Index	3,340	749	3,412	743	3,216	742	196	0.00***

Table 3 reports descriptive statistics and a two-tailed t-test for our regression variables. The t-test is applied to compare the means between successful and unsuccessful campaigns and when appropriate we use the unequal variance (Welch) t-test. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4. Security Type Comparison

Security Type	Amount Raised	% of Total Amount Raised	Number of Campaigns	% of Total Number of Campaigns	Success Rate	% of DE-Incorporated Campaigns
Equity (Common Stock)	\$365.3M	34.4%	1,302	26.8%	66.7%	53.8%
Preferred Stock	166.2M	15.6%	396	8.2%	71.5%	58.3%
Future Equity (grouping)	\$357.4M	33.6%	1,559	32.1%	67.2%	62.6%
Debt	\$95.9M	9.0%	1,176	24.2%	54.8%	17.3%
Other	\$78.6M	7.4%	419	8.6%	55.1%	27.9%

Table 4 reports security type funding characteristic differences. At the time of filing, firms must select the type of security they are offering from a list of ‘Common Stock’, ‘Preferred Stock’, ‘Debt’, or ‘Other’. We further separate ‘Other’ filings into the groups: ‘Convertible’, ‘Membership Unit’, ‘SAFE’, ‘Class A’, ‘Class B’, ‘Non-Voting Common Stock’, ‘Crowd Notes’, ‘Tokens’, and ‘Revenue Share’. The remaining unclassified filings remain in the ‘Other’ group. We group ‘Common Stock’, ‘Class A’, ‘Class B’, and ‘Non-voting Common Stock’ because of their similarities in offering a straight form of equity. We also group ‘SAFE’, ‘Convertible’, and ‘Crowd Note’ as Future Equity. Column 1, which sorts our security types, reports the aggregate dollar amount raised by each security type as of August 1st, 2022 (pre-Q1, 2022 campaigns only). Column 2 reports the aggregate dollar amount raised by each security type as a percentage of the total overall amount raised. Column 3 reports the number of campaigns by each security type as of August 1st, 2022 (pre-Q1, 2022 campaigns only). Column 4 reports the number of campaigns by each security type as a percentage of the total overall number of campaigns. Column 5 reports the average success rate of campaigns for each security type. Column 8 reports the percentage of campaigns of each security type that are incorporated in the state of Delaware (DE).

Table 5. Platform Comparison

Platform	Avg. Offering Amount	Avg. Underwriting Commission (%)	Amount Raised	% of Total Amount Raised	Number of Campaigns	% of Total Number of Campaigns	Success Rate	% of DE-Incorporated Campaigns
Wefunder	\$105,881	6.1%	345.3M	32.5%	1,275	26.3%	65.0%	52.6%
StartEngine	\$16,782	7.0%	286.2M	26.9%	988	20.4%	71.6%	57.8%
Republic	\$39,725	5.8%	171.0M	16.1%	441	9.1%	86.8%	74.6%
SeedInvest	\$46,151	7.9%	50.1M	4.7%	278	5.7%	44.2%	74.1%
Netcapital	\$14,470	4.9%	40.6M	3.8%	245	5.0%	77.6%	51.8%
MicroVentures	\$62,340	4.1%	27.7M	2.6%	156	3.2%	82.1%	53.2%
Angel Studios	\$485,743	6%	25.0M	2.3%	13	0.3%	84.6%	15.4%
NextSeed	\$130,412	9.1%	20.4M	1.9%	88	1.8%	88.6%	9.1%
MainVest	\$52,473	6.1%	15.7M	1.5%	453	9.3%	50.6%	0.9%
truCrowd	\$31,457	7.6%	12.7M	1.2%	122	2.5%	45.1%	24.6%
Honeycomb	\$31,251	7.8%	11.1M	1.0%	182	3.8%	69.2%	2.7%
Other	\$131,495	5.1%	57.7M	5.4%	611	12.6%	35.4%	31.6%

Table 5 reports platform funding characteristic differences. Column 1 reports the average offering amount by campaigns on each platform through Q4, 2021. Column 2 reports the average underwriting percentage taken by each platform. Column 3 reports the aggregate dollar amount raised on each platform as of August 1st, 2022 (pre-Q1, 2022 campaigns only). Column 4 reports the aggregate dollar amount raised on each platform as a percentage of the total overall amount raised. Column 5 reports the number of campaigns on each platform as of August 1st, 2022 (pre-Q1, 2022 campaigns only). Column 6 reports the number of campaigns on each platform as a percentage of the total overall number of campaigns. Column 7 reports the average success rate of campaigns on each platform. Column 8 reports the percentage of campaigns on each platform that are incorporated in the state of Delaware (DE).

Table 6. Ordinary Least Squares (OLS) Regression Model Ln (Amount Raised)

	(1)		(2)		(3)		(4)	
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
<u>Deal Characteristics</u>								
Ln (Offering Amount)	-0.504***	-4.45	-0.489***	-4.31	-0.507***	-4.46	-0.494***	-4.35
<u>Firm Characteristics</u>								
Ln (Firm Age)	0.078	0.59	0.069	0.52	0.081	0.61	0.074	0.56
Number of Employees	0.103***	6.29	0.102***	6.24	0.103***	6.32	0.104***	6.36
Delaware Incorporation	0.644***	2.60	0.670***	2.70	0.737***	2.96	0.640***	2.57
<u>Financials</u>								
Post-Revenue	0.306	1.16	0.324	1.22	0.326	1.23	0.318	1.20
Delaware x Post-Revenue	-0.356	-1.11	-0.354	-1.11	-0.360	-1.12	-0.348	-1.09
Net Profit Margin	0.010	0.69	0.012	0.83	0.011	0.75	0.012	0.78
Return on Assets	0.060*	1.88	0.059*	1.84	0.054*	1.68	0.063*	1.97
Total Debt to Revenue	0.011	0.64	0.011	0.64	0.011	0.66	0.011	0.62
<u>Security Type</u>								
Equity (Common Stock)	0.650**	2.56						
Preferred Stock			0.981***	3.26				
Future Equity					-0.616***	-2.58		
Debt							-0.537	-1.48
<u>Platform Terms</u>								
Relative Underwriting Fee	-0.086**	-2.43	-0.085**	-2.42	-0.089**	-2.52	-0.085**	-2.41
Relative Financial Interest Fee	-0.288	-0.55	-0.219	-0.42	-0.297	-0.57	-0.252	-0.48
Platform Popularity	-0.005	-1.16	-0.006	-1.42	-0.005	-1.30	-0.006	-1.39
<u>Fixed Effects</u>								
Time Fixed Effects?	Yes		Yes		Yes		Yes	
State Fixed Effects?	Yes		Yes		Yes		Yes	
Platform Fixed Effects?	Yes		Yes		Yes		Yes	
Number of Observations	4,850		4,850		4,850		4,850	
R-squared	0.241		0.242		0.241		0.240	

Table 6 reports the results of the robust ordinary least squares with time, state, and platform fixed effects models with the log transformation of *Amount Raised* as the dependent variable. The security type dummy variable is different for each regression compared to an omitted group of all other security-types. Regression (1) has an equity (common stock) dummy; Regression (2) has a preferred stock dummy; Regression (3) has a future equity dummy; and Regression (4) has a debt dummy. Standard errors are clustered at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 7. Linear Probability Regression Model (Probability of Success)

	(5)		(6)		(7)		(8)	
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
<u>Deal Characteristics</u>								
Ln (Offering Amount)	-0.084***	-8.36	-0.082***	-8.22	-0.084***	-8.33	-0.083***	-8.27
<u>Firm Characteristics</u>								
Ln (Firm Age)	0.007	0.59	0.006	0.53	0.007	0.62	0.006	0.57
Number of Employees	0.007***	4.97	0.007***	4.85	0.007***	4.97	0.007***	5.01
Delaware Incorporation	0.051**	2.39	0.053**	2.48	0.059***	2.75	0.050**	2.35
<u>Financials</u>								
Post-Revenue	0.034	1.49	0.035	1.55	0.036	1.56	0.035	1.53
Delaware x Post-Revenue	-0.047*	-1.74	-0.047*	-1.75	-0.048*	-1.76	-0.047*	-1.72
Net Profit Margin	0.001	0.83	0.001	0.98	0.001	0.88	0.001	0.91
Return on Assets	0.004	1.50	0.004	1.44	0.004	1.28	0.004	1.59
Total Debt to Revenue	0.002	1.29	0.002	1.29	0.002	1.31	0.002	1.26
<u>Security Type</u>								
Equity (Common Stock)	0.047**	2.19						
Preferred Stock			0.097***	3.98				
Future Equity					-0.056***	-2.78		
Debt							-0.045	-1.50
<u>Platform Terms</u>								
Relative Underwriting Fee	-0.007**	-2.40	-0.007**	-2.39	-0.008**	-2.50	-0.007**	-2.38
Relative Financial Interest Fee	-0.015	-0.35	-0.009	-0.22	-0.017	-0.39	-0.013	-0.29
Platform Popularity	0.000	-0.54	0.000	-0.78	0.000	-0.65	0.000	-0.74
<u>Fixed Effects</u>								
Time Fixed Effects?	Yes		Yes		Yes		Yes	
State Fixed Effects?	Yes		Yes		Yes		Yes	
Platform Fixed Effects?	Yes		Yes		Yes		Yes	
Number of Observations	4,850		4,850		4,850		4,850	
R-squared	0.223		0.225		0.224		0.223	

Table 7 reports the results of the linear probability models with time, state, and platform fixed effects. The dependent variable is our binary measure of campaign fundraising success. The security type dummy variable is different for each regression compared to an omitted group of all other security-types. Regression (1) has an equity (common stock) dummy; Regression (2) has a preferred stock dummy; Regression (3) has a future equity dummy; and Regression (4) has a debt dummy. Standard errors are clustered at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 8. Robustness Checks

	(9)		(10)		(11)		(12)	
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
<u>Deal Characteristics</u>								
Ln (Offering Amount)	-0.573***	-5.09	-0.497***	-4.29	-0.071***	-4.45	-0.489***	-8.57
<u>Firm Characteristics</u>								
Ln (Firm Age)	0.095	0.71	0.070	0.52	0.008	0.50	0.040	0.65
Number of Employees	0.105***	6.32	0.101***	6.10	0.012***	6.40	0.040***	4.97
Delaware Incorporation	0.638**	2.54	0.692***	2.76	0.094***	2.79	0.218**	1.97
<u>Financials</u>								
Post-Revenue	0.280	1.04	0.335	1.26	0.048	1.32	0.149	1.27
Delaware x Post-Revenue	-0.347	-1.07	-0.367	-1.14	-0.066	-1.61	-0.207	-1.42
Net Profit Margin	0.011	0.72	0.013	0.90	0.001	0.84	0.006	0.86
Return on Assets	0.052	1.63	0.059	1.82	0.007	1.83	0.023	1.64
Total Debt to Revenue	0.011	0.62	0.011	0.67	0.002	0.83	0.011	1.22
<u>Security Type</u>								
Equity (Common Stock)	0.618**	2.38	0.653***	2.5	0.085**	2.50	0.244**	2.14
<u>Platform Terms</u>								
Relative Underwriting Fee	-0.080**	-2.24	-0.089***	-2.52	-0.012**	-2.45	-0.036**	-2.29
Relative Financial Interest Fee	-0.396	-0.75	-0.30	-0.57	-0.037	-0.52	-0.171	-0.70
Platform Popularity	-0.005	-1.16	-0.006	-1.33	-0.001	-1.75	-0.002	-1.15
<u>Fixed Effects</u>								
Time Fixed Effects?	Yes		Yes		Yes		Yes	
State Fixed Effects?	Yes		Yes		Yes		Yes	
Platform Fixed Effects?	Yes		Yes		Yes		Yes	
Number of Observations	4,750		4,776		4,729		4,711	
R-squared	0.243		0.241		0.098		0.156	

Table 8 reports the results of robustness check regression with equity (common stock) as the security-type dummy variable, time, state, and platform fixed effects across all models. Regression (9) only considers campaigns that are confirmed to be closed as of August 1st, 2022. Regression (10) excludes all campaigns that meet the Covid-19 temporary amendment policy discussed in detail in section 4.2. Regression (11) is a Poisson pseudo-likelihood regression with the log transformation of *Amount Raised* as the dependent variable. Regression (12) is a logit model with the probability of *Success* as the dependent variable. The reported values are the logit coefficients and not the marginal effects. Standard errors are clustered at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 9. Event Indicator Regressions

	(13)		(14)		(15)	
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
<u>Deal Characteristics</u>						
Ln (Offering Amount)	-0.080***	-8.29	-0.084***	-8.53	-0.081***	-8.32
<u>Firm Characteristics</u>						
Ln (Firm Age)	0.004	0.40	0.007	0.65	0.004	0.34
Number of Employees	0.007***	4.85	0.007***	4.92	0.007***	4.86
Delaware Incorporation	0.056***	2.62	0.058***	2.73	0.057***	2.69
<u>Financials</u>						
Post-Revenue	0.037	1.62	0.035	1.53	0.036	1.59
Delaware x Post-Revenue	-0.050*	-1.84	-0.044	-1.62	-0.049*	-1.81
Net Profit Margin	0.001	0.80	0.001	0.82	0.001	0.75
Return on Assets	0.004	1.36	0.004	1.28	0.003	1.26
Total Debt to Revenue	0.002	1.35	0.002	1.53	0.002	1.34
<u>Security Type</u>						
Equity (Common Stock)	0.054***	2.53	0.062***	2.89	0.055***	2.56
<u>Platform Terms</u>						
Relative Underwriting Fee	-0.007**	-2.45	-0.008**	-2.49	-0.008**	-2.52
Relative Financial Interest Fee	-0.014	-0.34	-0.004	-0.10	-0.013	-0.31
Platform Popularity	0.000	-0.01	0.001**	2.42	0.000	-0.69
<u>Event Indicators</u>						
Post-Covid-19	0.119***	6.59				
Post-Regulation Change			0.057***	3.00		
Stock Index					0.0001***	5.63
<u>Fixed Effects</u>						
Time Fixed Effects?		No		No		No
State Fixed Effects?		Yes		Yes		Yes
Platform Fixed Effects?		Yes		Yes		Yes
Number of Observations		4,850		4,850		4,850
R-squared		0.434		0.435		0.434

Table 9 reports the results of regression models that use event indicators in replacement of time-fixed effects. All regressions are linear probability models with state and platform fixed effects models with *Success* as the dependent variable. The security-type dummy variable for each regression is equity (common stock) compared to an omitted group of all other security types. Regression (13) uses a Covid-19 dummy variable which has a value of 1 for campaigns filed after March 13, 2020. Regression (14) uses a regulation dummy variable which has a value of 1 for campaigns filed on or after March 15, 2021. Regression (15) uses a stock

market index to capture how broader market sentiment impacts crowdfunding. Standard errors are clustered at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 10. First Stage Regressions

	<u>Delaware</u>		<u>Common Stock</u>		<u>Ln (Offering Amount)</u>	
	(16)		(17)		(18)	
	Coefficient	z-statistic	Coefficient	z-statistic	Coefficient	t-statistic
<u>Instrumental Variables</u>						
Mimicking Ln (Offering Amount)	0.086	0.80	0.039	0.27	0.210***	5.27
Mimicking Delaware	0.872***	4.14	-0.271	-0.90	0.016	0.25
Mimicking Equity (Common Stock)	-0.158	-0.56	0.852**	2.27	-0.035	-0.41
<u>Deal Characteristics</u>						
Predicted Ln (Offering Amount)						
<u>Firm Characteristics</u>						
Ln (Firm Age)	-0.510***	-7.87	-0.104	-1.15	0.058***	3.19
Number of Employees	0.048***	5.94	0.048***	4.07	0.015***	6.56
Predicted Delaware Incorporation						
<u>Financials</u>						
Post-Revenue	-0.307***	-3.03	0.246*	1.71	-0.015	-0.46
Predicted Delaware x Post-Revenue						
Net Profit Margin	-0.002	-0.27	0.021	1.50	0.002	1.16
Return on Assets	-0.053***	-3.51	0.025	1.24	-0.001	-0.2
Total Debt to Revenue	0.027***	3.32	0.001	0.04	0.004**	2.03
<u>Security Type</u>						
Predicted Equity (Common Stock)						
<u>Platform Terms</u>						
Relative Underwriting Fee	-0.068***	-3.91	0.011	0.46	0.035***	5.84
Relative Financial Interest Fee	0.153	0.64	0.867**	2.35	0.188**	2.51
Platform Popularity						
<u>Fixed Effects</u>						
Time Fixed Effects?		Yes		Yes		Yes
State Fixed Effects?		Yes		Yes		Yes
Platform Fixed Effects?		Yes		Yes		Yes
Number of Observations		4,698		4,826		4,826
R-squared		0.293		0.298		0.579

Table 10 reports the first-stage regression results of the logit and ordinary least squares models for the probability of an entrepreneur incorporating in *Delaware*, the probability of using *Equity (Common Stock)*, and the total *Offering Amount*. Each regression is performed using time, state, and platform fixed effects. The three instruments are mimicking variables of the most similar size and age-matched campaign values of the respective variables from the prior 3 months on the same platform. The full sample is not used due to lagged instrumental variables. Some platform and state dummies predicted observations perfectly in the

regressions, and as such STATA dropped those observations. Firm clustered standard errors are used to calculate the t-statistics. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 11. Second Stage Regressions

	<u>Ln (Amount Raised)</u>		<u>Success</u>	
	(19)		(20)	
	Coefficient	t-statistic	Coefficient	z-statistic
<u>Instrumental Variables</u>				
Mimicking Ln (Offering Amount)				
Mimicking Delaware				
Mimicking Equity (Common Stock)				
<u>Deal Characteristics</u>				
Predicted Ln (Offering Amount)	-0.665	-0.75	-0.096	-1.27
<u>Firm Characteristics</u>				
Ln (Firm Age)	0.594	2.04	0.033	1.33
Number of Employees	0.013	0.36	0.002	0.64
Predicted Delaware Incorporation	5.467**	2.04	0.294*	1.74
<u>Financials</u>				
Post-Revenue	0.297	0.74	0.038	1.09
Predicted Delaware x Post-Revenue	-0.520	-0.85	-0.073	-1.37
Net Profit Margin	-0.011	-0.66	-0.0003	-0.21
Return on Assets	0.083**	1.99	0.005	1.38
Total Debt to Revenue	-0.012	-0.56	0.001	0.4
<u>Security Type</u>				
Predicted Equity (Common Stock)	12.762***	3.24	0.762**	2.27
<u>Platform Terms</u>				
Relative Underwriting Fee	-0.031**	-0.54	-0.004	-0.85
Relative Financial Interest Fee	-1.457	-2.24	-0.085	-1.56
Platform Popularity	-0.004	-1.06	-0.0001	-0.4
<u>Fixed Effects</u>				
Time Fixed Effects?		Yes		Yes
State Fixed Effects?		Yes		Yes
Platform Fixed Effects?		Yes		Yes
Number of Observations		4,826		4,826
R-squared		0.243		0.213

Table 11 reports the second-stage regression results of the ordinary least squares *Amount Raised* and probability of *Success* as dependent variables. Each regression is performed using time, state, and platform fixed effects. The three instruments are mimicking variables of the most similar size and age-matched campaign values of the respective variables from the prior 3 months on the same platform. The full sample is not used due to lagged instrumental variables. Some platform and state

dummies predicted observations perfectly in the regressions, and as such STATA dropped those observations. Firm clustered standard errors are used to calculate the t-statistics. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Figure 1. Securities-Based Crowdfunding Amount Raised in the U.S.

Figure 1 shows the evolution of the U.S. securities-based crowdfunding market from the second quarter of 2016 to the fourth quarter of 2021. On the primary y-axis, we report the aggregate quarterly number of new campaigns. On the secondary y-axis, we report the aggregate quarterly fundraising totals (as of August 1st, 2022).

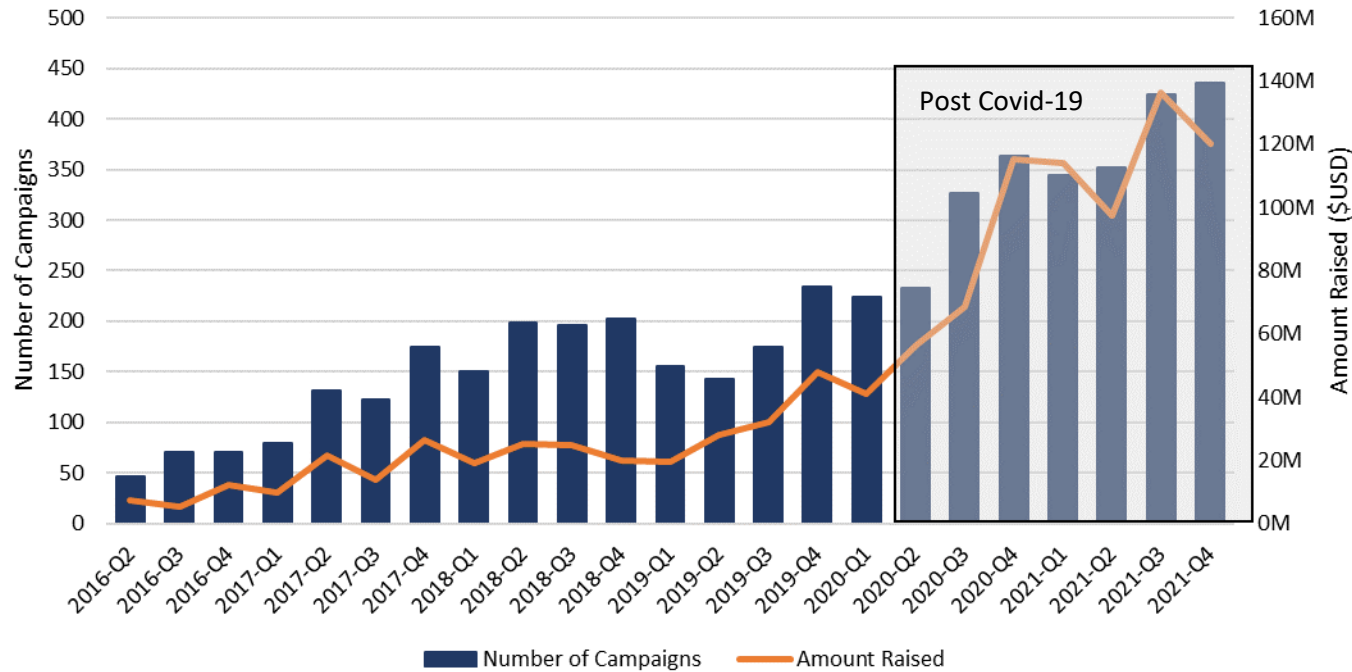


Figure 2. Securities-Based Crowdfunding Amount Raised greater than \$1 Million

Figure 2 plots aggregate quarterly fundraising totals for the second quarter of 2021 versus the aggregate totals in the second quarter for each of the previous 4 years. We further distinguish between campaigns that raised in excess of \$1 million (light green). *note the fundraising totals reported are as of August 1st, 2022.

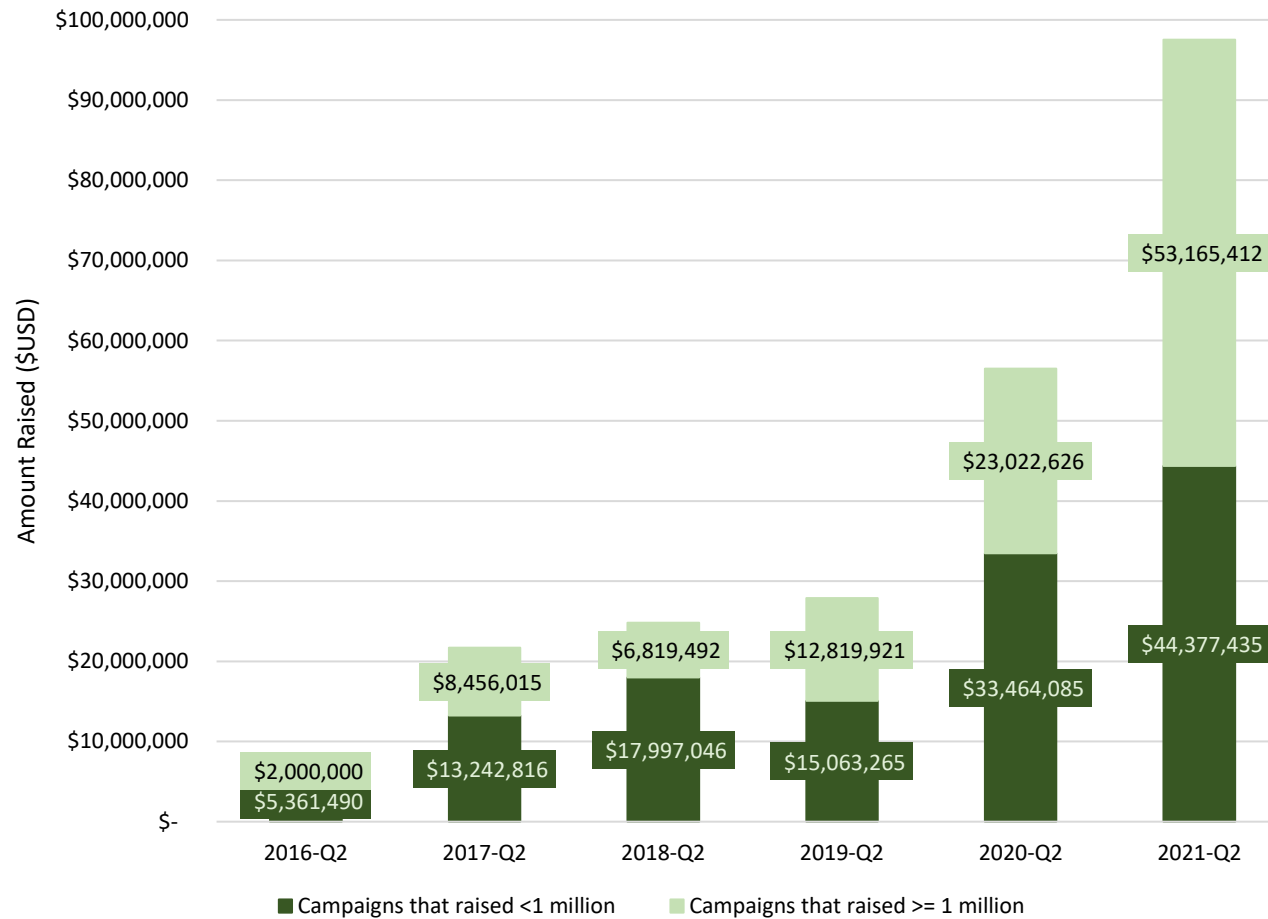


Figure 3. Histogram of Securities-Based Crowdfunding Amounts Raised

Figure 3 plots the histogram of securities-based crowdfunding amounts raised. Before March 15, 2021, there was a cap of \$1,070,000 in a 12-month period. This cap was increased to \$5 million effective March 15, 2021. In our sample, 26% of the offerings occurred on or after March 15, 2021.

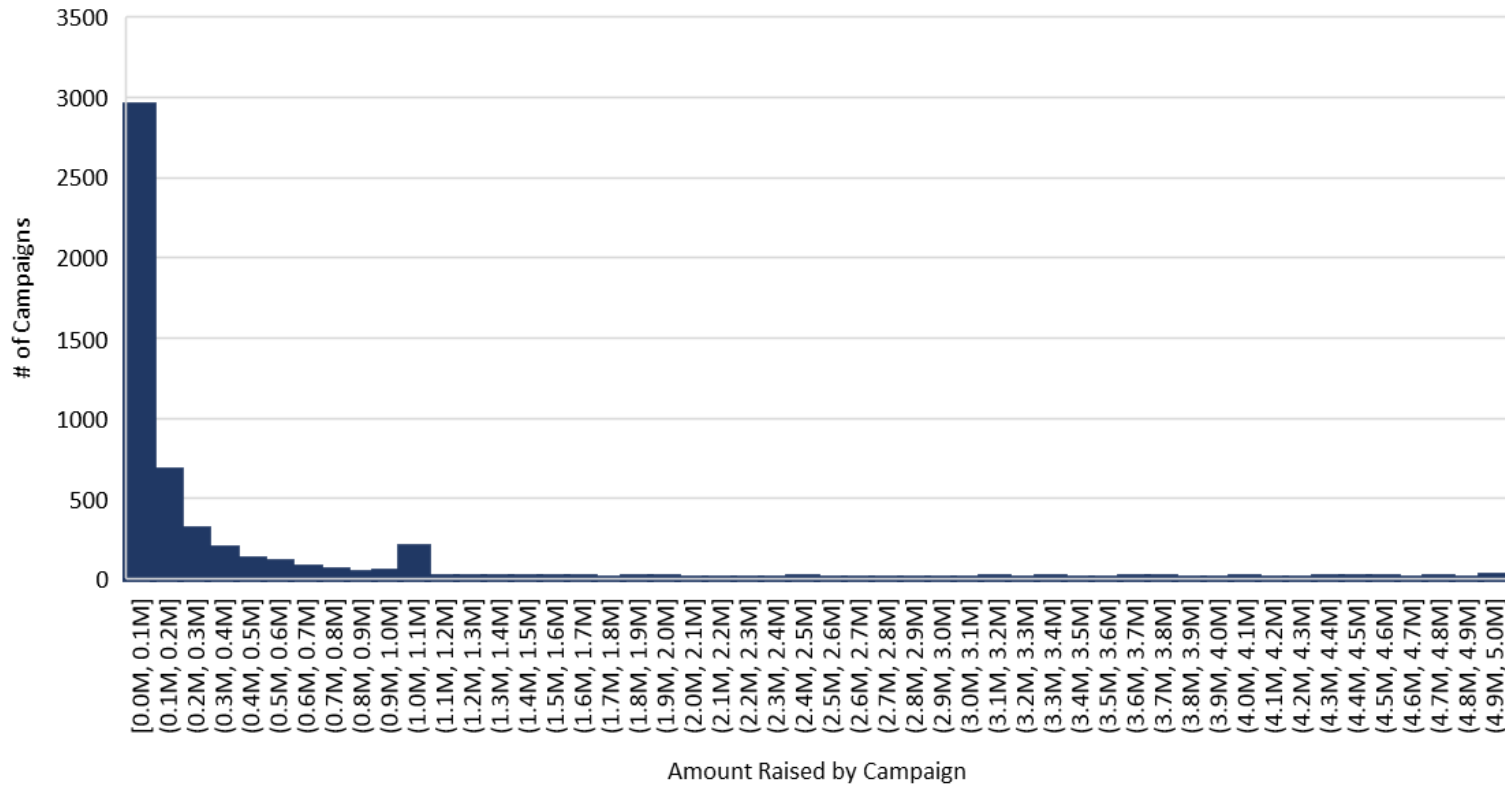


Figure 4. Securities-Based Crowdfunding Trend in Average Success Rate

Figure 4 shows the trend in successful campaigns by plotting the average success rate, measured as the number of successful campaigns divided by the total number of new campaigns within a given quarter from the second quarter of 2016 to the fourth quarter of 2021.

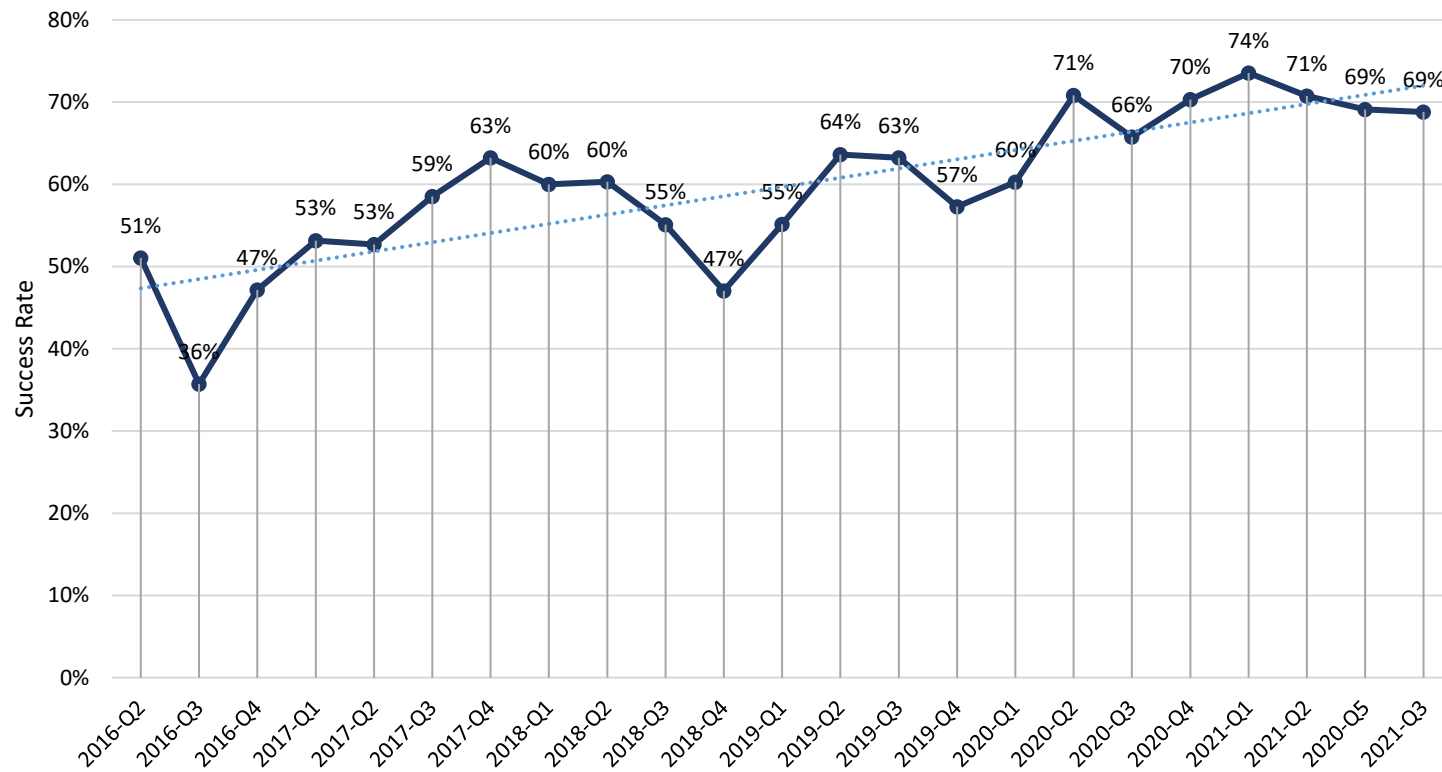


Figure 5. Heat Map of U.S. State Securities-Based Crowdfunding Activity

Figure 5 shows a heat map of the density of all securities-based crowdfunding activity amongst U.S. states. The darker the shade of blue, the greater the amount raised by campaigns in that particular state. For example, the campaigns of all collective firms headquartered in California have raised the largest amount of money of any state from 2016 Q2 to 2021 Q4.

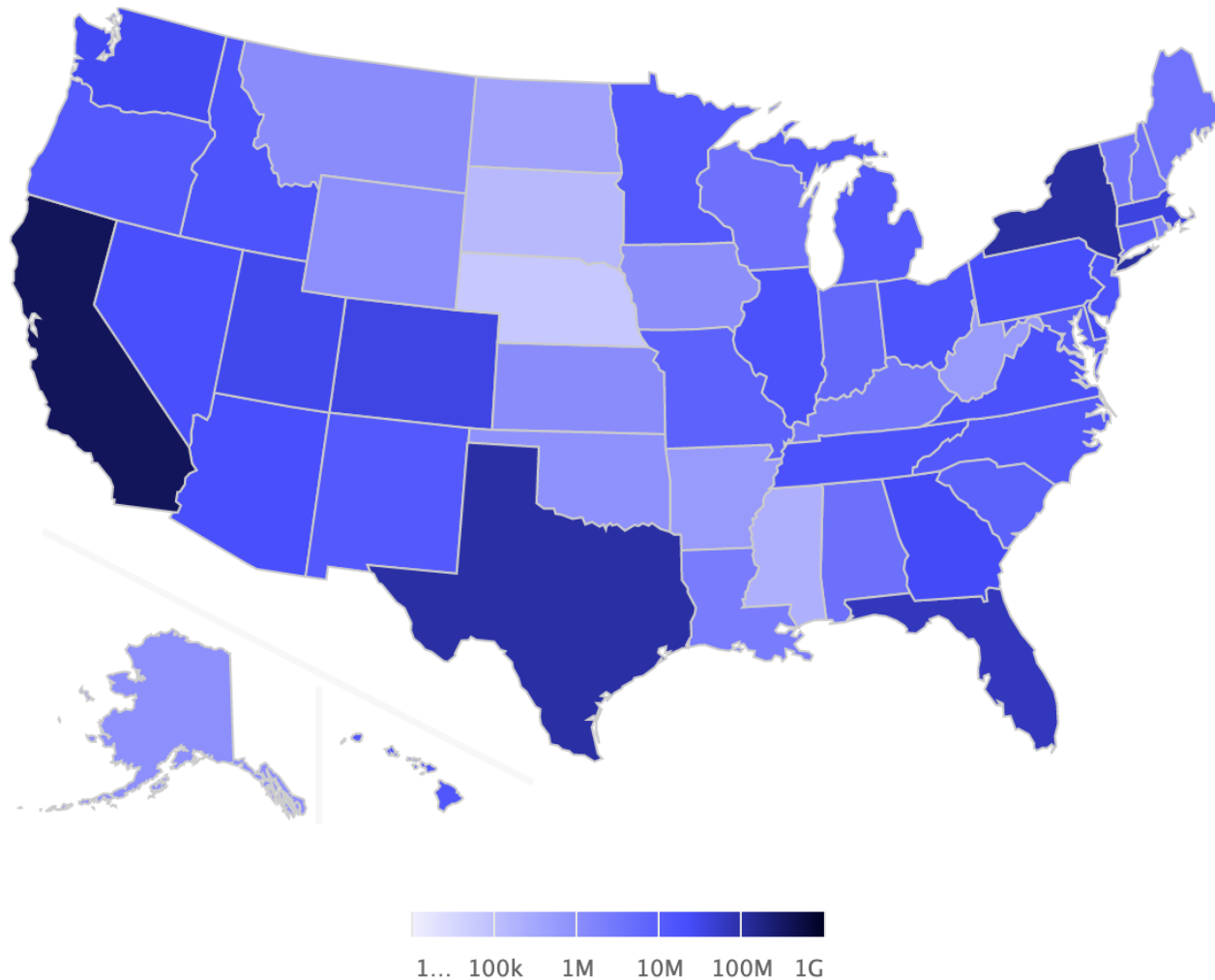
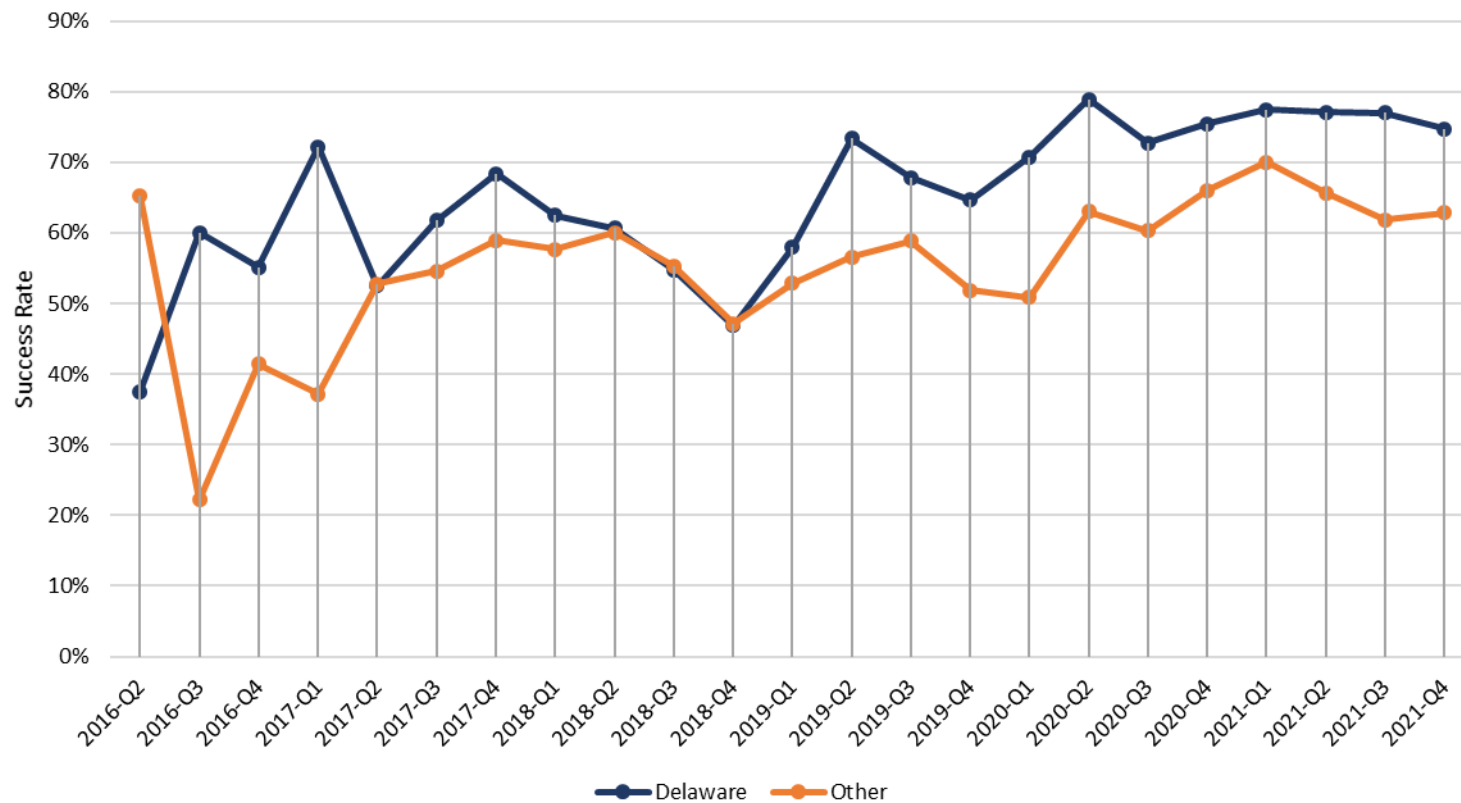


Figure 6. Securities-Based Crowdfunding Trend in Average Success Rate for Delaware Jurisdiction

Figure 6 plots the trend in the average success rate of firms incorporated in Delaware (dark blue) against firms incorporated in all other states (orange), measured as the number of successful campaigns divided by the total number of new campaigns within a given quarter from the second quarter of 2016 to the fourth quarter of 2021.



Appendix

Table A1. Descriptive Statistics (Original Values)

	N	Mean	Median	Std. Deviation	Minimum	Maximum
Amount Raised	4,851	218,713	53,975	489,521	0	500,000
Offering Amount	4,851	67,327	25,000	170,295	.01	500,000
Firm Age (years)	4,851	2.98	1.87	3.71	0	53.02
Number of Employees	4,851	5.86	3	14.69	0	700
Underwriter Commission (%)	4,851	6.27	6	1.88	0	17.5
Financial Interest (%)	4,851	0.82	0	1.59	0	50

	Full Sample		Successful Campaigns		Unsuccessful Campaigns		Mean Difference	p-value
Number of Observations	4,851		3,074		1,777			
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev		
Amount Raised	218,713	489,521	343,449	579,117	2,933	24,040	340,515	0.00***
Offering Amount	67,327	170,295	53,297	138,685	91,598	212,101	-38,300	0.00***
Firm Age (years)	2.98	3.71	3.20	3.81	2.59	3.48	0.62	0.00***
Number of Employees	5.86	14.69	6.41	11.79	4.92	18.64	1.49	0.00***
Underwriter Commission (%)	6.27	1.88	6.32	1.84	6.19	1.95	0.13	0.02**
Financial Interest (%)	0.82	1.59	0.83	1.58	0.81	1.59	0.02	0.66

Table A2. Descriptive Statistics (Transformed Values)

	N	Mean	Median	Std. Deviation	Minimum	Maximum	VIF
Ln (Amount Raised)	4,851	7.78	10.90	5.73	0	15.42	
Success (dummy)	4,851	0.63	1	0.48	0	1	
Ln (Offering Amount)	4,851	10.38	10.13	1.13	0.01	15.42	2.34
Ln (Firm Age)	4,851	1.10	1.05	0.72	0	3.99	1.68
Number of Employees	4,851	4.75	3	5.06	0	20	1.27
Delaware Incorporation (dummy)	4,851	0.46	0	0.50	0	1	2.78
Post-Revenue (dummy)	4,851	0.50	0	0.50	0	1	3.21
Delaware x Post-Revenue (dummy)	4,851	0.24	0	0.43	0	1	3.45
Net Profit Margin	4,851	-2.68	0	7.35	-30.20	0.13	2.43
Return on Assets	4,851	-1.28	-0.16	2.53	-10.00	0.34	1.22
Total Debt to Revenue	4,851	2.41	0	6.43	0	26.71	2.37
Equity (Common Stock)	4,851	0.27	0	0.44	0	1	2.30
Preferred Stock	4,851	0.08	0	0.27	0	1	1.24
Future Equity	4,851	0.32	0	0.47	0	1	2.18
Debt	4,851	0.24	0	0.43	0	1	3.69
Relative Underwriting Fee	4,851	2.06	0.05	3.25	-0.25	8.52	2.34
Relative Financial Interest Fee	4,851	0.05	0	0.17	-0.005	0.76	1.44
Platform Popularity	4,851	46.96	35	44.01	0	156	5.89
Event Indicators							
Post-Covid-19 (dummy)	4,851	0.52	1	0.50	0	1	
Post-Regulation Change (dummy)	4,851	0.26	0	0.44	0	1	
Stock Market Index	4,851	3,340	3,136	749	2,036.09	4,793.06	

Table A3. Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Ln (Amount Raised)	1												
(2) Success (dummy)	0.95	1											
(3) Ln (Offering Amount)	-0.07	-0.16	1										
(4) Ln (Firm Age)	0.13	0.12	-0.02	1									
(5) Number of Employees	0.16	0.13	0.001	0.31	1								
(6) Delaware Incorporation (dummy)	0.15	0.11	-0.06	-0.01	0.09	1							
(7) Post-Revenue (dummy)	0.13	0.12	-0.01	0.51	0.29	0.06	1						
(8) Delaware x Post-Revenue (dummy)	0.14	0.11	-0.02	0.21	0.19	0.62	0.57	1					
(9) Net Profit Margin	-0.05	-0.04	-0.001	-0.11	-0.05	-0.14	-0.37	-0.34	1				
(10) Return on Assets	-0.03	-0.02	0.03	-0.08	0.00	-0.15	-0.05	-0.12	0.26	1			
(11) Total Debt to Revenue	0.06	0.05	0.01	0.16	0.07	0.15	0.38	0.36	-0.74	-0.19	1		
(12) Equity (Common Stock)	0.03	0.04	-0.34	0.01	0.10	0.10	-0.05	0.01	0.02	-0.03	-0.01	1	
(13) Preferred Stock	0.06	0.05	0.06	0.03	0.06	0.07	0.05	0.07	-0.05	0.00	0.04	-0.18	1
(14) Future Equity	0.10	0.06	0.23	0.07	-0.04	0.23	0.12	0.20	-0.11	-0.13	0.10	-0.42	-0.21
(15) Debt	-0.14	-0.10	0.08	-0.06	-0.06	-0.32	-0.05	-0.19	0.11	0.15	-0.11	-0.34	-0.17

(16)	Relative Underwriting Fee	-0.18	-0.16	0.10	-0.48	-0.24	-0.19	-0.54	-0.34	0.21	0.23	-0.22	-0.04	-0.07
(17)	Relative Financial Interest Fee	-0.02	-0.03	0.07	-0.17	-0.09	0.08	-0.17	-0.10	0.05	-0.02	-0.07	-0.03	-0.03
(18)	Platform Popularity	0.21	0.16	0.06	0.10	0.12	0.17	0.07	0.12	-0.05	-0.07	0.07	0.00	0.05
(19)	Post-Covid-19 (dummy)	0.17	0.14	0.01	0.07	0.06	0.02	0.03	0.05	-0.004	0.01	0.03	-0.04	0.02
(20)	Post-Regulation Change (dummy)	0.09	0.08	-0.01	0.06	0.07	0.02	0.02	0.03	0.02	0.03	0.01	0.03	0.03
(21)	Stock Market Index	0.15	0.13	-0.02	0.08	0.07	0.02	0.03	0.05	0.01	0.03	0.02	-0.01	0.02

Variables	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
(14) Future Equity	1							
(15) Debt	-0.39	1						
(16) Relative Underwriting Fee	-0.19	0.25	1					
(17) Relative Financial Interest Fee	0.07	-0.05	0.27	1				
(18) Platform Popularity	0.22	-0.27	-0.14	-0.10	1			
(19) Post-Covid-19 (dummy)	0.04	0.04	0.01	-0.04	0.45	1		
(20) Post-Regulation Change (dummy)	-0.02	0.02	-0.01	-0.03	0.40	0.58	1	
(21) Stock Market Index	0.02	0.03	0.002	-0.05	0.52	0.79	0.84	1

Note: Correlations greater than 0.0373, 0.0285, and 0.0238 in absolute value are significant at the 1%, 5%, and 10% levels, respectively.



The Centre for Responsible Banking & Finance
CRBF Working Paper Series
Department of Finance, University of St Andrews
The Gateway, North Haugh,
St Andrews, Fife,
KY16 9RJ.
Scotland, United Kingdom
<https://crbf.wp.st-andrews.ac.uk/>



Recent CRBF Working papers published in this Series

Second Quarter | 2024

24-015 **Douglas Cumming, Shan Ji, and Monika Tarsalewska:** Market Manipulation and ESG Incidents.

24-014 **Nodirbek Karimov, Alper Kara, Gareth Downing, and David Marques-Ibanez:** The Impact of Regulatory Changes on Rating Shopping and Rating Catering Behaviour in the European Securitisation Market.

24-013 **Marta Degl'Innocentia, Marco Frigeriob, and Si Zhou:** The Fear Factor: How Mafia Influences Firms' Performance.

24-012 **Lora Dimitrova and Margaret Fong:** Executive Visibility in SPACs: A Worthwhile Investment or a Futile Pursuit?

24-011 **Giuseppe Cappelletti, David Marques-Ibanez, Alessio Reghezza, and Carmelo Salleo:** As Interest Rates Surge: From Funding to Lending.

24-010 **Parinitha (Pari) Sastry, David Marques-Ibanez, and Emil Verner:** Business as Usual: Bank Climate Commitments, Lending, and Engagement.

24-009 **Yuji Honjo, Arito Ono and Daisuke Tsuruta:** The Effect of Physical Collateral and Personal Guarantees on Business Startups.

24-008 **Sonny Biswas, Kostas Koufopoulos, and Anjan Thakor:** Can Information Imprecision Be Valuable? The Case of Credit Ratings.

24-007 **Stefano Colonnello and Mariela Dal Borgo:** Raising Household Leverage: Evidence from Co-Financed Mortgages.



University of St Andrews
Scotland's first university

600 YEARS
1413 – 2013