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

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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; Butticè 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 hypothesize that the financial statement data may have limited predictive power; and hence, have an immaterial 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 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 hybrid equity security campaigns because of their familiar terms, minimal transaction costs, and ease to follow-on funding and exit opportunities.

Fourth, we conjecture that securities-based crowdfunding platforms uniquely impact the relationship between entrepreneurs and their investors. Platform underwriting commissions are a cost to the capital raised by firms and hence lower the attractiveness of the offerings for capital-constrained entrepreneurs. Commissions on crowdfunding platforms in the U.S. average approximately 6% (similar to 7% for IPOs; Chen and Ritter,

2000), but it is hard to fully capture all the commission features, which are often on a graduated scale. Platforms sometimes take a financial interest in firms that the platform promotes in ways that might be a conflict of interest, but could also be considered a signal of quality. Further, platforms carry out due diligence and provide value-added advice to entrepreneurs (Cumming and Johan, 2019; Dushnitsky et al., 2016, 2018; Dushnitsky and Matusik, 2019; Rossi et al., 2018; Zunino et al., 2019), not all of which is directly observable nevertheless indicative of the importance for fixed-effects at the platform level in our analyses.

We test these four 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 4,852 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 crowdfunders to raise 65% more capital and increases the probability of successful fundraising (achieving the desired capital goal) by 2.5% 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, common stock securities (common stock, class a, class b, and non-voting shares) increase the probability of a successful offering by 4.4%. In comparison, debt reduces the probability of a successful offering by 4.6%. Common equity increases the amount raised by 96% relative to the average amount raised, while debt reduces the

[3]Regulation 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 Schwienbacher, 2020).

amount raised by 43% relative to the average 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. And fourth, neither the underwriter commission (negative relationship) nor the financial interest percentage (positive relationship) that platforms impose on entrepreneurs is significantly associated with campaign fundraising outcomes. However, the use of platform-fixed effects in our regressions is crucial and underscores enormous unobservable differences across many of the platforms.

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 involves very small and earlier stage capital raises and hence more pronounced risks than later stage venture capital, private equity, and public offerings. Securities-based crowdfunding involves minimal regulation so that very early-stage companies can raise capital without overly costly mandated disclosure requirements. But there is not a complete absence of regulatory oversight and governance, and striking the right balance is a central issue for academics, policymakers, and

[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.

practitioners alike. The salient issues in examining success in securities-based crowdfunding include the legal rules governing the offering, the usefulness of the entrepreneur's financial information disclosures, the signaling and governance issues with the particular type of security used in the offering, and the governance framework offered by the platforms. In this section, we explain these aspects of crowdfunding in the context of the U.S. setting in subsections 2.1-2.4.

2.1. Delaware Incorporation

Securities-based crowdfunding poses substantial risks to investors. The securities purchased are extremely illiquid because there is no viable secondary market to sell those securities. In recent years, many platforms have attempted to develop secondary markets; however, the illiquidity has remained due to high information asymmetries, among other factors (Lukkarinen & Schwienbacher 2020). Additionally, investors may lose some or all of their capital if the firm fails due to fraud, incompetence, or negligence. Given these risks, it is essential to have legal mechanisms that enable efficient investor protection. One form of legal protection in the U.S. is the jurisdiction of incorporation, which we discuss in this section.

In the U.S., firms can self-select an incorporation location that is different from the physical location of the business. The cost, taxation, and corporate laws associated with incorporation vary between states, making some states more advantageous than others. There is a large body of empirical evidence that Delaware law improves firm value. For example, when firms reincorporate in Delaware, seminal work shows that their share prices significantly increase (Romano, 1985).

There is mixed evidence that Delaware firms are worth more at the time of an IPO. Daines (2001) analyzed Tobin's Q of firms and found that Delaware firms were more valuable. His analysis of the sample firm data from 1981 to 1996 established better corporate governance as the basis for investor preference for Delaware-incorporated firms. Gompers et al. (2003), however, find conflicting results that they acknowledge may be a result of differences in sample, time period, and control variables. After controlling for endogeneity and other factors, they found the Delaware coefficient statistically significant and negative after controlling for their "governance index", which is a sum of takeover defenses[5]. Bebchuk et al. (2002) also find no correlation between Delaware incorporation and higher Tobin's Q at the end of 1999. Subramanian (2004) extended the Daines model by differentiating firm size and extending the sample by six years to also look at 1997 to 2002. He found that larger firms (more than $50 million in net sales) exhibited no Delaware effect from 1991 to 2002. More interestingly, he found that small firms (less than $50 million in net sales) incorporated in Delaware were valued more than small firms incorporated outside Delaware firms from 1991 to 1996, but not after.

The apparent disappearance of a Delaware effect for IPOs renders the analysis of Delaware law for equity-based crowdfunding to be quite interesting. Equity crowdfunding is similar to an IPO without the mandated prospectus level disclosure standards. The risks associated with crowdfunding are much more pronounced due to the lack of disclosure, illiquidity of shares, and nascent operating history of crowdfunding

[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.

entrepreneurs. If anything, a legal mechanism such as Delaware is of greater importance for a crowdfunding offering than it is for an IPO due to the risks involved.

Incorporation in Delaware arguably offers the best possible solution for crowdfunding investors for five primary reasons: (1) enabling exit, (2) managerial entrenchment, (3) legal efficiency, (4) signaling, and (5) legal familiarity. First, Delaware law most effectively facilitates mergers and acquisitions (Romano, 1985; Daines, 2002). Securities-based crowdfunding investors desire future exit opportunities for the illiquid assets that they hold. Delaware does have some anti-takeover provisions that have given rise to debates about the quality of Delaware law in the literature over the last 50 years. Regardless, the empirical evidence shows that clarity, legal certainty, bilateral devices (such as board independence and compensation; see Kahan and Rock, 2002), and anti-takeover laws do not promote managerial entrenchment (Jagannathan and Pritchard, 2017). Further, investors that are likely to purchase crowdfunded shares include angels and venture capitalists. Empirical evidence shows that angel investors and venture capitalists prefer to invest in companies incorporated in Delaware (Ibrahim, 2008; Waisman, 2009). Likewise, investment bankers may also prefer incorporation in Delaware before going public (Carney et al., 2012).

Second, Delaware incorporation mitigates managerial entrenchment because it better enables mergers and acquisitions (Jagannathan and Pritchard, 2017). Delaware firms are also more likely to terminate directors. Despite the termination risks, Delaware firms attract higher-quality CEOs and directors on average. Further, less managerial entrenchment allows for more frequent changes in managers and directors, which is especially valuable for early-stage ventures experiencing high uncertainty in their early years. Empirical evidence from Jagannathan and Pritchard (2017) shows that Delaware firms are more likely to terminate CEOs, especially after a poor performance.

Third, Delaware has a specialized judiciary that understands corporate law issues ensuring proper resolution to legal debates (Romano, 1985). A judiciary system that is more understanding of corporate law would allow for the efficient resolution of issues that the firm might face, and this is valuable for early-stage ventures due to their limited resources. As such, a majority of publicly traded companies are incorporated in Delaware. Delaware obtains a significant percentage of its budget from incorporations, which means they are committed to offering the highest quality legal services and efficiency.

Fourth, incorporation in Delaware law is a costly signal of high firm quality and this cost is not easily borne by low quality firms. Delaware incorporations face higher expected litigation risks and costs (Iacobucci, 2004). The Delaware corporate domicile encourages increased litigation by shareholders because of well-trained entrepreneurial attorneys who seek to earn fees from the aggregate number of business cases brought to court, especially when the firms are of low quality (Macey and Miller, 1987). Moreover, Delaware law enables shareholder litigation against directors and officers, even in cases where the fiduciary is physically located outside of the state (title 10, section 3114 of the Delaware code). Also, statutory rights give shareholders the right to inspect corporate books and records, which can maximize the potential for litigation (title 8, section 220 of Delaware code). There is no minimum holding period nor share count requirement that a shareholder must maintain to exercise the freedom to inspect. Since low-quality entrepreneurs are more likely to face litigation, incorporation in Delaware is an expected cost that lower-quality firms would not want to incur. There is no comprehensive legal framework for addressing crowdfunding fraud in the U.S. (Heminway, 2021), despite the presence of crowdfunding fraud cases (Cumming and Johan, 2019, Chapter 15), which makes the legal framework of the jurisdiction of incorporation quite important. Crowdfunding fraud and litigation is in its infancy, and as such, a Delaware incorporation

has informational value in crowdfunding campaigns and is not an easy signal for low quality firms to adopt.

To minimize signaling costs, firms rely on legal familiarity, which is our fifth and final reason why Delaware law better enables securities crowdfunding. Delaware investors face less legal uncertainty with the legal and governance structure of Delaware firms, and the familiarity with Delaware law means that investors from a diverse set of states and even countries will be on more equal footing and have a more common understanding about 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 Delaware law improves the probability of successful crowdfunding outcomes. Delaware incorporation is valued as a quality signal amongst sophisticated investors aware of its utility. Delaware incorporation is an especially relevant signal for investors who seek future liquidity of their shares, as Delaware incorporation promotes exit into secondary markets.

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) suggest that accounting disclosure improves the corporate governance information environment by reducing the disadvantage of unsophisticated investors. Thus, we are motivated to test whether the

information contained in the mandated financial disclosures of regulated crowdfunding firms is a relevant tool for predicting fundraising success.

How necessary is financial statement information in securities-based crowdfunding? On the one hand, financial statement information is potentially meaningful for investors. In the case of an IPO, financial statement information allows investors to forecast revenues, costs, and profits for future years, thereby enabling a valuation model. The same logic could apply to crowdfunding firms if financial statements could be used similarly to forecast growth.

On the other hand, financial statement information might not be all that meaningful. Crowdfunding firms often have a limited operating history and must disclose two years of annual financial statement data to the SEC upon filing. More specifically, they are required to report revenue, net income, total assets, short-term debt, long-term debt, cash equivalents, and taxes paid. Some of these early-stage firms may not even have two years of financial data, so they only need to report their current balance sheet. Even sophisticated investors find it challenging to forecast with just two years of data.

Additionally, entrepreneurs might time their offering after two lucky years in anticipation of unfavorable events in the future. Moreover, with grey areas of revenue recognition, it is possible to overstate financial statements for shorter windows of time. As such, financial statement disclosures for two years may say very little about entrepreneurial growth prospects, potential agency problems, and potential operating inefficiencies within the firm. For example, empirical evidence using debt crowdfunding data in Germany shows barely any relation between financial statement information and crowdlending success (Cumming and Hornuf, 2022). Instead, investors will likely rely on other signals from the platform and campaign to infer investment quality.

Due to the limited forecasting ability of two years of financial statements, we propose our second hypothesis as follows.

Hypothesis 2: *Two years of financial statement information enables a limited ability to forecast future financial success to securities-based crowdfunding investors and hence is immaterial to predicting 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. In the U.S., firms choosing to raise regulation CF financing may offer securities such as preferred stock, convertibles, SAFEs, bonds, crowd notes, revenue shares, membership units, or tokens in addition to common stock shares.[6] Unlike financial information, security design can say a great deal about agency costs and growth opportunities in start-ups.

Firms choose to raise securities-based crowdfunding capital because they typically do not have enough collateral to obtain a bank loan or have other operating risks that lead them to exhibit adverse selection problems (Walthoff-Borm et al., 2018; Blaseg et al., 2020). Start-ups are typically characterized by adverse selection associated with uncertainty about 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 with financing a start-up are highly pronounced. They include risk shifting, underinvestment, and asset stripping, among others (Cumming and

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

Johan, 2019, Chapter 2). Risk shifting means that debt-financed entrepreneurs can deviate from their business plan and undertake riskier actions to transfer expected wealth from bondholders to shareholders (themselves). Underinvestment, or debt overhang, is a pronounced risk as near-bankrupt entrepreneurs are less likely to engage in positive NPV projects if substantial debts need to be covered before the entrepreneur sees any value associated with those actions. Furthermore, entrepreneurs that foresee possible bankruptcy can remove assets from the firm or pay themselves a large dividend before revealing the bankruptcy. Common equity and convertible securities mitigate these risks, while debt finance exacerbates these risks. Therefore, we expect debt crowdfunding to be relatively less successful than common equity or convertible and other hybrid equity securities.

There are three primary reasons why common equity crowdfunding campaigns are expected more often to facilitate successful offerings than hybrid equity security campaigns. First, common stock offers terms many retail investors are familiar with (Cumming and Johan, 2019). In the U.S., there are recent innovations to enable simple agreements for future equity (SAFEs), crowd notes, and membership units in LLCs in crowdfunding campaigns. These contracts, however, are relatively new and not as prevalent as common stock. Common equity offers terms that investors are familiar with, and hence investors might prefer these terms.

Second, there are greater transaction costs with more complicated securities, even if the platform offers standard form investment contracts for those securities at the time of crowdfunding (Cumming and Johan, 2019; Wroldsen, 2017). The higher transaction costs occur at the time of exit of 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 depend on the performance of the

entrepreneurial venture. With a simple common equity security, the terms are straightforward and simple to negotiate.

Third, entrepreneurs seeking equity crowdfunding offer their investors the ability to sell (illiquid) investments through an exit event, and this exit event is facilitated through common equity. Exits or sales are made with investors, such as angel investors, venture capitalists, or in rare cases, directly as an IPO. [7] Successful exit events are more likely when agency problems are mitigated as much as possible, and the new investors can take on the firm's capital structure in a way that continues to maximize value after the exit. Convertible securities and associated contractual arrangements that separate ownership and control rights at the time of crowdfunding could discourage subsequent investors. A simple and proportional allocation of ownership and control with common equity held by crowdfunding investors can better enable sales to new venture capital and other investors that seek more flexibility in designing the allocation of cash flow and control rights with other securities. For this reason, angel investors in the U.S. typically invest with common equity and do not use hybrid equity securities (Wong, 2009), partly because it enables exit to venture capitalists. And even though only a small number of crowdfunding investments are able to exit in an IPO since that would require exceptional growth,[8] common equity crowdfunding investments can better enable an IPO as other securities and contractual arrangements could lead to a shift in the allocation of control from a top performing entrepreneurial team to a disperse group of investors; similarly, common equity venture capital investments are more likely to be exited as IPOs (Cumming, 2008). Therefore, we expect common equity crowdfunding campaigns to be more successful

[7] 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.

[8] *Ibid*.

than hybrid-equity campaigns because common equity better enables subsequent exit outcomes to venture capitalists and other subsequent investors.

Hypothesis 3: *Securities crowdfunding campaigns offering common stock have a higher probability of achieving the stated capital goal for a successful offering than crowdfunding campaigns offering hybrid or debt securities.*

2.4. Platform effects

All transactions under regulation crowdfunding must take place online through an SEC-registered and FINRA-registered intermediary, either a broker-dealer or a funding platform. Platforms are a product of the emerging financial technology industry of the last two decades. Platforms serve as intermediaries between entrepreneurs and crowdfunding investors. They provide investors with a wide array of campaigns to invest in and detailed information about each start-up campaign, including the management team, business plan, social media, current fundraising totals, and more. Over 80 securities-based crowdfunding platforms have emerged in the U.S. market since 2016. No two of these platforms are exactly alike (Dushnitsky et al., 2016, 2018; Dushnitsky and Matusik, 2019; Rossi et al., 2018; Zunino et al., 2019). Platforms may, to different degrees, carry out due diligence by doing third-party and other background checks to ensure that the company is viable and should be listed on the platform (Cumming et al., 2019). For example, campaign applications to the platform SeedInvest go through several layers of screening, including a third-party due diligence check and a meeting between the firm's management team and SeedInvest's Screening Committee. Juxtaposition to SeedInvest's level of scrutiny, the largest regulation crowdfunding platform in the U.S., Wefunder, does not assess ideas but instead performs very basic fraud screenings.

Platforms may also offer advice to entrepreneurs to help achieve a successful campaign, including financial, strategic, and marketing advice. Cumming et al. (2019) and Rossi et al. (2018) provide evidence that the more due diligence and advice provided, the better the average performance on the platform. Continuing our U.S. example, SeedInvest's third-party partner Crowdcheck will properly help firms file their initial Form C to the SEC. This body of work indicates that platform characteristics should be controlled for; or if they are not observed, then platform-fixed effects should be used. We use the SEC's available information on platform underwriting fees and financial interests to analyze the observable part of the platforms' governance role. Still, we acknowledge that we must control for platform-fixed effects in our empirical tests to account for the less observable role that platforms perform such as due diligence screening and advice provided.

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.

Underwriting fees impose costs on crowdfunding firms insofar as they will receive a lower potential capital raise than in the absence of such fees. These costs can impair the short-term performance of companies that are capital constrained. Thus, we would expect investors to be discouraged from investing in companies on platforms with higher underwriting fees (Barry et al., 1991). However, we observe in our sample that the most popular platforms tend to charge above-average underwriting fees, and investors may be willing to ignore the costs if they have loyalty to a particular platform. Furthermore, larger platforms, spend more on compliance and are more likely to apply due diligence (Cumming et al., 2019).

With the exception of a few outlier campaigns, platform ownership stakes typically range from 0% to 7%. Platform ownership stakes in companies have potentially offsetting costs and benefits. From one perspective, a platform may decide to take an ownership stake because, after conducting careful due diligence, it has deemed the company to be a profitable venture. In this case, the platform's financial interest would be viewed as an endorsement by crowdfunding investors and, therefore, would act as a positive signal of company quality (Kleinert et al., 2021).

From the other perspective, ownership stakes could discourage crowdfunders due to possible conflicts of interest in listing those companies. Platforms may unduly promote companies that they partly own or list them with fewer due diligence checks. Investors concerned about these potential agency costs will be less likely to invest in these companies.

Given the offsetting theoretic arguments that we establish on the trade-offs of underwriting fees and ownership stakes, we propose our fourth hypothesis as follows.

Hypothesis 4: *Higher platform underwriting fees and ownership stakes in crowdfunding campaigns have an insignificant effect on the chances of achieving stated capital goals for a successful offering.*

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 study 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 University, which can be accessed at the following address: https://business.fau.edu/equity-crowdfunding-tracker/. The tracker provides interactive graphs on the number of campaigns, amount raised, success rate, security type, firm, and platform characteristics.

Securities-based crowdfunding as an alternative financing process for entrepreneurs, start-ups, and small-business began proliferating in Europe and Australia in the late 2000s and early 2010s (Cumming and Johan, 2019). However, securities-based crowdfunding in the United States did not begin until the JOBS Act was passed with bipartisan support and signed into law on April 5th, 2012. The JOBS Act was designed to promote small business growth by democratizing start-up financing. The Act contained several provisions implemented in a staged fashion to ease the existing regulatory restrictions. 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. To create our dataset, we follow the data collection

process of Rossi et al. (2021).[9] From the Electronic Data Gathering Analysis and Retrieval System (EDGAR), we investigate Form C filings and extract information about the firm's financials, characteristics, offering features such as the target amount and security type, and which platform the campaign decides to list on. We elect to count withdrawn campaign offerings as 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.[10] Further, we match campaigns to any Form C/A (amendment-type) and C-U (update-type) filings.

A firm will file a Form C/A if they need to make a change to their original campaign offering statement. In light of this, we update the campaign information based on Form C/A. Occasionally, a firm will improperly resubmit a duplicate Form-C rather than submit a Form C/A. We have identified those cases and consolidated them within our dataset to count as a single campaign using the most recent submission as truth. 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.

We compensate for unreported Form C-Us and ambiguous funding amounts of campaigns still open for investment by utilizing secondary sources. Our first secondary source is KingsCrowd, a subscription-based website that provides up-to-date information

[9] 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 4,015 campaigns of all security types.

[10] 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.

on regulation crowdfunding campaigns. Second, we manually examine fundraising totals from each of the various platform websites. The data used in our analysis is representative of the U.S. population of regulated CF offerings as of August 1st, 2022; however, we heed that some campaigns in our dataset are still open to funding; thus, the total amount raised may exceed that which we report within this paper. Our final cross-sectional population contains 4,852 campaigns launched from May 2016 to December 2021.

3.2. Dependent Variables

In Table 1, we briefly describe each variable and the data source used to obtain each variable (see Appendix Table 1 for the summary statistics). Our first 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 originating Form C opening for public investment. While most campaigns raise the majority of their funds in that same quarter, campaigns can and often do remain open for several quarters, sometimes even years. Figure 1 perfectly illustrates the growth of the securities-based crowdfunding market in the United States. This graph plots the number of new campaigns and the aggregate amount raised in each quarter over time. The trend is nearly a monotonic increase for both measures. The aggregate total amount raised from Q2, 2016 to Q4, 2021 stands at a little over one billion dollars. Another noticeable trend is the increasing rate of change occurring just after the start of the COVID-19 pandemic. Crowdfunding has shown few negative effects from COVID-19, unlike other markets such as bank consumer lending in the U.S. (Cumming et al. 2021). Consequently, we use a dummy variable to control for the effect of COVID-19 in our multivariate analysis.

[Table 1 and Figure 1 About Here]

Figure 2 shows that much of the fundraising totals are driven by campaigns that raised over one million dollars. Specifically, we compare Q2, 2021 to the second quarter of each of the prior five years. Before March 26th, 2021, campaigns were only allowed to raise a maximum of $1,070,000, but a change to SEC regulation effective immediately allowed campaigns that were still open and any new campaigns to raise up to $5 million. Entrepreneurs appear to be taking advantage of this new policy change as the amount raised in excess of 1 million dollars has increased disproportionately in Q2, 2021 compared to the other quarters. In our dataset, 12 firms have raised the new maximum amount of $5,000,000, 132 firms have raised greater than $1,070,000, and 327 firms have raised at least $1,000,000. The complete distribution is plotted in Figure 3.

[Figures 2-3 About Here]

Following Ahlers et al. (2015), we define campaign funding *Success*, our second dependent variable, as a venture raising or exceeding its target amount of capital (offering amount). A total of 3,075 of 4,852 (63.4%) campaigns in our dataset successfully achieved their fundraising goals. In Figure 4, we plot the average success rate in each quarter, revealing that campaign success has followed a consistently increasing trend from Q2, 2016 to Q4, 2021. In fact, each of the most recent seven quarters has had an average campaign success rate above 65%.

[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

Distinct from our evaluation of the importance of the firm's physical location, we now turn to the importance of the legal domicile in which the firm is incorporated. Figure 6 illustrates the significance of a firm incorporated in Delaware. 45.9% (2,229 of 4,852) of the campaigns in our sample are incorporated in Delaware. We trend the average success of campaigns in each quarter for Delaware-incorporated firms against the average success rate of firms incorporated in any other state. In line with Hypothesis 1, Delaware-incorporated firms achieved a higher success rate in 17 of the 21 quarters. Firms incorporated elsewhere were only marginally more successful in Q2, 2016, Q2, 2017, and during the period from Q3, 2018 through Q4, 2018.

[Figure 6 About Here]

3.5. Firm Characteristics & Financial Statement Information

In Table 3, we report complete sample means and compare successful and unsuccessful campaigns across all offering characteristics. (Additional descriptive statistics can be found in Appendix Table A1). We perform t-tests on the mean difference of these characteristics. Notable findings from the table include a positive correlation between crowdfunding success and firm age as well as firms with more employees. Successful firms are, on average, 255 days older and have 2.14 more employees than unsuccessful firms. These positive correlations for age and size seem to suggest that U.S. investors favor more developed ventures. (Correlations in Table A2 in the Appendix additionally verify). Prior literature finds that younger firms tend to face more constraints when accessing external capital and are associated with an increased risk of failure (Ouimet and Zarutskie, 2014; Hornuf et al., 2018). We, therefore, control for firm age and the number of employees in our regressions.

Table 3 further shows that firms with more assets, lower net income, higher cash levels, and higher total debt are more likely to succeed. Since larger firms are more likely to have higher cash, higher debt, and more assets, we again conclude that firm size is a significant predictor of campaign success. To reduce multicollinearity amongst the regressors in our model, we scale each of the key financial information variables by total assets across our empirical analysis. The scaled variables appear in Table 3. Additionally, we compute a measure of firm financial growth by taking the difference between total assets in the most recent fiscal year and total assets in the prior fiscal year.

Entrepreneurs can set the offering amount they desire when establishing a campaign. Since setting a higher target will require more investment capital to be successful, it is intuitive that we find that campaigns with higher offering amounts are less likely to be successful. Naturally, we control for the offering amount by using a log transformation of the variable in our regression models. Last, firms listed when the stock

index was above its average value during the sample period are more likely to succeed. Hence, we will also control for these measures across our regression models.

[Table 3 About Here]

3.6. Security Type

Regulation crowdfunding campaigns offer a variety of securities. When filing with the SEC, companies must select between 'common stock', 'preferred stock', 'debt', and 'other' for their security type classification. Using the description provided for 'other' security types, we can further parse the data for 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 hybrid 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.

Membership units or interests reflect an ownership stake in an LLC. These holdings can be expressed by a percentage (interest) or number (units) and act most similarly to a stock dividend where the LLC manager can make distributions to members. Members will receive cash or other assets in exchange for their ownership rights if the LLC is acquired. One key attribute of membership units is that LLCs typically do not go public unless converted into a C-corporation.

With revenue shares, companies can offer a set percentage of profit to be distributed to investors as a form of interest payment on their debt investment until the crowdfunding firm repays the loan and premium.

Last, tokens, sometimes referred to as STOs (and their associated offerings, such as SAFTs, SAFTEs, and Token DPAs), are cryptocurrency securities held on the blockchain which represent an ownership interest and may have a particular value in its ecosystem.

In order to make more straightforward comparisons across security types, we elect to group common stock with the similar security types of class A, class B, and non-voting common stock shares. Based on this grouping, the most common security types are the common stock grouping (34%), SAFEs (24%), and debt (24%). Less popular types are preferred stock (8%), convertible (6%), and membership units (5%). Table 4 examines the amount raised, the number of campaigns, and the success rate across each type of security. In line with Hypothesis 3, we find that campaigns with a security type in our common stock grouping are much more successful on average than convertible and debt campaigns (common stock: 66.7%; convertible: 64.3%; debt: 54.8%).

[Table 4 About Here]

3.7. Platforms

Table 5 examines crowdfunding activity across the various platforms. The primary lending platforms that have emerged in U.S. regulated crowdfunding are Wefunder (which has 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. The average offering amount varies widely across platforms. For example, the average offering on StartEngine is $16,782, whereas Angel Studios, a platform centered on the film industry, has an average offering of $485,753. It is important to note that Angel Studios has only 13 campaigns thus far; nonetheless, we see vast differences in average offering amounts across other platforms as well. Platform platforms charge entrepreneurs an average underwriting fee that ranges from 4.1% (MicroVentures) to 9.1% (NextSeed). Oddly enough, both platforms have success rates above 80%, which foreshadows the empirical result consistent with Hypothesis 4, that the underwriting percentage fee has an insignificant effect on the amount of capital raised and the success rate.

Success rate varies across platforms. Among the top 10 platforms, Republic and NextSeed are the most successful, each having an average success rate greater than 86%. Moreover, Republic, StartEngine, and Wefunder each have a market share greater than 16% in terms of the total amount raised. The success of Republic 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.

[Table 5 About Here]

4. Multivariate Tests

In this section, we present logit analyses of successful fundraising and OLS analyses of total funding amounts. We present regressions without instrumental variables and regressions with instrumental variables. We control for selection effects as we carry out our multi-platform analyses. Finally, we offer alternative specifications to show robustness. Other specifications not presented here are available on request. The sample covers 100% of the regulated CF offerings in the U.S. from inception in May 2016 to December 2021 (Q4). As of August 1st, 2022, some offerings are yet to be closed. We show robustness in including and excluding these two types of offerings in the data due to obvious possible truncation bias.

4.1. Baseline Regressions

OLS regressions on the log of the amount raised and a logit regression on success are presented in Tables 6-7. The data indicate that Delaware incorporation allows crowdfunders to raise more capital (significant at the 5% or 1% level in the different specifications), and they are more likely to have a successful campaign (significant at the 5% or 10% level). The economic significance of the effect is quite notable. In the base model specification (regression 1) with the complete set of control variables, state-, platform-, and time-fixed effects, Delaware incorporation gives rise to 65% more capital raised and an increase in the probability of successful fundraising (achieving the desired capital goal) by 2.5% on average. This result holds against the robustness checks, which exclude California campaigns (regression 2) and campaigns still open to fundraising (regression 3). Additionally, the results hold under different empirical methods. Cohn et al. (2022) suggest that rather than using a 1+log transformation of a dependent variable,

researchers should use a simple fixed effects Poisson model[11], and regression 4 of table 7 of our success test uses linear probability rather than logit framework for testing our hypotheses. Overall, the data provide robust support for Hypothesis 1.

[Tables 6-7 About Here]

The variables for the different financial statement data are generally not statistically significant (Hypothesis 2). The only significant evidence (at the 5% level in some specifications and insignificant in other specifications) shows a negative relationship between net income to assets and success, and a positive relationship between total debt to assets and success. The economic significance in Table 7 (regression 1) is such that a one standard deviation increase in net income to assets reduces success chances by 0.35%, so the effect is not very economically large. It is possible that crowdfunding investors look at high levels of net income as a reflection of low levels of R&D investment, thereby casting doubt on the chances of long-run success. This theory could also explain why investors seem to favor firms with high total debt-to-asset levels. Nevertheless, the detailed financial information in the prior two years of the offering hardly relates to the amounts raised and funding success.

Unlike the financial information explanatory variables, security design has a significant impact on achieving the stated capital goals for a successful offering. In particular, common stock securities increase the amount raised by 96% and probability of a successful offering by 4.4% depending on the specification, and these effects are consistently significant at the 5% level in the different specifications.[12] Conversely, debt

[11] We do not report this result in Table 6; however, it is available upon request. The Poisson model was calculated using ppmlhdfe command in STATA, as recommended by Cohn et al. (2022)

[12] We model different classes of stock indicated in the SEC data – combining class a, class b, and non-voting rights, and common stock shares in a single group which we refer to as common stock. The results here are not materially different if we separate non-voting from voting offerings. This finding is different than what is observed with U.K. data (Cumming, Meoli, and Vismara, 2019), but the institutional context

reduces the chance of a successful offering by 4.6%, and this effect is significant at the 10% level. Our omitted group represents hybrid-equity security types, including convertibles, SAFEs, and crowd notes. These results provide strong support for Hypothesis 3.

We observe that underwriter commission is negatively associated with the amount raised and campaign success, whereas the financial interest / ownership of a platform positively associated with the amount raised and success. But neither of these findings are statistically significant, consistent with our fourth hypothesis. We do see in the data (although not explicitly reported in the tables for reasons of conciseness) that using platform-fixed effects in our regressions is critical. We believe this to be a reflection of the unobservable due diligence and advice-providing roles that platforms serve. Not using platform-fixed effects gives rise to very large changes in many of our regression coefficients.

Many of our control variables are significant in ways that are expected. For example, large entrepreneurial firms as measured by the number of employees, and older firms, tend to raise more capital and are more successful. Also, the offering amount has a negative relationship with crowdfunding success. Last, firms tend to raise more money when stock markets are rising, implying that the market environments are connected.

Two significant events occurred over the sample period that we controlled for using dummy variables. First, the data indicate that the March 26, 2021, regulatory change allowing a larger amount of capital raised up to $5 million (discussed above in section 3) increased the amount of capital raised by firms in our sample by nearly 260% (significant

with different thresholds for voting rights and other factors in the U.K. is also notably different and hence the results between the U.K. and U.S. are not directly comparable.

at the 1% level). Second, the data indicate that since the onset of the COVID-19 pandemic, securities-based crowdfunding outcomes have improved (probability of success increased 9%) confirming the result found by Cumming et al. (2021) (see also Figure 1).

4.2. Instrumental Variables

The instrumental variable regressions are presented in Tables 8 and 9. 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.

[Insert Tables 8-9 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 might be selected with expected success in mind. There are other endogenous variables in the Table 8 and 9 regressions.

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 8 shows that the mimicking variables are 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 16%. Similarly, past use of common equity gives rise to future mimicking use of common equity, and this effect is significant at the 1% level. The economic significance is that the use of common equity is 8% more likely. And finally, past offering sizes predict future offering sizes. This effect is positive and significant at the 1% level.

The second-stage outcome regressions in Table 9 show the same statistical significance for our main hypotheses. The statistical significance for the variables pertinent to our main hypotheses is at a higher 1% level after using the instruments in Table 9. Moreover, the Delaware variable is increasingly significant at the 1% level when we exclude debt and hybrid-equity offerings to focus on common stock only crowdfunding campaigns. The economic significance of the estimates is also greater than that of Tables 6 and 7. In the spirit of being conservative and presenting mostly harmless econometrics, we therefore focus our more conservative estimates in Tables 6 and 7 without further discussing further the instrumental variable estimates here.

5. Conclusions

This paper examines key governance characteristics in the development and performance of securities-based crowdfunding campaigns in 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 key governance mechanisms for facilitating success: Delaware incorporation, financial disclosure information, security design, and crowdfunding platforms.

Our findings contribute to the theory and literature as follows. First, we show that entrepreneurs can select into more stringent legal standards as a signal of legal quality, clarity, and certainty that facilitates access to entrepreneurial finance. In this U.S. context, there has been debate about the actual value of Delaware law to more established firms, and here we show for the first time that it matters in respect of crowdfunding. Future work could compare other parts of the world to see how alternative legal mechanisms affect funding outcomes for entrepreneurs. These results have interesting policy implications and continue to inform policymakers around the world in respect of the optimal design of laws to enable entrepreneurs best to access capital.

Second, we show that legal rules pertaining to the disclosure of two years of financial statement history do not do much in terms of informing investors and enabling successful crowdfunding. Our data indicate that financial statement information has little

or no predictive power. Ultimately two years of information is just too short to be informative as a predictor of success.

Third, our analyses provide useful guidance to entrepreneurs and their investors on the importance of security design in crowdfunding success. Debt securities exacerbate risk shifting, underinvestment, and asset-stripping problems. Concurrently, we provide empirical evidence that campaigns issuing debt securities are relatively less successful and tend to raise less capital than campaigns issuing common stock. Likewise, more complicated financial instruments such as convertibles and other hybrid-equity securities do not work as well as common stock in enabling successful crowdfunding outcomes. While newer financial instruments like SAFEs and other hybrid securities might appear timely, useful, and attractive, our theory and empirical analyses show that entrepreneurs are better off with common equity securities in crowdfunding campaigns.

Finally, our analyses show that crowdfunding platforms have an important role in due diligence, ensuring low-quality entrepreneurs do not enter the market. Evidence to date spotlights conflicts of interest with the different contractual arrangements of crowdfunding platforms and the ownership stakes they take in entrepreneurial firms. But future research could more closely examine the characteristics of these platforms, analyze the selection process that firms take when choosing between platforms, why some platforms are more successful than others, and how they compare to international platforms with a longer history.

Securities-based crowdfunding is still in its infancy, and the richness of data available offers many new angles to explore at the intersection of finance, entrepreneurship, management, and law. Future research could examine post-crowdfunding success in raising new capital, such as from angels, venture capitalists, and IPOs. This work would add to earlier important studies on the topic (Signori and Vismara,

2018; Hornuf et al., 2018). Future research could also compare the value-add provided by crowdfunding to angels and venture capitalists; 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).

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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
Common Equity (Grouping)	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 Equity	A dummy variable which indicates a campaign with a 'Preferred Equity' type of security offered	SEC.gov
Debt	A dummy variable which indicates a campaign with a 'Debt' type of security offered	SEC.gov
Convertible	A dummy variable which indicates a campaign with a 'Convertible' type of security offered	SEC.gov
SAFE	A dummy variable which indicates a campaign with a 'SAFE' or simple agreement for future equity type of security offered	SEC.gov
Crowd Note	A dummy variable which indicates a campaign with a "Crowd Note" type of security offered	SEC.gov
Membership Unit	A dummy variable which indicates a campaign with a 'Membership Unit' type of security offered	SEC.gov
Revenue Share	A dummy variable which indicates a campaign with a 'Revenue Share' type of security offered	SEC.gov
Tokens	A dummy variable which indicates a campaign with a 'Tokens' type of security offered	SEC.gov
Underwriter Commission (%)	The percentage compensation to be paid to the intermediary/platform	SEC.gov
Financial Interest (%)	The percentage of direct or indirect interest held by the intermediary in a campaign (ownership stake) as a proportion of the offering amount.	SEC.gov
Delaware Incorporation	A dummy variable = 1 for a campaign that files with jurisdiction of 'Delaware'	SEC.gov
Firm Age (days)	The age of the firm in total number of days at the time of filing	SEC.gov

Number of Employees	The current number of employees at the firm at the time of filing	SEC.gov
Total Assets	The total assets of the firm at the time of filing for the most recently completed fiscal year	SEC.gov
Asset Growth	The difference between the total assets of the firm in the most recent fiscal year and the total assets in the prior fiscal year	SEC.gov
Cash	The cash and cash equivalents of the firm at the time of filing for the most recently completed fiscal year	SEC.gov
Total Debt	The short-term debt plus the long-term debt of the firm at the time of filing for the most recently completed fiscal year	SEC.gov
Net Income	The net income of the firm at the time of filing for the most recently completed fiscal year	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)
Post COVID-19	A dummy variable = 1 for a campaign after March 15th, 2020	
Post-SEC Regulation Change	A dummy variable = 1 for a campaign after March 26, 2021	

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%
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	4,852		3,075		1,777			
Deal Characteristics	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev		
Amount Raised	$219,183	$490,565	$344,151	$580,327	$2,933	$24,039	$341,217	0.00***
Offering Amount	$67,318	$170,279	$53,287	$138,663	$91,598	$212,100	($38,310)	0.00***
Platform Terms								
Underwriter Commission (%)	6.27	1.88	6.32	1.83	6.19	1.95	0.13	0.02**
Financial Interest (%)	0.82	0.02	0.83	0.03	0.81	0.04	0.02	0.68
Firm Characteristics								
Number of Employees	6.28	32.15	7.05	37.80	4.92	18.64	2.14	0.01***
Age of Firm at time of listing (days)	1,086	1,352	1,169	1,392	944	1,269	255.19	0.00***
Delaware Incorporation	0.46	0.50	0.50	0.50	0.39	0.49	0.12	0.00***
Security Type								
Common Stock (Grouping)	0.26	0.01	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***
Debt	0.24	0.43	0.21	0.41	0.30	0.46	(0.09)	0.00***
Convertible	0.06	0.24	0.06	0.24	0.06	0.24	0.00	0.73
SAFE	0.24	0.43	0.25	0.43	0.22	0.41	0.03	0.01***
Crowd Note	0.02	0.14	0.01	0.16	0.03	0.10	(0.02)	0.00***
Membership Unit	0.06	0.23	0.05	0.22	0.07	0.25	(0.02)	0.00***
Revenue Share	0.02	0.12	0.01	0.11	0.02	0.13	(0.004)	0.20
Tokens	0.01	0.10	0.01	0.10	0.01	0.10	(0.001)	0.72
Other	0.003	0.06	0.002	0.05	0.04	0.07	(0.002)	0.18

Financials								
Total Assets	$499,899	$4,907,846	$590,950	$5,764,876	$342,342	$2,868,701	$248,608	0.04**
Cash Equivalents	$111,169	$611,665	$142,402	$737,231	$57,121	$276,712	$85,281	0.00***
Total Debt	$492,972	$3,585,672	$581,508	$4,081,416	$339,768	$2,499,680	$241,740	0.01**
Net Income	($226,153)	$847,949	($277,072)	$946,175	($138,040)	$634,145	($139,032)	0.00***
Cash to Assets	0.35	0.66	0.37	0.73	0.32	0.51	0.05	0.606
Total Debt to Assets	29.37	940.50	36.27	1,161.46	17.42	284.52	18.85	0.39
Net Income to Assets	38.71	886.85	33.40	849.68	47.91	947.92	(14.51)	0.59
Asset Growth	$149,771	$1,426,323	$175,148	$1,492,698	$105,857	$1,302,746	$69,291	0.10
Macroeconomic Characteristics								
Stock Index	3,341	749	3,412	743	3,216	742	196	0.00***
Post-COVID-19	0.59	0.50	0.57	0.50	0.43	0.49	0.14	0.00***
Post-SEC-Regulation Change	0.25	0.43	0.28	0.45	0.21	0.41	0.07	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
Common Stock (Grouping)	365.3M	34.4%	1,302	26.8%	66.7%
SAFE	281.4M	26.5%	1,165	24.0%	66.6%
Preferred Stock	166.2M	15.6%	396	8.2%	71.5%
Debt	95.9M	9.0%	1,176	24.2%	54.8%
Convertible	60.9M	5.7%	294	6.1%	64.3%
Membership Unit	56.3M	5.3%	275	5.7%	55.3%
Crowd Note	15.1M	1.4%	100	2.1%	83.0%
Tokens	10.2M	1.0%	46	0.9%	60.9%
Revenue Share	8.4M	0.8%	73	1.5%	56.2%
Other	66.3M	0.4%	25	0.5%	40.0%

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. 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.

Table 5. Platform Comparison

Platform	Avg. Offering Amount	Avg. Underwriting %	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 of Amount Raised)

	(1)		(2)		(3)	
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
Ln (Offering Amount)	-0.514	-4.39***	-0.571	-4.10***	-0.582	-4.53***
Security Offered						
Common Stock	0.674	2.45**	0.605	2.51**	0.637	2.21**
Debt	-0.560	-1.91*	-0.416	-1.17	-0.577	-1.95*
Terms Offered and Role of Platform						
Underwriter Commission (%)	-0.098	-1.57	-0.014	-0.17	-0.103	-1.58
Financial Interest (%)	0.044	0.53	0.051	0.63	0.030	0.35
Entrepreneurial Firm Characteristics						
Delaware Incorporation	0.500	2.95***	0.442	2.61**	0.502	2.98***
Firm Age (days)	0.0002	4.19***	0.0002	3.21***	0.0002	4.10***
Number of Employees	0.003	1.01	0.002	0.94	0.004	1.08
Cash to Assets (t)	0.122	0.71	0.101	0.37	0.136	0.78
Total Debt to Assets (t)	0.0001	1.62	0.0002	1.07	0.0001	1.85*
Revenue to Assets (t)	-0.001	-1.34	-0.0008	-0.46	-0.001	-1.45
Net Income to Assets (t)	-0.00004	-0.49	-0.0002	-0.64	-0.0001	-0.70
Asset Growth (t-1 to t)	4.11e-08	0.59	7.07e-08	1.58	4.22e-08	0.60
Market Conditions						
Stock Index	0.002	3.27***	0.002	1.96*	0.002	3.05***
Post-COVID-19	1.253	2.56***	1.887	3.20***	1.110	2.28**
Post-SEC Regulation Change	1.283	4.19***	2.272	5.82***	1.360	4.94***
Time Fixed Effects?	Yes		Yes		Yes	
State Fixed Effects?	Yes		Yes		Yes	
Platform Fixed Effects?	Yes		Yes		Yes	
Excluding California?	No		Yes		No	
Only Confirmed Closed Campaigns?	No		No		Yes	
All Campaigns?	Yes		Yes		No	
Number of Observations	4,830		3,614		4,730	
Adjusted or Pseudo R^2	0.233		0.240		0.235	

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. Regression (1) is a full model with key explanatory variables and pertinent controls. Regression (2) is a robustness check which excludes campaigns with a physical location of California. Regression (3) is a robustness check which only considers campaigns that are confirmed closed as of August 1st,

2022. Year-quarter clustered standard errors are used to calculate the t-statistics. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 7. Logit Regression Model (Probability of Success)

	(1)		(2)		(3)		(4)	
	Coefficient	z-statistic	Coefficient	z-statistic	Coefficient	z-statistic	Coefficient	z-statistic
Ln (Offering Amount)	-0.495	-8.37***	-0.510	-6.91***	-0.516	-8.26***	-0.090	-7.63***
Security Offered								
Common Stock	0.239	1.98**	0.195	1.77*	0.251	2.06**	0.048	2.11**
Debt	-0.246	-1.89*	-0.215	-1.25	-0.249	-1.90*	-0.049	-1.75*
Terms Offered and Role of Platform								
Underwriter Commission (%)	-0.044	.-1.59	-0.013	-0.36	-0.046	-1.57	-0.006	-1.37
Financial Interest (%)	0.032	0.76	0.037	0.80	0.026	0.62	0.002	0.19
Entrepreneurial Firm Characteristics								
Delaware Incorporation	0.134	1.66*	0.109	1.36	0.123	1.58	0.028	1.97*
Firm Age (days)	0.0001	2.84***	0.0001	2.65***	0.0001	2.90***	0.00002	3.76***
Number of Employees	0.005	0.55	0.002	0.56	0.005	0.56	0.0002	0.85
Cash to Assets (t)	0.067	0.74	0.025	0.21	0.730	0.78	0.014	0.89
Total Debt to Assets (t)	0.002	2.08**	0.0002	1.51	0.0003	2.38**	0.00001	1.91*
Revenue to Assets (t)	-0.006	-1.29	-0.0002	-0.19	-0.0007	-1.33	-0.0001	-1.22
Net Income to Assets (t)	-0.002	-2.04**	-0.0002	-1.41	-0.0003	-2.38**	-0.00001	-1.45
Asset Growth (t-1 to t)	1.52e-08	0.38	3.41e-08	1.13	1.47e-08	0.38	2.13e-09	0.40
Market Conditions								
Stock Index	0.001	3.72***	0.0005	2.42**	0.0008	3.41***	0.0001	3.18***
Post-COVID-19	0.489	2.81***	0.712	4.12***	0.489	2.55***	0.097	2.64***
Post-SEC Regulation Change	0.742	5.25***	1.012	6.12***	0.708	4.66***	0.131	5.84***
Time Fixed Effects?	Yes		Yes		Yes		Yes	
State Fixed Effects?	Yes		Yes		Yes		Yes	
Platform Fixed Effects?	Yes		Yes		Yes		Yes	
Excluding California?	No		Yes		No		No	
Only Confirmed Closed Campaigns?	No		No		Yes		No	
All Campaigns?	Yes		Yes		No		Yes	
Number of Observations	4,691		3,488		4,590		4,730	
Adjusted or Pseudo R^2	0.150		0.156		0.150		0.217	

Table 7 reports the results of logit regressions with time, state, and platform fixed effects models with the probability of *Success* as the dependent variable. The reported values are the logit coefficients and not the marginal effects. Regression (1) is a full model with key explanatory variables and pertinent controls. Regression (2) is a robustness check which excludes campaigns with a physical location of California. Regression (3) is a robustness check which only considers campaigns that are confirmed closed as of August 1st, 2022. Regression (4) uses the linear probability model framework rather than logit in an effort to preserve

campaigns which have a platform panel that is perfectly collinear with success.Year-quarter clustered standard errors are used to calculate the z-statistics. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 8. First Stage Regressions

	Delaware		Common Stock		Ln (Offering Amount)	
	(1)		(2)		(3)	
	Coefficient	z-statistic	Coefficient	z-statistic	Coefficient	t-statistic
Instrumental Variables						
Mimicking Delaware	0.979	5.39***	-0.241	-0.94	0.010	0.16
Mimicking Common Stock	-0.240	-0.91	0.796	2.90***	-0.040	-0.31
Mimicking Ln (Offering Amount)	0.099	0.80	0.054	0.45	0.210	2.73***
Predicted Ln (Offering Amount)						
Security Offered						
Predicted Common Stock						
Terms Offered and Role of Platform						
Underwriter Commission (%)	-0.119	-3.36***	-0.007	-0.18	0.025	1.46
Financial Interest (%)	0.099	2.12**	0.201	2.82**	0.64	
Entrepreneurial Firm Characteristics						
Predicted Delaware Incorporation						
Firm Age (days)	-0.0003	-9.65***	0.00003	0.90	0.00001	1.67
Number of Employees	0.013	2.56***	0.006	1.55	0.0008	1.82*
Cash to Assets (t)	0.262	3.00***	-0.104	-1.48	-0.038	-1.91*
Total Debt to Assets (t)	-0.0001	-1.22	-0.00008	-0.83	0.00001	1.32
Net Income to Assets (t)	0.0001	1.20	0.0002	1.34	-0.00002	-1.74*
Asset Growth (t-1 to t)	4.79e-08	2.27**	4.96e-08	1.27	1.99e-08	1.78*
Market Conditions						
Stock Index	-0.0001	-0.30	-0.00006	-0.16	0.0002	3.07***
Post-COVID-19	0.356	1.39	0.624	1.93*	0.084	1.45
Post-SEC Regulation Change	0.237	1.18	0.068	0.30	0.317	6.67***
Time Fixed Effects?	Yes		Yes		Yes	
State Fixed Effects?	Yes		Yes		Yes	
Platform Fixed Effects?	Yes		Yes		Yes	
All Campaigns?	Yes		Yes		Yes	
Number of Observations	4,679		3,906		4,806	
Adjusted or Pseudo R2	0.288		0.475		0.571	

Table 8 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 *Common Stock*, and the total *Amount Sought*. with *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 (<923 observations, or 19% of the total sample). Year-quarter clustered standard errors are used to calculate the z and t-statistics. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 9. Second Stage Regressions

	Amount Raised		Success	
	(1)		(2)	
	Coefficient	t-statistic	Coefficient	z-statistic
Instrumental Variables				
Mimicking Delaware				
Mimicking Common Stock				
Mimicking Ln (Offering Amount)				
Predicted Ln (Offering Amount)	0.188	0.21	-0.304	-0.61
Security Offered				
Predicted Common Stock	5.123	2.46**	1.691	1.98**
Terms Offered and Role of Platform				
Underwriter Commission (%)	-0.099	-1.11	-0.059	-1.52
Financial Interest (%)	-0.104	-0.91	-0.013	-0.23
Entrepreneurial Firm Characteristics				
Predicted Delaware Incorporation	3.922	3.06***	0.937	1.85*
Firm Age (days)	0.0004	6.17***	0.0001	5.22***
Number of Employees	-0.0002	-0.11	0.0007	0.18
Cash to Assets (t)	0.028	0.15	0.048	0.56
Total Debt to Assets (t)	0.0002	1.69	0.0003	2.02**
Net Income to Assets (t)	-0.0003	-1.13	-0.0004	-2.04**
Asset Growth (t-1 to t)	-5.34e-08	-0.74	-1.54e-08	0.41
Market Conditions				
Stock Index	0.003	3.22***	0.001	3.51***
Post-COVID-19	0.616	0.86	0.333	1.21
Post-SEC Regulation Change	-2.50	-4.14***	-0.792	-3.23***
Time Fixed Effects?	Yes		Yes	
State Fixed Effects?	Yes		Yes	
Platform Fixed Effects?	Yes		Yes	
All Campaigns?	Yes		Yes	
Number of Observations	3,828		3,737	
Adjusted or Pseudo R2	0.217		0.134	

Table 9 reports the second-stage regressions results of the ordinary least squares and logit models with *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 (<1,081 observations, or 22% of the total sample). Year-quarter clustered standard errors are used to calculate the t and z-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).

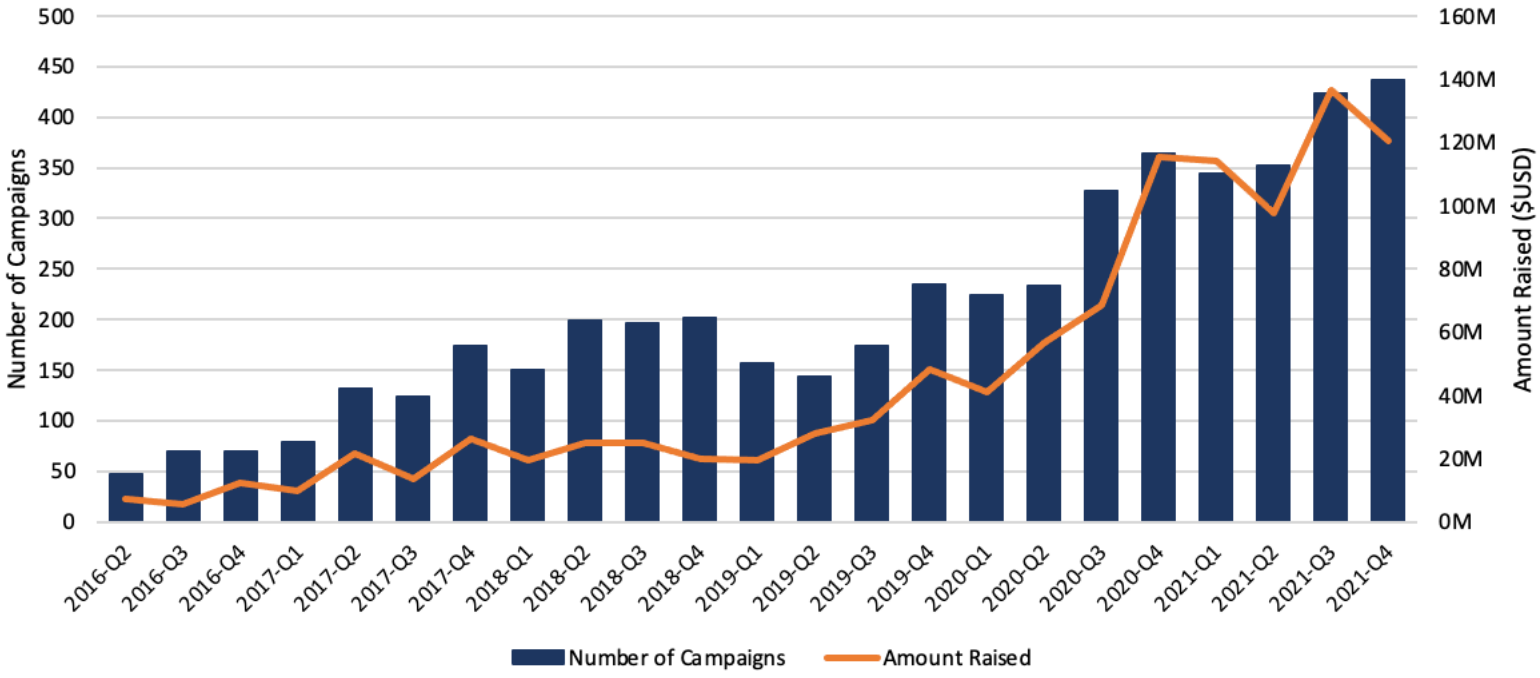


Figure 2. Securities-Based Crowdfunding Amount Raised greater than $1 Million

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.

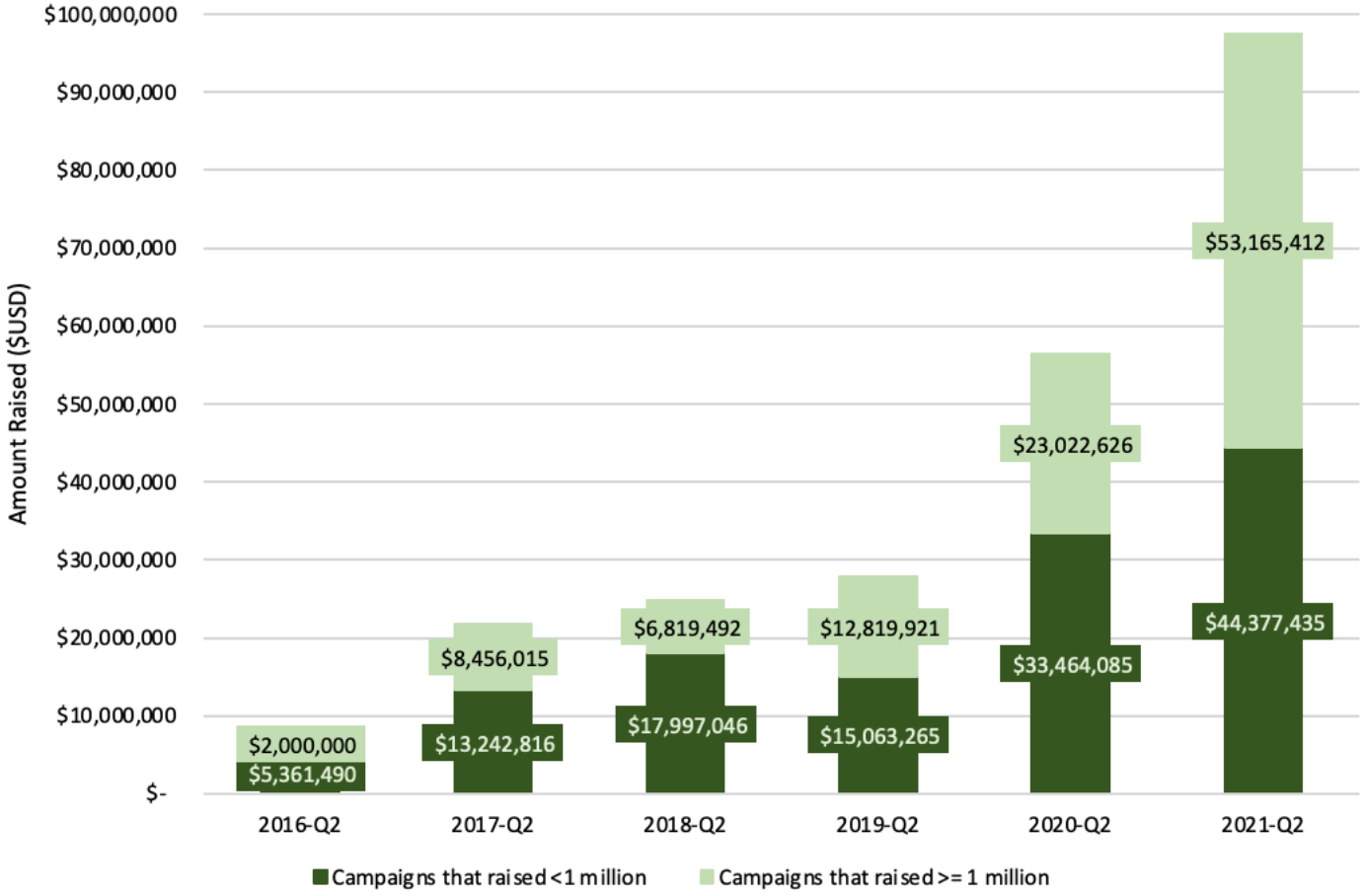


Figure 3. Histogram of Securities-Based Crowdfunding Amounts Raised

Figure 3 plots the histogram of securities-based crowdfunding amounts raised. Before March 26, 2021, there was a cap of $1,070,000 in a 12-month period. This cap was increased to $5 million effective March 27, 2021. In our sample, 25.2% of the offerings occurred after March 26, 2021.

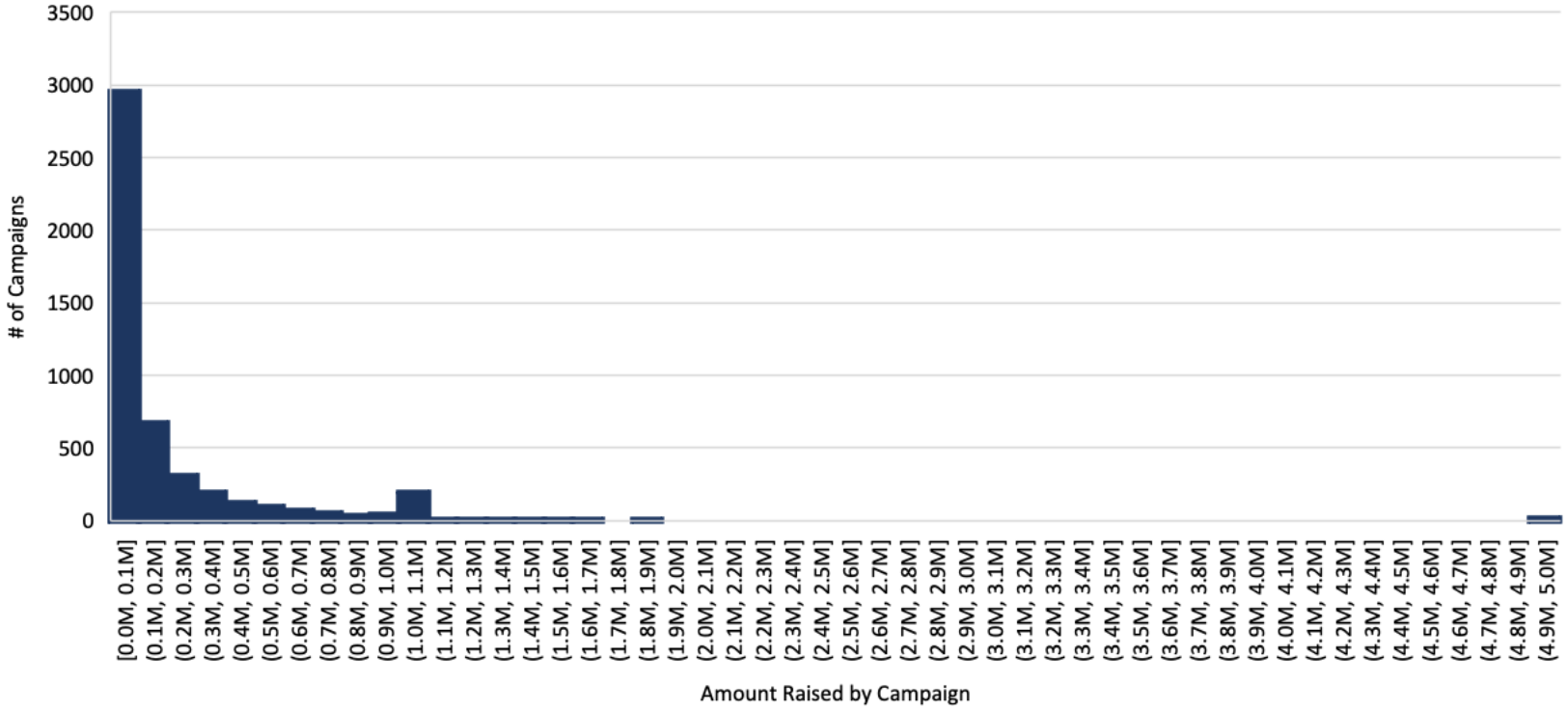


Figure 4. Securities-Based Crowdfunding Trend in Average Success Rate

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.

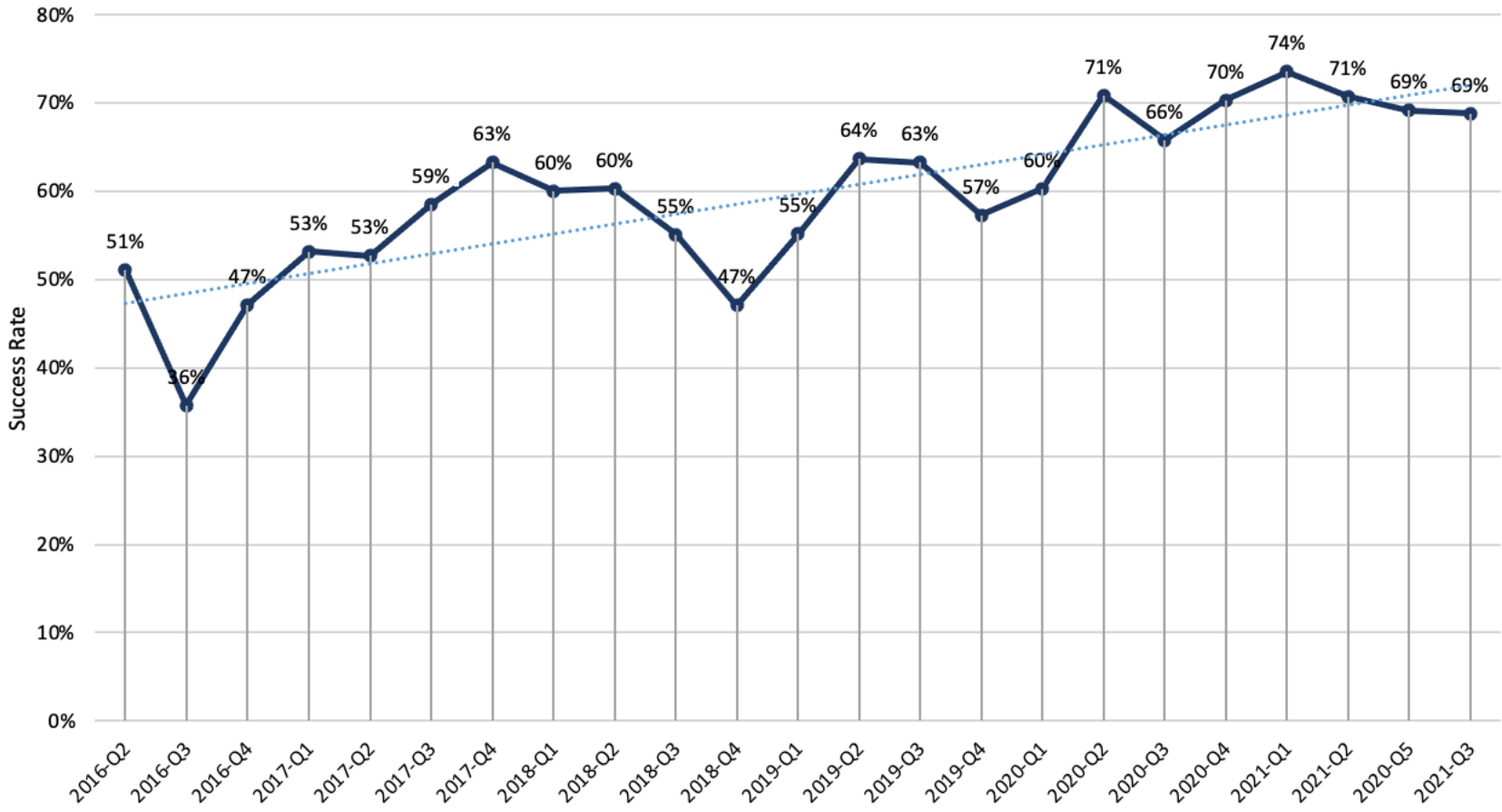


Figure 5. Heat Map of U.S. State Securities-Based Crowdfunding Activity

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.

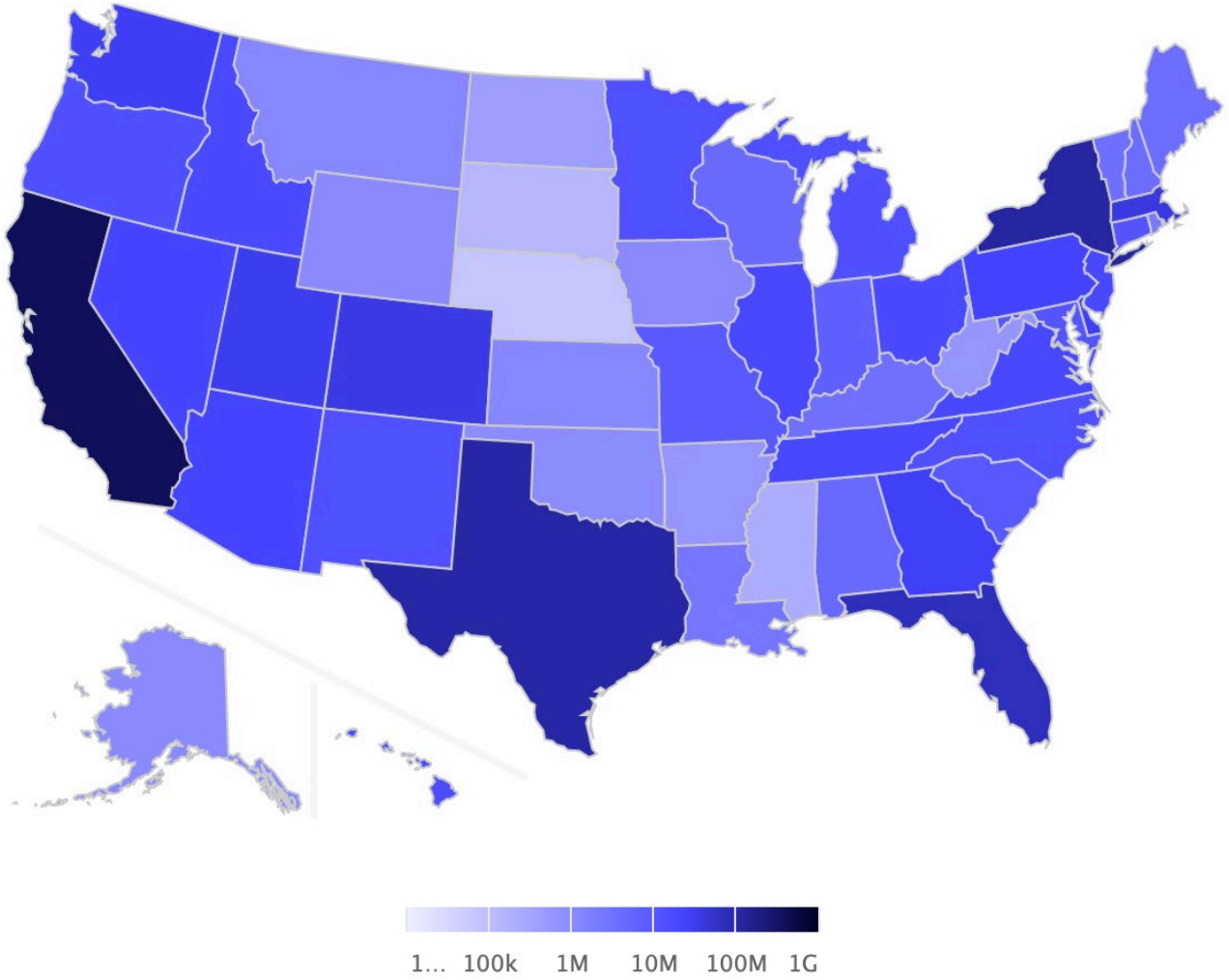
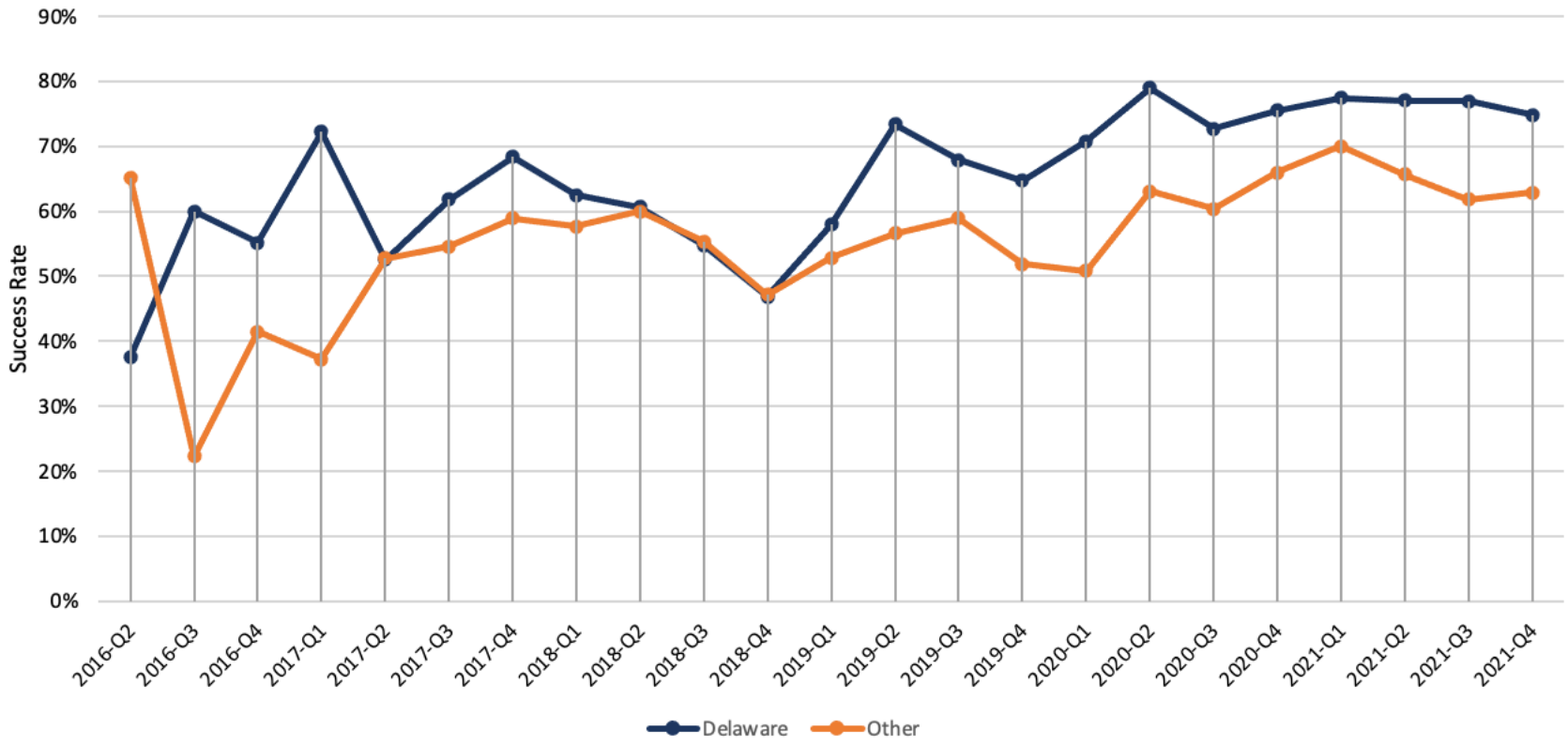


Figure 6. Securities-Based Crowdfunding Trend in Average Success Rate for Delaware Jurisdiction

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

	N	Mean	Median	Std. Deviation	Variance	Minimum	Maximum
Amount Raised	4,852	219,183	53,977	490,565	2.407 e+11	0	5,000,000
Ln(Amount Raised)	4,852	7.79	10.90	5.73	32.78	0	15.42
Success (dummy)	4,852	0.63	1	0.48	0.23	0	1
Offering Amount	4,852	67,318	25,000	170,279	2.899e+10	0.01	5,000,000
Ln(Offering Amount)	4,852	10.38	10.13	1.13	1.27	0.01	15.42
Underwriter Commission (%)	4,852	6.27	6	1.88	3.54	0	17.50
Financial Interest (%)	4,852	0.82	0	1.59	2.52	0	50
Firm Age on filing date (days)	4,852	1,086.53	682	1,352.78	1,830,005	0	19,354
Number of Employees	4,852	6.27	3	32.15	1,034	0	1,998
Cash to Assets (t)	4,852	0.35	0.11	0.66	0.43	0	33.75
Total Debt to Assets (t)	4,852	29.36	0.22	940.50	884,548	0	49,170
Net Income to Assets (t)	4,852	38.71	0.34	886.85	786,510	0	404,81
Asset Growth (t-1 to t)	4,852	149,771	1,000	1,426,323	2.034e+12	-14,163,000	50,657,344
Stock Index	4,852	3,341	3,138	749	560,765	2,036	4,793
Post-COVID-19 (dummy)	4,852	0.52	1	0.50	0.25	0	1
Post-SEC-Regulation Change (dummy)	4,852	0.25	0	0.43	0.19	0	1

Table A2. Correlation Matrix

Variables		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)	Ln(Amount Raised)	1											
(2)	Success	.95	1										
(3)	Ln(Offering Amount)	-.07	-.16	1									
(4)	Underwriter Commission (%)	.04	.03	-.08	1								
(5)	Financial Interest (%)	.02	.01	-.03	.14	1							
(6)	Delaware Incorporation	.15	.11	-.06	.004	.20	1						
(7)	Firm Age (days)	.09	.08	-.01	.01	.03	-.06	1					
(8)	Current Number of Employees	.05	.03	.02	.007	.01	.04	.08	1				
(9)	Cash to Assets	.04	.03	-.02	.01	.07	.11	.03	.06	1			
(10)	Total Debt to Assets	.01	.01	-.01	-.001	.0004	.004	-.003	-.001	.02	1		
(11)	Net Income to Assets	-.002	-.007	-.01	.01	-.001	-.002	-.02	-.002	.04	.75	1	
(12)	Asset Growth	.04	.02	.03	.0001	-.004	.03	.08	.11	-.02	-.004	-.005	1
(13)	Stock Index	.15	.13	.02	.18	-.05	.03	.06	.05	-.02	-.002	-.02	.03
(14)	Post-COVID-19	.17	.14	.006	.14	-.07	.025	.05	.03	-.005	-.002	-.01	.02
(15)	Post-SEC Regulation Change	.08	.07	-.01	.12	-.02	.023	.04	.05	-.02	.01	-.003	.03

(16)	Common Stock	.03	.04	-.05	.07	-.08	.10	.05	.04	.00	.02	.01	.04
(17)	Preferred Stock	.06	.05	.06	.04	.10	.07	.01	.01	.02	-.01	-.01	.02
(18)	Debt	-.14	-.10	.08	.13	.02	-.33	-.03	-.03	-.08	-.02	-.004	-.03
(19)	SAFE	.08	.04	.21	-.11	.06	.22	-.01	-.02	.08	.01	-.01	-.02
(20)	Convertible	.02	.006	.06	.012	-.07	.05	.03	.003	.02	.002	.02	-.01
(21)	Crowd Note	.05	.06	.01	-.24	.03	.03	.0003	-.01	.02	-.004	-.002	.00
(22)	Membership Unit	-.05	-.02	-.004	.02	-.07	-.07	-.05	-.01	-.01	-.003	-.004	-.01
(23)	Revenue Share	-.02	-.04	.03	-.10	.02	-.11	.003	.006	-.03	-.01	-.01	.00
(24)	Tokens	-.01	-.005	-.07	-.02	-.03	.05	-.05	-.004	-.02	-.002	-.004	-.01
(25)	Other	-.01	-.019	.04	.003	-.03	-.04	-.004	-.006	-.02	-.002	-.002	.002

Variables		(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
(13)	Stock Index	1												
(14)	Post-COVID-19	.79	1											
(15)	Post-SEC Regulation Change	.83	.56	1										
(16)	Common Stock	-.01	-.04	.03	1									
(17)	Preferred Stock	.03	.02	.02	-.18	1								
(18)	Debt	.02	.04	.01	-.34	-.17	1							
(19)	SAFE	.03	.04	.02	-.34	-.17	-.32	1						
(20)	Convertible	.01	.04	-.02	-.15	-.08	-.14	-.14	1					
(21)	Crowd Note	-.04	-.03	-.06	-.09	-.04	-.08	-.08	-.04	1				
(22)	Membership Unit	-.04	-.04	-.04	-.07	-.04	-.07	-.07	-.03	-.02	1			
(23)	Revenue Share	-.04	-.05	-.03	-.15	-.07	-.14	-.14	-.06	-.04	-.03	1		
(24)	Tokens	-.07	-.09	-.05	-.06	-.03	-.06	-.06	-.02	-.01	-.01	-.02	1	
(25)	Other	-.01	-.01	-.02	-.03	-.02	-.03	-.03	-.01	-.01	-.01	-.01	-.01	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.