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Soft and hard information and signal extraction in securities crowdfunding

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Abstract

We examine the impact of information flows on financing and the relative roles of hard information, soft information, and certification of issuer quality by third parties, using novel evidence from the US securities-based crowdfunding market. While hard information about the issuer's financial condition and experience has only marginal relevance for offering outcomes, third-party certification of issuer quality as well as soft information about the issuer proxied by social media following plays a significant role in crowdfunding offerings. The relative roles of hard information and certification are greatest in offerings of more information-sensitive securities and when investors are less likely to derive nonpecuniary returns from participating in an offering. Further, there is evidence of partial substitution between different signals of issuer quality. Both third-party certification and issuer social media following are positively related to the valuation obtained by the issuer. Issuers tailor deal features, specifically, the choice of funding target flexibility and offering duration, to the level of information asymmetry about issuer quality. Finally, there is some evidence of geographic matching, with issuer characteristics and local availability of platforms affecting distance between issuers and platforms.

Keywords: crowdfunding, entrepreneurial firms, information asymmetry, soft information, social capital

1. Introduction

We examine issuer and investor behavior in a new entrepreneurial finance market – US internet-based securities crowdfunding. Although peer-to-peer lending and reward- or donation-based crowdfunding have existed for a while, securities-based crowdfunding involving retail investors has only emerged in the US in 2016. Securities crowdfunding is a new method of conducting very small securities offerings that relies on an exemption from registration based on Title III of the Jumpstart Our Business Startups ("JOBS") Act and SEC rules that became effective in May 2016. While there have been extensive discussions in the popular press and law literature about the future of this market, little rigorous empirical evidence is available to date. In this study we use new data from securities crowdfunding to reexamine a fundamental finance question: what types of information and signals of issuer quality affect retail investor decisions in the presence of significant information asymmetries. Understanding how investors use information to make decisions about opaque issuers is crucial for evaluating the viability of crowdfunding as a financing method for small startups, as well as for a broader understanding of how individual investors make decisions when information is limited.

Securities crowdfunding is a new external financing option for startups and other small businesses that may not be well-suited for other financing methods, such as angel financing, venture capital or bank lending, at this point in their life cycle, or that are seeking to add smaller amounts of capital from retail investors to their financing mix. Securities crowdfunding has several features that set it apart from traditional external financing methods available to small issuers. The low offer limit is likely to appeal to very small and development-stage issuers. Limits on how much each investor can commit, the absence of limits on the number of retail investors that can participate, and the online format for raising financing are likely to draw a

large number of small retail investors, in contrast to angel or VC financing that involves a small number of large, sophisticated investors. While crowdfunding issuers have certain disclosure obligations, smaller issuers can exit periodic reporting and offerings are not subject to regulatory review or registration requirements, which makes crowdfunding significantly less costly than a traditional small public offering.

The intermediation structure of the crowdfunding market enables us to examine the certification role of intermediaries in the resolution of information asymmetry. All offerings must involve a registered funding portal or broker-dealer. Although funding portals cannot offer investment advice or recommend issuers based on expected returns, they provide certification by screening issuers for risk of fraud and non-compliance with regulatory requirements, two factors that are likely to be important to investors. Further, issuers in larger offerings are required to have their financial statements reviewed or audited by an independent accountant, which may serve as an additional source of certification of issuer quality.

Securities crowdfunding shares some similarities with non-securities (lending-based, reward-based, donation-based etc.) crowdfunding:[2] the ability of the public at large to participate; the use of an online platform to solicit funding; relatively small scale of projects and prevalence of idea-stage projects; and potential presence of nonpecuniary motives (e.g., interest of current or prospective customers in a product or service, as well as emotional returns from supporting the local community or a social cause). However, there are important distinctions. Securities crowdfunding is governed by federal securities laws and regulations, with issuers required to provide specified disclosure and to involve third parties (registered intermediaries and, in certain instances, independent accountants) whereas many non-securities crowdfunding

[2] See, e.g., Morse (2015) for an in-depth discussion.

campaigns do not involve established companies and there is no associated disclosure regime. Most non-securities crowdfunding campaigns involve charitable or other nonprofit causes or product perks without an expectation of a monetary return. While securities crowdfunding issuers may invoke emotional returns to appeal to different investor clienteles, transactions are more arm's-length in nature: offerings are larger; in return for funding, investors receive equity, debt or another claim with an explicit monetary payoff structure; and issuers are companies formed under the respective state's law (e.g., as a limited liability company, limited partnership or corporation), typically with a for-profit business objective. Thus, while nonpecuniary motives are likely present to some extent, they are expected to be less influential in securities crowdfunding. Given these differences in legal treatment, characteristics of fundraisers, payoff structure, and objectives of backers, inference from non-securities-based crowdfunding models need not directly translate into securities crowdfunding.

In this study we examine how different types of information about issuer quality are incorporated in investor decisions in the securities crowdfunding market. Our hypotheses evaluate the relative roles of hard information about the issuer financial condition, certification by third parties, soft information, and nonpecuniary payoffs in predicting offering outcomes. We hypothesize that the arm's-length nature of securities crowdfunding will yield a role for hard information in resolving information frictions, with issuers with stronger financials more likely to receive funding. We also hypothesize that hard information and certification through the reputation of third parties will act as substitutes, with certification playing a relatively greater role when the issuer lacks a track record based on hard information. Further, we hypothesize that, due to the involvement of young issuers and retail investors and a lack of information intermediaries, proxies for the presence of positive soft information about issuer quality, such as

the extent of an issuer's social media following, will play a crucial role as a soft signal of issuer quality. Next, we hypothesize that the presence of nonpecuniary payoffs, such as consumer utility and emotional returns from supporting causes, will increase the likelihood of the offering attracting investors. Further, it may decrease the role that information about issuer quality plays for the decision to invest in the offering because investors would be less likely to pay attention to a firm's financial condition. Lastly, we examine the impact of information frictions on offering features and evaluate factors that may contribute to geographic segmentation in this market.

Our main findings are as follows. We find that hard information about issuer quality generally has at most a marginal role for the funding outcome, inconsistent with the hypothesis about hard information. This suggests limited relevance of historical disclosures for individual investors that may face difficulties in interpreting disclosure information for early-stage issuers or may be factoring in other preferences in their investment decisions that deviate from the traditional risk-return optimization. However, we also find that third-party certification of issuer quality by platforms and accountants in crowdfunding offerings plays a significant role, consistent with the importance of certification when information asymmetries are high. We also find that extensive social media following, and to some extent, issuer communications through the platform, play a significant role. An issuer's ability to amass a significant social media following is viewed as a positive signal of issuer quality, potentially capturing a favorable outlook for market interest in the issuer's product or service and the recognition of the issuer's brand. After accounting for disclosure information and certification, we interpret social media following to be a proxy for positive soft information about the issuer – a reflection of unobservable buzz about the issuer among customers, prospective investors and other followers. Furthermore, the relative importance of hard information about issuer quality and third-party

certification is enhanced in offerings that involve more information-sensitive (equity-linked) securities. When investors' nonpecuniary payoffs are more pronounced, hard information about issuer quality and certification have a lesser impact on investment decisions. Consumer-related nonpecuniary payoffs appear to be relatively more significant than ones related to social causes. We also find that issuers appear to factor in the level of information asymmetry into the choice of offering features, such as funding target flexibility and offering duration. There is also some evidence of geographic segmentation in the matching between issuers and platforms, explained in part by supply-side considerations and information asymmetries.

Our study contributes to the nascent literature on securities crowdfunding, which examines securities crowdfunding using mostly international data, as well as to the literature on hard versus soft information and social capital in finance (discussed in detail in Section 2.1 below). Our study extends the existing crowdfunding literature by providing novel evidence on the role of different types of information about issuer quality and nonpecuniary factors that affect investor decisions in the U.S. securities-based crowdfunding market. Our study also contributes to the literature on the role of information frictions in external financing by examining the relative roles of hard information, certification by third parties, and soft information in overcoming information frictions associated with small private issuers. Our study also sheds light on the decision making by retail investors confronted with limited information.

Section 2 discusses related work, institutional background on securities crowdfunding, and hypotheses. Section 3 describes the data and variables. Section 4 presents the results and robustness checks. Section 5 concludes.

2. Background and hypotheses

2.1. Existing evidence and institutional background

Related work

Prior research on *rewards- and donation-based crowdfunding* finds that personal networks and underlying project quality appear to be the main factors associated with the campaign's success (e.g., Mollick, 2014). Backers participating in these types of crowdfunding campaigns also tend to have different motivations than arm's-length investors in the capital markets. In particular, they commit capital not just to get monetary compensation, but also because they value non-monetary benefits (Belleamme, Lambert, and Schwienbacher, 2014).

The role of social connections and soft information is also prominent in these deals. For example, Lin, Prabhala, and Viswanathan (2013) find that social networks are consistently significant predictors of lending outcomes in peer-to-peer lending transactions, with an important gradation based on the verifiability and visibility of a borrower's social capital. Stronger and more verifiable relational network measures are associated with a higher likelihood of a loan being funded, a lower risk of default, and lower interest rates. Freedman and Jin (2014) find that loans for which investor-lenders endorse and bid on their friends' applications yield higher returns to lenders. Vismara (2016a) examines the role of social media based on UK data from Crowdcube and Seedrs and finds higher funding success rates for campaigns by entrepreneurs who sold a smaller stake and had more social capital. Buttice, Colombo and Wright (2017) examine social capital in non-securities crowdfunding. Cumming, Hornuf, Karami, and Schweizer (2016) and Siering, Koch, and Deokar (2016) examine predictors of fraud in non-securities crowdfunding. Courtney, Dutta, and Li (2017) examine the role of different types of information signals and endorsements using Kickstarter data on non-securities crowdfunding

campaigns. Estrin and Khavul (2016) show that investments are influenced by hard and soft information about entrepreneurial quality, as well as by signals from other investors.

In addition, crowdfunding seems to relax the geographical constraints on fundraising that are typical of other financing methods such as, for example, venture capital (Agarwal, Catalini, and Goldfarb, 2011), but home bias still appears to be a robust phenomenon (Lin and Viswanathan, 2016). Agarwal, Catalini, and Goldfarb (2011) find that local funders differ from distant funders in their responsiveness to the investment decisions of others, because proximity enables social ties. Although local and distant funders display different investment patterns, this difference is mostly explained by the disproportionately local nature of social relationships.

There are a few prior studies that examine *securities crowdfunding* using mostly international data. International settings differ from the US disclosure regime – for example, the UK exempts crowdfunding offerings from most disclosure obligations, differently from the US (Armour and Enriques, 2017). Using Australian data, Ahlers, Cumming, Günther, and Schweizer (2015) examine firm quality attributes and associated signals that, together with the level of uncertainty, are related to funding success. They find that human capital and uncertainty significantly affect crowdfunding success. Cumming and Zhang (2016b) examine what crowdfunding platforms do and whether it matters for offering outcomes and investor returns using Canadian data. Their results indicate that crowdfunding platform due diligence is less pronounced for platforms with busy employees that list too many projects, with less sophisticated management systems indicated by inflexible service fee structure, and with less complex campaigns that do not involve an investment in securities. They also find that due diligence application not only facilitates the success of fundraising campaigns, but also helps increase the total amount of money raised on a platform. Using Crowdcube data, Estrin and

Khavul (2016) show that investments are influenced by hard and soft information about entrepreneurial quality and signals from other investors. Vismara (2016b) shows that the success of crowdfunding campaigns is predicated upon information cascades using data from 111 equity offerings from 2014 on the UK platform Crowdcube. Mohammadi and Shafi (2017) examine Swedish crowdfunding data from FundedByMe and find that female investors are more risk-averse and less likely to invest in young, high-tech startups and more likely to invest in projects with a higher proportion of male investors. Abrams (2017) provides early, largely descriptive evidence on the U.S. securities crowdfunding market and suggestive evidence that family and friends tend to invest first, followed by more sophisticated investors.

Our study contributes to the existing crowdfunding literature by examining the relative roles of hard information, certification by third parties, and soft information in overcoming information frictions and relates them to the outcomes of securities-based crowdfunding offerings.

Our study also contributes to the finance literature that focuses on *hard versus soft information* (see, *e.g.,* Liberti and Petersen (2017) for an in-depth discussion). Stein (2002) shows that the scope of the firm depends on the type of information (hard or soft) that is an input into its production process – large firms are more likely to use production technologies that rely on soft information. Theoretical models underline the superior ability of banks to collect and process information (Diamond, 1984; Diamond, 1991; Ramakrishnan and Thakor, 1984). Unlike bondholders and credit rating agencies, banks tend to specialize in collecting soft information (e.g., the ability of the manager, her honesty, etc.) that is not readily convertible into a numerical score, nor is it easily communicable to the broader lending market. We contribute to this

literature by examining the roles of hard and soft information in a brand new, retail investor-dominated securities offering market.

Several studies have demonstrated the role of *social capital and/or social media* as a source of soft information signals about a firm's quality. Engelberg, Gao, and Parsons (2012) examine offline social ties and find that they result in informational advantages in lending decisions. Engelberg, Gao, and Parsons (2013) find support for the value to the firm of a CEO's social ties. Given the fully online nature and nationwide solicitation of investors associated with securities crowdfunding, social media capital an issuer has accumulated on social media websites is expected to be highly relevant. Luo, Zhang, and Duan (2012) find that social media presence, captured by online blogs and consumer ratings, predicts higher equity valuation. Chung, Animesh, Han, and Pinsonneault (2017) find evidence of favorable effects on *q* of firms' social media communications with customers. Lee, Lee, and Oh (2016) find that social media 'likes' are associated with increased customer traffic and higher sales while Steffes and Burgee (2009) document the existence of consumer 'word of mouth' effects in online communications. Chen, De, Hu, and Hwang (2014) find that social media posts predict stock returns and earnings surprises. Paniagua and Sapena (2014) show that 'followers' and 'likes' improve firm value, but only after a critical mass has been achieved, and that Twitter has a larger effect than Facebook. These findings are based on established companies. For crowdfunding issuers, social media following may be an even more informative signal of an issuer's product market reputation and brand because other sources of information are more limited. Moreover, to the extent that existing social media followers may become investors, all else equal, social media following may proxy the number of prospective market participants that have a favorable assessment of issuer quality.

Institutional background

The 2015 SEC rules implementing securities crowdfunding establish requirements for issuers and intermediaries seeking to participate in an internet-based crowdfunding offering. The key provisions are summarized below.[4]

First, an issuer can raise up to $1.07 mln (prior to April 2017, $1 mln) through crowdfunding in a given 12-month period. Crowdfunding securities are subject to resale limitations for one year unless specific conditions are met.

Second, the rules limit how much an investor can invest across all crowdfunding offerings in a given 12-month period.[5] Although accredited and institutional investors are able to invest in crowdfunding securities, in practice, due to investment limits, the pool of investors is dominated by small individual investors.

Third, crowdfunding issuers are subject to disclosure requirements at the time of the offering, during the offering's progress, and on an annual basis. Issuers in larger offerings face additional financial statement requirements.[6] While issuer disclosure and platform due diligence requirements mitigate some of the information asymmetries, the market presently lacks traditional information intermediaries, such as analysts or credit rating agencies.

[4] See Release No. 33–9974 (Oct. 30, 2015) [80 FR 71388] (Crowdfunding Adopting Release) and Ivanov and Knyazeva (2017) for details. See also Armour and Enriques (2017) for a detailed legal analysis of crowdfunding for startups.

[5] Investors with both an annual income and net worth of at least $107,000 (prior to April 2017, $100,000) can invest up to 10% of the lesser of annual income or net worth, but their total investment, including the amount invested in the current transaction, may not exceed $107,000 (prior to April 2017, $100,000) in a 12-month period preceding the date of the transaction. Other investors can invest during the same 12-month period the greater of $2,200 (prior to April 2017, $2,000) or up to 5% of the lesser of their annual income or net worth, whichever is greater.

[6] In offerings greater than $107,000 (prior to April 2017, $100,000) but not more than $535,000 (prior to April 2017, $500,000) in a 12-month period, financial statements must be reviewed by an independent public accountant, and in offerings of more than $535,000 (prior to April 2017, $500,000) in a 12-month period financial statements must be audited by an independent public accountant, except for the issuer's first federal crowdfunding offering where the issuer must offer a financial statement reviewed by an independent public accountant, so long as audited financial statements are not available.

Fourth, there are no restrictions on soliciting out-of-state investors and no state registration requirements, so virtually all crowdfunding offerings have involved nationwide solicitation of investors.

Finally, crowdfunding securities must be offered through an internet-based platform of a registered broker-dealer or a registered funding portal. These intermediaries are required to conduct due diligence and take measures to reduce the risk of fraud, make required disclosures about issuers available to the public, provide communication channels to permit discussion of offerings on the platform, disclose the compensation received by an intermediary, provide educational materials to investors, and comply with additional requirements related to investor commitments, notices to investors, and maintenance and transmission of funds. Although there is concentration in platform market share among early entrants, as of the writing of this paper, over 25 entities were registered as funding portals, and several broker-dealers also have developed online platforms and taken part in crowdfunding.

2.2. Hypotheses

The securities crowdfunding market is likely to be characterized by high information asymmetries, resulting in significant uncertainty about investor demand for the securities being offered. This is driven by the prevalence of very small and young companies in the issuer pool, the prevalence of small investors and a lack of institutions in the investor base, the absence of traditional underwriting or research coverage, and scaled disclosure requirements applicable to issuers. We conjecture that several channels will play a role in mitigating information asymmetries in this market, including hard information, soft information, and certification of issuer quality provided by third parties.

Unlike non-securities crowdfunding, securities crowdfunding transactions are expected to be more arm's-length in nature, with the explicit recognition that issuers generally expect to maximize profits and investors expect to receive monetary returns on their risky investment. Issuers are required to provide financial disclosures that represent a scaled version of an offering prospectus. Given that, we hypothesize that hard information will be important for resolving information asymmetries. Therefore, issuers characterized by better quality, as proxied by hard information, are expected to be more likely to receive funding. We base our hard information proxies on the information contained in the issuer's disclosures filed prior to the offering. Such information can be verified at a low cost by examining disclosures on Form C filed on the SEC website. In particular, we consider asset size, age, financial condition of the issuer, and in supplementary tests, executive team size[9] as the main measures of hard information about issuer quality.

Institutional features of the US securities crowdfunding market motivate the design of our empirical tests. In particular, because at-the-market offerings are not permitted—the price must be fixed at the outset—and issuers must raise at least the target amount in order to receive funds, the main empirical measures of the market's assessment of issuer quality are (i) whether the offering was funded and (ii) how much capital the offering raised, which we collectively term "crowdfunding success". We use issuer valuations as a robustness measure of the market's assessment of issuer quality.

Hypothesis 1: Crowdfunding success is expected to be positively related to favorable hard information about the issuer's quality.

[9] Larger executive teams typically pool diverse human capital and expertise, which could be very beneficial for guiding early-stage firms through probably the riskiest stage of their life cycle.

While hard information derived from historical operations and financial results of the issuer can provide important data about the issuer's prospects, many of the issuers in this market have extremely limited assets in place and operating history, with most of their value being a function of future growth opportunities rather than assets in place. The prevalence of very small and young issuers, such as development- or even idea-stage companies, is a function of the low offer limit ($1 million, subsequently raised to $1.07 million at the end of our sample period). As a result, issuers tend to have very high information asymmetries, which may only be partly mitigated by historical hard information. Further, low investor-level limits lead to the market being dominated by individual investors, who face significantly greater information processing constraints than sophisticated investors in the private placement market. Low investor-level limits also reduce individual investor incentives to expend information acquisition and processing effort. Both the characteristics of the issuer pool and the nature of the investor population are likely to make it difficult for investors to infer issuer quality from historical hard information.

Given the high information asymmetry between issuers and prospective investors and the high cost of verification of issuer quality by an individual investor, we conjecture that the certification of issuer quality by third parties will play a significant role in resolving information asymmetries. In particular, we expect certification to be provided by intermediaries and independent accountants since research analysts and credit rating agencies do not participate in this market.[10]

[10] Other literature has also shown the certification role of venture capitalist reputation (e.g., Megginson and Weiss, 1991; Nahata, 2008) and lender reputation (e.g., Ross, 2010; Bushman and Wittenberg-Moerman, 2012), issuers seeking financing through crowdfunding are typically at a stage that is too early for VC financing and typically do not have collateral or a track record of profitability that is sufficient to attract traditional bank financing. Thus, while crowdfunding issuers that are successful at raising financing, developing their business model, and producing information about their quality through disclosures may proceed to

The certification effect of underwriter reputation has been examined in the context of traditional initial public offerings (e.g., Chemmanur and Fulghieri, 1994; Carter and Manaster, 1990; Carter, Dark, and Singh, 1998). While crowdfunding offerings do not entail traditional firm commitment underwriting, they must be conducted through an online platform of a registered intermediary (funding portal or broker-dealer). Being listed on the platform of an intermediary with a better reputation is expected to serve as a favorable signal of issuer quality. Platforms can build a reputation for quality by conducting more extensive due diligence and fraud screening of prospective issuers that apply to be listed on the platform.[11] Given the information risk in this market and the average investor's limited ability to discern the risk of fraud, investors are expected to rely on intermediary reputation when assessing a prospective issuer. Our platform reputation rank is motivated by underwriter reputation literature and is based on a 'league table' of crowdfunding platforms based on funded deals. At the same time, some models predict that competitors' entry will weaken the incumbent platform's screening incentives.[12] Empirically, the latter argument would cause platform reputation to have an insignificant impact on crowdfunding success.

Moreover, the presence of an independent accountant that reviews or audits an issuer's financial statements is expected to be an important signal to investors of the quality of an issuer's disclosures. Several studies have demonstrated the certification role of independent accountants/auditors in traditional financing markets (e.g., Menon and Williams, 1991; Balvers,

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rely on these financing methods and certification channels in the future, certification through VCs and lenders is not yet available to them. This simplifies the set of certification channels available to issuers seeking crowdfunding financing.

[11] Under existing regulations, funding portals cannot screen or rank issuers based on likely performance. Nonetheless, given the small, opaque nature of the issuers and evidence from the registered microcap space, we expect due diligence and fraud screening to be of first-order importance to investors.

[12] For instance, Wu, Lin and Tan (2016) predict that potential competition from a new entrant incentivizes the incumbent platform to bias the information on borrowers' risky projects; however, the uncertainty resolution provided by a third party (e.g., regulator, media) could mitigate this incentive.

McDonald, and Miller, 1988; Hogan, 1997). The involvement of an independent accountant, particularly, one that has a higher reputation, is expected to serve as a positive signal of issuer quality.

Prior studies have shown the certification role of venture capitalist reputation (e.g., Megginson and Weiss, 1991; Nahata, 2008). While crowdfunding issuers have typically not yet raised VC financing, a history of past financing by angels or other private investors can serve as a positive signal of issuer quality since private investors tend to be more sophisticated and therefore are expected to be in a better position to screen issuer quality (e.g., Kerr, Lerner, and Schoar, 2014; Cumming and Zhang, 2016).

Hypothesis 2: Crowdfunding success is expected to be positively related to the presence of certification of issuer quality by third parties.

Hard information and third-party certification may interact with each other as part of investor information about issuer quality. On the one hand, hard information and certification through the reputation of third parties may serve as substitutes, with certification playing a relatively greater role when the issuer lacks a track record based on hard information. For example, for unknown issuers, listing an offering on a reputed platform can indicate to investors that due diligence was performed on the issuer and did not reveal "red flags", which may partly compensate the lack of an established track record. Having a reputed independent accountant perform a review of an issuer's financials can similarly provide additional assurance of an unknown issuer's quality to prospective investors. On the other hand, certification may reinforce the credibility of hard information about the issuer, resulting in a complementary relation. For example, conducting an offering through a reputed platform may indicate to investors that the risk of fraud is lower and the disclosures are more likely to be complete and compliant with

regulatory requirements. Having a reputed independent accountant review the issuer's financials may increase the credibility of hard information about the issuer's financial condition.

The roles of hard information and third-party certification may also interact with the *information sensitivity* of the securities being offered. On the one hand, information about issuer quality should have a larger effect on offering success in offerings of more information-sensitive securities. In particular, in the spirit of Myers and Majluf (1984), debt is expected to be less information-sensitive than equity. Therefore, a lack of hard information or third-party certification is expected to be relatively more important for offering success in equity or equity-linked offerings. On the other hand, the prediction may be reversed to the extent that risky debt of small, growth issuers is highly information-sensitive. Indeed, some papers find that the traditional pecking order does not hold for small, growth issuers (e.g., Robb and Seamans (2014); Berger and Udell (1998)). This is ultimately an empirical question.

Overall, hard information about issuer quality tends to be limited in this market. As noted above, while some third-party certification is anticipated, information intermediaries such as research analysts or rating agencies do not cover crowdfunding issuers. Therefore, investors may decide to rely on other signals of issuer quality outside of information from disclosures and third-party certification. Specifically, we focus on an issuer's overall reputation based on social media presence.[14] The extent of the issuer's social capital with online followers is expected to capture the extent to which consumers, prospective investors, and others have a positive opinion about the issuer's brand and products and/or an interest in the issuer. Issuers with more social media following are expected to be associated with a larger amount of positive information available,

[14] Issuers are subject to limits on advertising the offering outside the crowdfunding platform and may not solicit investor interest in the prospective offering prior to filing a Form C. However, issuers may advertise their business, brand, and products/services.

all else equal. While the number of social media followers is an observable proxy, the nature of information that prompts the market's interest in the issuer on social media is not perfectly observable or verifiable. Thus, after controlling for information from the offering disclosures, we consider the extent of social media 'word of mouth' to be an observable proxy capturing the extent of positive soft information about the issuer's quality. For robustness we also consider an issuer's responsiveness to prospective investors on the crowdfunding platform.[15] The significance of social connections in conveying soft information has been investigated in the context of relationship banking and, subsequently, peer-to-peer lending (see Morse (2015) for a comprehensive discussion). Indeed, given the internet-based nature of the crowdfunding offerings, online metrics of an issuer's social capital and communications are expected to be most relevant in this context. Outside of the lending context, consumer research and marketing literature has used social media following as a proxy for the value of an issuer's brand and product market reputation.

Hypothesis 3: Crowdfunding success is expected to be positively related to social capital of the issuer.

In the context of crowdfunding, investors may value nonpecuniary payoffs in addition to monetary returns from investing, making such nonpecuniary aspects of crowdfunding campaigns potentially relevant for offering outcomes. Based on examining crowdfunding campaigns to date, the main sources of nonpecuniary payoffs can be classified into two main categories – emotional returns from supporting social causes and consumer utility (proxied by offerings with investor

[15] The communications measure is based on issuer communications through the crowdfunding platform and captures an issuer's responsiveness to investors that arrived to the offering page and asked questions. It is not just capturing the extent of an issuer's efforts to advertise and solicit prospective investors.

product perks and offerings in sectors where investors are more likely to be consumers, such as food, beverage, travel, recreation, film *etc*.).

Hypothesis 4: Nonpecuniary payoffs are expected to increase the likelihood of crowdfunding success.

In addition to increasing the likelihood of funding, nonpecuniary payoffs may decrease the role that information about issuer quality plays in investor decisions.

Further, we examine the impact of information frictions on *offering terms*. While securities crowdfunding is structured so that issuers receive proceeds only if the target (minimum) amount has been reached ("all-or-nothing"), issuers may elect to set a maximum offer amount, which allows issuers flexibility. Almost all offerings have such a min-max design, with the maximum often set significantly higher than the target. We define the extent of flexibility in reaching the funding goal by the relative size of this max/min wedge. Issuers seeking more flexibility can decrease the target amount and/or increase the maximum amount. Setting a wide wedge between the target and the maximum effectively approximates a "keep-it-all" format (where the issuer receives all of the funds, regardless of whether the campaign has reached the fundraising goal). At the other end, issuers may choose not to allow oversubscriptions and set the target equal to the maximum amount. Marwell (2016) predicts that higher quality issuers will select "all-or-nothing" models. Extending the argument predicts greater funding target flexibility—larger max/min wedge and longer offering duration—for issuers with less favorable information about issuer quality and higher information asymmetry. Cumming, Leboeuf, and Schwienbacher (2015) predict that "keep-it-all" models are preferred for smaller, scalable projects, but that such campaigns are less likely to meet fundraising goals.

Hypothesis 5: Issuers with less favorable information about issuer quality and higher information asymmetry are expected to select more flexible funding terms (higher max/min wedge and longer offering duration).

Alternatively, issuers with a strong product market and social media following may have a greater number of prospective investors but significant uncertainty about whether such prospective investors would actually invest. Such issuers may select a low target and a high maximum, giving themselves more funding target flexibility.

Finally, given that small, young issuers in this market are likely to have a high level of information asymmetry, we expect geographic distance between issuers and platforms to be potentially relevant for the platform's ability to perform due diligence, yielding some degree of local segmentation. This is expected to make the local availability of platforms relevant for the average distance between issuers and platforms.

3. Data

3.1. Sample

The details of sample and variable construction are presented in Appendix A. The sample for the study is based on securities crowdfunding offerings that have been initiated in the first year of Regulation Crowdfunding, between May 16, 2016 and May 15, 2017. Data is obtained from the information reported by filers in offering circulars, offering progress updates, and funding portal registration forms during that period. Additional data is hand-collected from the textual portions and exhibits of Form C, platform websites and aggregate listings of crowdfunding offerings. Information on the extent of social media presence and extent of issuer communications is hand-collected from individual issuer websites. The main tests examine the outcomes of offerings that have closed (expired - reached the deadline date) as of May 31, 2017, a few days before the end of data collection on proceeds (approximately June 5, 2017). Robustness tests examine the full sample of closed and ongoing offerings.

3.2. Variables

Variable definitions are presented in Appendix A. Our main ***dependent variables*** involve two measures of crowdfunding offering outcomes: offering success indicator (whether the offering has reached the funding target) and proceeds (log of the amount of proceeds). For robustness, we also examine the issuer's valuation (expressed in log terms and as the ratio of valuation to assets in log terms). Tests of funding target flexibility use the max/min wedge, defined as the ratio of the maximum amount sought in the offering to the minimum funding target, where high values correspond to more flexibility in the funding amount, and vice versa. Tests of geographic matching examine the distance in log terms between the business location of the platform and the issuer.

We construct the following ***variables of interest*** to test the hypotheses discussed above.

Hard information about issuer quality focuses on the issuer's track record and financials. We characterize an issuer as having more favorable hard information about issuer quality if the issuer is better established (measured by age since incorporation), larger (measured by asset size), has generated net income, and has a larger executive team (measured by the number of officers and directors).

Certification of issuer quality by third parties is captured in three ways. First, we use the availability of financial statements that have been reviewed or audited by an *independent accountant*, which can signal to prospective investors that the issuer's financial reports have been examined by an outside party and therefore are more reliable. For robustness we use the independent accountant's market share (based on the number of crowdfunding offerings for which the accountant has prepared review or audit reports) and PCAOB registration status, both

of which can signal the accountant's reputation and increase investor confidence in the issuer's financial information.

Second, conducting an offering through a larger *intermediary* (defined based on the number of funded offerings) can also serve as a favorable signal. While funding portals may not curate offerings on the basis of expected returns, larger platforms are likely to have more extensive due diligence resources and experience. We recognize, however, that the greater number of concurrent offerings on larger platforms may result in more competition among issuers for capital, having the opposite effect on offering success. For robustness, we consider the willingness of an *intermediary to take a stake* in the issuer as part of compensation, to the extent that it signals an intermediary's favorable assessment of the issuer's prospects. Alternatively, it can indicate that the issuer is more financially constrained, with a greater need for cash proceeds from the offering.

Third, a track record of *past private placements* (proxied by the filing of a notice for a Regulation D offering) is expected to serve as a favorable signal, indicating that some sophisticated investors positively assessed the issuer's prospects in the past. For example, angel investors tend to be relatively sophisticated, large investors with resulting greater capabilities for performing due diligence and evaluating issuer prospects, so their past involvement may serve as a positive signal of issuer quality.

Soft information *signals of* issuer quality (information other than the filed disclosures) are captured in two ways. The main variable relies on the issuer's *social media* following on Facebook and Twitter,[17] measured by the presence of an issuer on social media and the number of likes or followers on social media sites. Since the measures are highly correlated, a factor

[17] Almost all issuers in the sample have their own websites, so the presence of a website does not offer meaningful variation.

analysis is performed to extract a social media factor. Extensive social media following is expected to convey positive soft information about the issuer's reputation and value of the issuer's brand.

We also consider how actively the *issuer communicates*[18] with investors on the crowdfunding platform, using the number of frequently asked questions the issuer has supplied and the number of responses to investor questions. We conjecture that the presence of active issuer communications is a soft signal of issuer quality since higher quality issuers may be more transparent and more willing to share information with investors that ask questions. It may also proxy the aggregate level of investor interest that prompts them to ask questions on the platform, with 'buzz' among prospective investors on the platform conveying positive soft information.

While we recognize that it is possible for issuers to transmit new hard information through social media and platform communications channels, anecdotal evidence suggests that this is generally not the case.

The relevance of investors' ***nonpecuniary payoffs*** is focused on three aspects. First, *social impact* of the issuer, proxied by whether the issuer is a benefit corporation ('PBC' or 'B Corp'); the offering description emphasizes benefits to demographic groups such as women, minorities, or veterans; or the issuer's business involves sustainability or renewable energy, health care / medical devices, education / childhood development, or local community development.

Second, we attempt to capture *consumer private benefits*. Customers may value different aspects of the business than investors. Some issuer decisions may benefit customers at a cost to

[18] In addition, photos and videos posted on the profile page snapshot may represent another measure of issuer communication with prospective investors. However, almost all issuers have those elements featured as part of the campaign page, and exceptions to this general practice tend to cluster at the platform level.

investors (e.g., price reductions or costly improvements in product quality may lower profits). When customers are also investors, the private benefit they may derive from the issuer's success as customers is a nonpecuniary payoff for purposes of evaluating an investment in the issuer's security. Based on anecdotal evidence from offerings, such customer private benefits may be concentrated in the *food/drink* industry.

Third, we consider the presence of *offering perks*, such as exclusive access to products, product samples, merchandise, acknowledgments of the investor by name, access to VIP events *etc*. Although such perks have a small market value, these private benefits to investors can appeal to an investor's hubris, inducing an individual investment as well as the word-of-mouth effect on prospective investors.[19]

Information sensitivity of securities is defined based on whether the security is a debt security or an equity-linked security.

Controls

Offering success regressions also account for other offering characteristics. We recognize that those characteristics are determined simultaneously with other predictors of offering success and therefore do not attribute causal inference to their estimates. Offerings with higher target amounts may be mechanically less likely to achieve funding targets in the 'all-or-nothing' model, all else equal. Offering with higher investor-level minimum investment requirements may be less likely to achieve funding targets, all else equal, to the extent that prospective investors have financial constraints or do not wish to invest a large amount for diversification reasons.

The likelihood of offering success is expected to be lower, all else equal, when there are higher investor search costs. We proxy investor search costs with the length of the issuer name

[19] For instance, Stern (2016) examines backers' narcissism in crowdfunding campaigns using recognition rewards in the context of a lab experiment.

(or website domain or "doing business as" name), as well as the complexity of the intermediary platform name (Umar (2017) examines complexity and investor information frictions, in a different context).

In addition, we account for the issuer's sector using Fama-French 12 industry classification derived from the business description of the issuer to the extent that industry outlook may affect growth opportunities and investor demand.

Descriptive statistics for issuer and offering characteristics are summarized in Appendix B. Most issuers are relatively young, pre-revenue, and unprofitable, and they tend to have limited assets and some debt.

3.3. Methodological considerations

We focus on identifying the types of issuer quality signals that predict the odds of offering success, in essence, trying to determine what information about the issuer matters to the market in its assessment of a crowdfunding offering. Given that, we do not impose strong causality assumptions. For instance, we recognize the simultaneity stemming from endogenous matching between issuers and intermediaries on quality (e.g., a separating equilibrium in which better issuers self-select onto reputed platforms). Such associations may still be informative about the types of observable characteristics that predict offering success, thus, reveal issuer quality to the market. To differentiate between potential confounding factors, however, we account for various issuer, deal, and platform characteristics.

We also recognize that issuers (and intermediaries) choose multiple deal terms simultaneously, so estimates on offering terms controls should be treated strictly in a reduced-form context. In particular, since offering success (whether the funding target is exceeded) depends on the target amount, hypothetically, any offering may get funded if the target is set to

be sufficiently low. Therefore, we repeat the main tests using offering proceeds. We find significant results both using tests of offering success and tests of offering proceeds, which addresses this possibility. Indeed, setting a very low target may be impractical because the amount raised, net of the compliance and other offering costs, may not be enough to meet the issuer's financing needs.

The results are obtained under the conservative assumption of clustering of standard errors at the platform level, which accounts for potential within-platform correlation in error terms. The main results hold after the inclusion of platform fixed effects and under the alternative assumption of clustering of standard errors at the issuer level.

Certain data limitations exist. As the market is still developing, it is difficult to predict whether inference from this sample period will generalize to other periods, such as market downturns. Given the recent nature of the market, we do not have data on long-term financial outcomes of issuers or risk-adjusted returns to crowdfunding investments. Further, data on investor identities is not available to us, so we perform analyses at the issuer level.

4. Results

Univariate evidence of offering success determinants is shown in Table 1. Hard information about the issuer's track record in the form of profitability, asset size, and issuer age is positively but not significantly related to success, inconsistent with Hypothesis 1. A larger executive team is positively and significantly related to offering success, consistent with Hypothesis 1. Certification by third parties, proxied by platform rank and presence of an independent accountant's review report, is associated with greater offering success, consistent with Hypothesis 2. Social media following is positively related to offering success, consistent with Hypothesis 3. Nonpecuniary factors (offering perks and, on the margin, social impact) are

positively related to offering success, consistent with Hypothesis 4. However, univariate tests disregard the possibility that some or all of these characteristics are correlated.

[Table 1]

The main regression evidence of offering success determinants is presented in Table 2. As discussed above, tests examine both the likelihood of funding success and the amount of proceeds after controlling for issuer, deal, and platform characteristics. Similar to univariate tests, multivariate tests do not provide much support for Hypothesis 1. Hard information about issuer quality based on current accounting characteristics and past track record has limited relation to offering success. More profitable, larger issuers are *not* more likely to receive funding and do not on average raise larger proceeds. (The exception is the positive relation of issuer age to amounts raised in the full sample containing both closed and ongoing offerings in Table 3, Column III.) Issuer characteristics such as size, age and profitability, can more generally indicate maturity of an issuer's business and as a result may be correlated with third-party certification and soft information proxies. However, similar to univariate tests, in unreported tests excluding soft information and third-party certification, hard information proxies remain insignificant, suggesting that the lack of significance is not driven by multicollinearity. Historical financials appears to be generally discounted by retail investors in this market dealing with issuers at an early stage of development. (The interaction tests in Table 5 attempt to isolate subsets of the issuer population for which hard information is relatively more relevant for investors.)

A lack of impact of hard information may be consistent with the presence of behavioral investors. Because the market is dominated by individual investors and limits to arbitrage are present (securities are not marginable and cannot be sold short; securities have very limited transferability within one year after the offering; and secondary market liquidity is virtually non-

existent at this time), valuations may diverge from fundamentals. Prior research on individual investor behavior has pointed to bounded rationality and high information processing hurdles. Besides limits to information processing, investors may exhibit behavioral biases. For instance, investors may approach the crowdfunding investment as a lottery ticket or another form of gambling rather than a conventional risk-return optimization problem. Investors may also overweigh nonpecuniary payoffs. While we test the latter possibility below, the data available to us does not allow us to pinpoint whether investors disregard hard information due to information processing limitations, behavioral biases or a combination of the two.

[Table 2]

Consistent with Hypothesis 2, third-party certification in the form of a review or audit report from an independent accountant[20] is strongly positively associated with offering success probability and offering proceeds.[21] The presence of a review or audit report increases funding probability by about twenty-five percent, all else equal. The effect on proceeds is approximately sixty percent of the standard deviation.

Further, platform reputation is positively related to offering proceeds (although it is not significantly related to offering success probability). As we noted above, we recognize that issuer characteristics that predict successful offerings may underlie issuer matching to platforms, so platform success record, especially for platforms with fewer offerings, may be shaped by the incremental flow of issuers to the platform. To the extent that such matching on quality between issuers and platforms conveys information of a predictive nature, it can nonetheless be valuable,

[20] A review report, rather than an audit report, is sufficient for almost all issuers in the sample as they have not yet conducted a repeat offering exceeding $535,000 ($500,000 prior to April 2017).

[21] Since almost all offerings accept oversubscriptions, target amounts do not determine financial statement requirements, which are based on the maximum amount offered. Moreover, if the target amount is correlated with the review report indicator, a mechanical effect would suggest the opposite sign since a higher target lowers the likelihood of offering success in the 'all-or-nothing' model, all else equal. Further, tests of funding success control for the target amount (without inferring a causal relation).

even in the absence of an identified causal effect. A one-standard deviation increase in platform reputation is associated with an increase in proceeds by about twenty percent of a standard deviation.

The certification effect from prior investors proxied by the Regulation D private placement indicator is positively related to offering proceeds, but at the 10% significance level.[22] All else equal, having a prior private placement is associated with an increase in proceeds by about a third of a standard deviation. Prior private placement activity is not significantly related to the binary offering success measure.

Consistent with Hypothesis 3, social media following is significantly positively related to both offering success and offering proceeds. A one-standard-deviation increase in social media following increases the funding likelihood by about eleven percent, all else equal. A one-standard-deviation increase in social media following increases proceeds by about thirty percent of a standard deviation, all else equal.

Similar to univariate tests, there is also support for Hypothesis 4. Of the proxies for nonpecuniary gains, offering perks are positively related at the 10% significance level to both offering success probability and offering proceeds. The presence of offering perks increases funding probability by over twenty percent, all else equal. It is also associated with an increase in proceeds by over a third of a standard deviation, all else equal. After the inclusion of other controls, the social impact indicator is not significant. Since the regressions contain industry fixed effects, which would absorb almost all of the consumer-facing business type effect, the latter is not included in the present specification.

[22] Prior offering activity may be correlated with firm age and size. Further, the measure does not include private placements that relied on a statutory exemption and not the Regulation D safe harbor and therefore did not involve a Form D notice filing.

Among the controls, offerings with higher target amounts are less likely to be funded. Investment minimums are not significant, possibly due to limited variation in the measure and clustering around the $100 threshold. Issuer name complexity is negatively related to funding success but not offering proceeds, suggesting that search costs may be marginally decreasing the breadth of investors drawn to the offering but not the amount invested.

In an unreported test, we replace the control for profitability with an indicator for the pre-revenue status of the issuer, to capture the extent of maturity of the issuer's business model (e.g., whether it is idea-stage or whether a product or service has already been commercialized prior to the offering) and we do not find it to have a significant effect.

Additional tests using alternative sample and variable definitions are presented in Table 3. The main dependent variables considered so far were the funding success indicator and offering proceeds (in log terms). Column I uses an alternative dependent variable, the amount of proceeds as a proportion of the funding target. Similar to the previous set of results, hard information measures do not enter significantly after controlling for other effects. Consistent with the results in Table 2, history of private placement activity, accountant review reports, and platform rank are significant predictors of higher offering proceeds relative to the target.

[Table 3]

Columns II-V use alternative sample definitions. The main analysis in Table 2 contained only closed offerings. Columns II and III expand the analysis to the full sample of closed and ongoing offerings. For ongoing offerings, success is defined based on cumulative investor commitments relative to the target amount. The results are generally preserved, with social media following and third-party certification being significant and hard information insignificant. However, platform rank and offering perks are no longer significant and issuer age

becomes significant in the offering proceeds specification in Column III. The main analysis required information from offering profiles on investment minimums and nonpecuniary measures of offering perks and social impact. This information is not available for offerings initiated on the platform that subsequently withdrew its registration, which are excluded from the main tests. To account for potential survivorship bias, Columns IV and V use these observations but exclude the respective controls. The results are generally unaffected. Profitability becomes a significant predictor of funding success at the 10% level.

The main specifications use ordinary least squares. Column VI replaces the linear probability model with logit for the analysis of offering success probability. Column VII uses tobit for proceeds. The results generally hold.

The main tests do not include intermediary fixed effects to preserve the power of the tests but cluster errors at the platform level. Over 25 intermediaries have been involved in offerings during our sample period, and the regressions already incorporate a number of other controls. Adding platform fixed effects in Columns VIII-IX generally preserves the results. However, social media following loses significance in the funding success probability model.

Additional tests and robustness checks are presented in Table 4. Panel A incorporates individual security type controls and local area population rank to proxy the size of potential local investor base (Columns I-II) and incorporates nonpecuniary effects of food/drink businesses (Columns III-IV, suppressing industry fixed effects). Local population rank is not significant. Debt offerings attract somewhat larger offering proceeds. Equity-linked offerings are associated with lower proceeds. When industry controls are excluded, food/drink businesses[23] are not significantly likely to raise capital or raise more capital.

[23] The result remains insignificant when cannabis businesses are not grouped with food/drink businesses.

[Table 4]

Panel B uses alternative social media measures, including the number of Twitter followers and the social media factor based on the presence and intensity of Facebook and Twitter social media following (defined in Appendix A). When included separately, Twitter following has the same significant positive effect as Facebook likes considered earlier. When included jointly, the Facebook measure is significant while the Twitter measure is not. Due to the high correlation between the two measures, in Columns V and VI we use a social media factor instead of individual social media measures, where it enters highly significantly.

Panel C presents tests of the role of additional types of soft information signals – the frequently asked questions posted by the issuer and the issuer responses to questions asked on the platform's communication channels. After controlling for other factors, FAQs are not statistically significant. Communications in response to questions by investors are statistically significant and positively associated with both measures of offering success. When included jointly with communications, social media remains a significant predictor of offering proceeds but not funding success probability. The two are highly correlated, so we alternatively consider a social media and communications factor in Columns V-VI and find it to be highly significant. The communications channels information is available for a subset of the sample with live profile pages, so the power of the test is lower. We cannot rule out that issuer communications through the platform are jointly determined with the amount of investor attention and buzz that the offering is generating, resulting in more investor interest and a more active discussion, which in and of itself can serve as a positive soft signal of issuer quality. Overall, social media following and active platform communications appear to serve as important soft signals of better issuer quality, consistent with Hypothesis 4.

Issuer quality, which drives offering success, is revealed via hard and soft information signals. Thus, for our purposes, a causal effect is not essential.[24]

Panel D controls for the effects of management team size. Issuers with more directors and officers (measured based on the number of signers) are positively associated with offering success. Although it is a potentially noisy proxy of cumulative expertise of the issuer's executive team, it may be correlated both with stronger business prospects and/or greater experience in raising financing, including, gauging investor demand and setting the relevant target. However, the overall size of the issuer's team, including founders and key staff, is not significant. The latter variable is available for a subset of the sample.

Panel E considers alternative measures of third-party certification. Instead of the presence of the review report, Columns III-IV use accountant market share and Columns V-VI use the accountant's PCAOB registration status. The effects remain strongly significant and positive.

In addition, the panel uses intermediary financial interest as a control. Intermediaries may take a financial stake in the issuer as part of compensation, for instance, if they believe the issuer's securities will be highly valued in the future. However, such a decision by the intermediary may also indicate that the issuer is financially constrained and negotiates to compensate the intermediary with securities rather than cash. These effects may be offset. The coefficients on the indicator for the financial intermediary being compensated with securities and on the size of such compensation are not significant. These transaction terms may also be determined largely at the platform level, with limited variation at the deal level.

[24] However, we do not believe reverse causality (crowdfunding success causing social media following) to be likely. While offering profiles on platform websites may contain links to issuer social media channels, this is not uniform across platforms and offerings. Anecdotally, it is unlikely that most social media followers discover issuers by browsing crowdfunding platforms. More often, posts about an ongoing crowdfunding offering are made on an issuer's social media channel.

Table 5 presents estimates of several sets of interaction effects to evaluate the tradeoffs between the different types of information flows in the context of predicting offering success. As a general caveat, when multiple potentially correlated direct terms are paired with interaction terms, some multicollinearity may arise, limiting the significance of individual *t*-statistics. Panel A examines the interaction of information conveyed by the level of social media following with third-party certification. There is significant evidence of a substitution relation, consistent with the substitution prediction in Hypothesis 4. The relative role of third-party certification is less important when there is better soft information about the issuer and vice versa.

[Table 5]

Panel B considers the interaction of third-party certification effects with hard information about the issuer, to gauge whether these signals of issuer quality serve as substitutes for purposes of resolving the information asymmetry between prospective investors and the issuer and increasing the probability of offering success. There is some evidence of substitution between certification and issuer size, as a hard information signal about the issuer. The coefficient on asset size in the offering proceeds regression is significantly reduced when a review report or a larger platform is present. However, platform rank augments rather than reduces the coefficient on issuer age, suggesting a complementary relation with some issuer characteristics.

Panel C considers the information sensitivity of securities being offered with respect to the relevance of hard information about the issuer's prospects and third-party certification. Debt is expected to be less information-sensitive than equity. Therefore, information asymmetry about the issuer due to a lack of hard information or third-party certification is expected to be relatively less important for offering success in debt offerings. There is some evidence consistent with this hypothesis. Assets and profitability, which reflect hard information signals of issuer quality, are

more important for offering success in equity-linked offerings. The interaction with platform rank is positive and significant, suggesting that third-party certification by intermediaries is also relatively more important for offering success in equity-linked offerings. However, the interaction of security type with review report availability is not significant. Certification by accountants seems to be equally important in gauging the issuer's quality in equity and debt offerings.

Panel D conditions the analysis of the relevance of hard information about issuer quality and third-party certification on the characteristics expected to proxy nonpecuniary investor payoffs from the offering (*e.g.*, offering perks, investor utility from product success due to investors also being customers, or emotional returns from social or community impact rather than from expected security payoffs alone). There is some evidence of reduced relevance of hard information and certification in the presence of nonpecuniary payoffs. The aggregate measure of nonpecuniary payoffs generally offsets the lack of profits and weakens the impact of a review report. However, there is heterogeneity depending on the source of nonpecuniary returns. Social impact, as well as food/drink business type, is not a significant factor moderating the role of hard information or review report. Offering perks slightly decrease the effect of issuer size on offering proceeds.

For robustness, Table 6 considers the determinants of issuer valuation used in the offering. Regulation Crowdfunding does not permit at-the-market offerings, thus, investors may only buy securities in a crowdfunding offering at the price set by the issuer *ex ante*. As a caveat, disclosures frequently reference the speculative nature of the valuation and note that is not based on any particular methodology or market analysis and represents solely an issuer's view. For some equity-linked non-equity securities, rather than reporting the valuation, the issuer is

including a valuation threshold around which an investor makes a bet (e.g., simple agreements for future equity), similar to acquiring a security containing an out-of-the-money option. Thus, the valuation threshold may diverge from the firm's fair value. Finally, if growth opportunities are at the core of the valuation of small, young issuers with limited assets in place, valuations may be unrelated to historical fundamentals. Valuation information is typically not available for straight debt offerings and is not found for some equity offerings, so the sample size for this analysis is smaller. All of these factors can limit the predictive power of valuation tests.

[Table 6]

Larger issuers have higher valuations in absolute terms, as could be expected. Profitability and issuer age are not significantly related to valuation. Issuers that have debt are associated with lower valuations and issuers with a prior record of private placements have higher valuations in some specifications. Platform rank and accountant certification are positively related to valuation. Social media and issuer communications through the platform are also positively related to valuation. Looking at valuation ratios (valuation scaled by assets) we find that older issuers and issuers that carry debt, as well as issuers of debt securities, are associated with lower valuations. Accountant market share has a positive effect on valuation ratios. Panel B presents qualitatively similar results within the subsample of closed offerings.

Offering design is examined in Table 7. Columns I and II present the results using the full sample of initiated offerings and Columns III and IV reproduce the tests in the sample of closed offerings, which had been used in the offering outcomes analysis. The issuer's decision on the *flexibility* of the funding target is examined in Column I. The dependent variable is the wedge between the maximum amount and the target amount (the minimum amount that must be raised for a successful offering), expressed as log of the ratio of the maximum to the target. As

discussed above, issuers may select flexible funding targets for two reasons. On the one hand, a flexible funding target may arise when issuers set a low minimum due to the high level of information asymmetry and the resulting uncertainty about investor demand for the issuer's securities at the presented valuation. On the other hand, a flexible funding target may arise if issuers set a high maximum in response to a positively-skewed distribution of investor demand (a small probability of significant investor demand at the offered valuation).

[Table 7]

The impact of hard information on funding target flexibility is mixed. Larger, more profitable issuers select more precise funding targets, consistent with Hypothesis 5. At the same time, older issuers also select more flexible targets. However, issuer age and size are highly collinear, and when issuer age is included separately in unreported tests, it is not significant. Issuers in less populous areas with a smaller local retail investor base select more flexible targets. Issuers of more information-sensitive securities select more flexible targets. Issuers with greater social media following also select more flexible targets, with the effect driven by the choice of the higher maximum, all else equal. More profitable issuers and issuers in more populous areas select a shorter duration for the offering, all else equal. Longer duration offerings also are correlated with more flexible targets (this correlation should not be interpreted causally).

Table 8 examines the determinants of geographic proximity of issuers and intermediaries. Consistent with partial geographic segmentation making local supply constraints relevant, average distance decreases when there is greater local presence of platforms, holding area population size constant.[25] The general preference for proximity is consistent with geographic frictions in conveying and verifying issuer information and the advantages of local knowledge

[25] Therefore, the relation between local platform availability and distance between issuers and platforms is not mechanically driven by big urban areas, where both prospective issuers and platforms may be concentrated.

for performing due diligence. The proximity preference may also be due to platform recognition by local issuers and greater costs for issuers of researching remote platforms. The proximity preference is countered by the stronger track record of the platform and larger platform size, which can make it more attractive to prospective issuers and provide the platform with sufficient resources to perform due diligence on remote issuers. Issuers funding larger offerings and issuers in offerings with accountant certification are matched to more distant intermediaries. However, more profitable issuers tend to have more local intermediaries. The crowdfunding market is currently dominated by funding portals. Consistent with it, issuers offering securities through a funding portal tend to be located closer to the intermediary than issuers offering securities through a broker-dealer platform.

[Table 8]

Although we control for local population density, one may ask whether local matching between issuers and platforms is merely a reflection of joint clustering of issuers and platforms in areas with a high degree of business concentration, in which case the finding of greater proximity between issuers and platforms when there are more platforms located nearby may be mechanical. To check for this possibility, we construct a counterfactual – the issuer's distance to the average crowdfunding platform, assuming the issuer randomly chooses among all platforms participating in crowdfunding. Columns V and VI report the tests redefining the dependent variable as the ratio of the actual issuer-platform distance and the distance under the counterfactual. Our main conclusions are confirmed, ruling out the possibility of a mechanical relation. In unreported tests, we confirm the result using the dependent variable defined as the difference, rather than the ratio, between the actual issuer-platform distance and the counterfactual.

5. Conclusions

We provide novel evidence on the impact of information on external financing in the presence of significant informational frictions using a new external financing market dominated by retail investors - securities-based crowdfunding. The unique institutional features of this market set it apart both from other external financing methods and from non-securities crowdfunding. We identify different types of hard and soft information signals of issuer quality and examine their relative roles in conjunction with certification of issuer quality by third parties and investor preferences. The presented evidence is important for small issuers, intermediaries and investors.

Offering outcomes are only marginally related to hard information about issuer quality. However, certification by independent accountants and reputed intermediaries (with respect to screening issuers for fraud and regulatory compliance) plays a significant role. Hard information and platform certification are relatively more important for more information-sensitive securities. Moreover, we find that offerings are significantly influenced by the presence of favorable soft information as proxied by social media capital. Given the online nature of the solicitation process, we focus on online social media following and active communications through the platform as summary metrics of issuer reputation. These proxies represent soft signals of the issuer's reputation and overall brand, as well as the level of prospective customer and investor interest in the issuer.

Given the largely retail nature of this market, we recognize the potential role of nonpecuniary investor payoffs. We find evidence of the significance of consumer-related nonpecuniary payoffs (offering perks but not social impact) for offering success. We also find

that nonpecuniary payoffs diminish the role of hard information and certification in investor decisions.

Issuers in this market commonly vary the amount of flexibility they build into the funding goal. Greater information asymmetry and uncertainty about investor demand, proxied by a lack of hard information about the issuer and a limited local investor base, predict a preference for more funding target flexibility. At the same time, issuers with significant social media following also set more flexible funding targets, selecting a higher maximum in an attempt to capture the potential investor demand upside. We also find evidence of matching of issuers and intermediaries on geographic location, consistent with the advantages of proximity when information asymmetries are high. Future analysis can explore the role of platform specialization in issuer-platform matching and offering outcomes.

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Appendix A: Sample and variables

Sample construction

The sample period is 1 year between May 16, 2016 (the effective date of securities-based crowdfunding rules) and May 15, 2017. A total of 334 unique offerings are identified during that period based on filing data. This number excludes a total of 14 offerings classified as potential duplicates and erroneous filings, most of which were subsequently withdrawn. The subsample of closed offerings is comprised of offerings with deadline dates on or before May 31, 2017. There were 212 closed offerings. The final sample excludes offerings with missing information on control variables used in the respective specification (e.g., if campaign profile materials cannot be retrieved). Information is obtained from EDGAR filings, except where specified otherwise.

Information on the proceeds of offerings initiated during this period is collected through approximately June 5, 2017, to allow the proceeds of closed offerings to be reported. Progress updates on Forms C-U are retrieved through June 10, 2017. Data on offering outcomes is gathered from filings of progress updates on Form C-U and hand-collected information from the lists on wefunder.com and nextgencrowdfunding.com, which aggregate information on offering proceeds from individual platforms, and offering profiles on individual platforms for a small number of other offerings not found on those lists. Proceeds amounts are located for almost all of the offerings initiated during the sample period. For 12 offerings, no proceeds information is found. Of those, 6 are significantly past their deadline dates and have been removed from platforms, which is typically associated with unfunded offerings. The remaining 6 can no longer be found on platforms, which is usually associated with withdrawn offerings. Since a withdrawal filing is not required for failed offerings, these are presumed to have failed. These missing proceeds observations are excluded from the offering outcomes analysis. Including them in the analysis does not qualitatively affect the results. Offerings that were withdrawn (either because the issuer filed a withdrawal or the platform through which the offering was conducted filed a withdrawal) are considered to have failed and are included in the analysis of offering outcomes to avoid survivorship bias.

The analysis of offering features uses the full sample of closed and ongoing offerings initiated during the sample period and uses the subsample of closed offerings for robustness. Since offerings may be ongoing for several months, the analysis of offering outcomes uses the subsample of closed offerings, except as specified otherwise in robustness tests using the full sample.

Unless specified otherwise, for offerings that have been amended, information on issuer financial and offering characteristics is based on the latest amendment filed during the sample period. Issuer age is evaluated at the date of the initial filing and offering duration is defined from the initial filing date to the deadline date based on the latest amendment filed during the sample period. Information from campaign profiles is based on the profile materials filed on EDGAR, where available, and on the February 2017 or May 2017 campaign profile on the platform website otherwise, if available.[26]

Issuer industry classification is not available from filings. Issuers are classified into Fama-French 12 industries based on the business description in the Form C filing and/or offering profile on the platform. The choice of the industry classification is a tradeoff between decreased power of the tests due to loss of degrees of freedom and the omitted variable bias. Industry definitions may be less meaningful for idea-stage businesses that minimal operations and that may pivot their business model and operations multiple times in the future. Some degree of judgment is required to assign industry classification to businesses.

Variable definitions

Variable	Definition
Offering outcomes	
Success	Equal to 1 if the offering proceeds are equal to or greater than the target amount; equal to 0 otherwise (including for offerings that have been withdrawn).
Proceeds	Log of one plus the amount raised in the offering in $ thousands.
Proceeds (000s)	Amount estimated to be raised in $ thousands.
Offering characteristics	
Wedge (Maximum/Target) (log)	Log of the ratio of maximum offer amount to the target offer amount; set to 1 if the offering does not accept oversubscriptions (commitments above target offer amount).
Offering duration	Log of the number of days between the initial filing date and the deadline date listed in the latest amendment as of the end of the sample period. Source: EDGAR filings.

[26] Offering profile materials submitted with filings are used, where available, and supplemented with profiles on platform websites, where available. Certain information, e.g., about offering perks and investment minimums, can be removed from the profiles of closed offerings on individual platform websites, and the profiles of closed offerings that were not funded may be removed. Where enclosed with filings, offering profile snapshots are usually not text searchable, which may introduce some noise.

Offering duration (days)	Offering duration in days.
Target amount	Log of the target amount (the target amount must be raised for the issuer to receive any funds).
Target amount (000s)	Target amount in $000s.
Maximum amount	Log of the maximum amount offered. The issuer may accept oversubscriptions up to the maximum amount. If the issuer does not accept oversubscriptions, it is set to equal the target amount.
Maximum amount (000s)	Maximum amount in $000s.
Equity/equity-linked	Equal to 1 if the security type is equity or an agreement for future equity; 0 otherwise.
Equity	Equal to 1 if the security type is equity; 0 otherwise.
Debt	Equal to 1 if the security type is debt; 0 otherwise.
Offering perks	Equal to 1 if the offering campaign page snapshot enclosed with Form C or on the platform website advertises nonmonetary investor perks or rewards for participating in the offering; 0 otherwise. Obtained from offering profiles, where available.
Review report	Equal to 1 if a review or audit report by an independent accountant has been provided; 0 otherwise.
Accountant PCAOB registered	Equal to 1 if the accountant that provided the review or audit report is PCAOB-registered; set to 0 if Review report equals 0. Registration status is manually checked on the PCAOB website as of May 2017.
Accountant market share (within Reg CF)	The number of Reg CF offerings for which this accountant that prepared a review or audit report divided by the maximum number of Reg CF offerings for which any accountant has prepared a review or audit report in the sample; 0 if Review report equals 0. Higher values indicate more popular accountants.
Accountant market share (top 3 within Reg CF)	Equal to 1 if Accountant market share (within Reg CF) is in the top 3; 0 otherwise or if Review report equals 0.
Investment minimum	Investment per investor in dollars (log). Obtained from offering profiles, where available.
Valuation (log)	Pre-money issuer valuation in dollars (log), where available. Obtained from offering profiles and circulars, where available. N/A for straight debt offerings and not found for certain other offerings. Equal to valuation cap for offerings of simple agreement for future equity securities and to the valuation threshold for offerings of convertible debt.
Valuation/assets (log)	Valuation (log) minus log of 1 plus total assets in dollars (to account for issuers with zero assets).
Communications	Log of the number of issuer responses posted on the platform's communication channels, where available.
FAQs	Log of the number of frequently asked questions posted on the platform, where available.
Days ongoing	Log of the number of days the offering has been ongoing as of June 10, 2017 for ongoing offerings, and offering duration for closed offerings. Used as a control in the full sample containing closed and ongoing offerings.
Issuer characteristics	
Assets	Log of 1 plus issuer assets in dollars, set to 0 if the issuer does not have assets.
Assets (000s)	Issuer assets in thousands (no log).
Profitable	Equal to 1 if the issuer reports net income in the most recent fiscal year; set to 0 otherwise. For ease of interpretation, interaction tests use *Unprofitable*, which equals 1 minus *Profitable*.
Issuer has debt	Equal to 1 if the issuer reports short- or long-term debt in the most recent fiscal year; set to 0 otherwise
Issuer age	Log of issuer age in days since founding date as of the date of the initial filing of Form C
Issuer age (months)	Issuer age in months (no log)
Prior Reg D offering	Equal to 1 if the issuer has filed a Form D prior to the initial filing of Form C. Obtained from Ives Group AuditAnalytics.
Social media (FB likes)	Log of the number of likes on the issuer's Facebook page, hand-collected in May 2017; 0 if no Facebook page associated with the issuer's legal or product name is identified.
Social media (Twitter followers)	Log of the number of followers of the issuer's Twitter page, hand-collected in May 2017; 0 if no Twitter page associated with the issuer's legal or product name is identified.
Social media	Factor based on factor analysis of the following variables: indicator for the presence of an issuer Facebook page; indicator for the presence of an issuer Twitter page; Social media (FB likes); Social media (Twitter followers); Social media (FB followers) (log of the number of followers of the issuer's Facebook page, assumed to be 0 if no Facebook page is found).

Social media/communications	Factor based on factor analysis constructed similarly to Social media, however, FAQs and Communications are added to the list of variables considered in the factor analysis.
Name complexity	Log of the number of characters in the issuer's legal name, website name (after removing https, www, .com, .co, .net, .us, facebook, and home), or alternate name used on the offering profile, whichever is shorter.
Name complexity (no log)	Issuer name as defined above (no log)
Signers>1	Equal to 1 if the number officers and directors listed as signers on Form C exceeds 1; 0 otherwise.
Team size (profile)	Log of the number of founders and other key persons listed on the offering profile. Obtained from offering profiles, where available.
Founders>1	Equal to 1 if the number of founders listed on the offering profile is greater than 1. Obtained from offering profiles, where available.
Social impact	Equal to 1 if the issuer is a benefit corporation (PBC or B Corp); the offering description emphasizes benefits to demographic groups such as women, minorities, or veterans; the issuer's business involves sustainability or renewable energy, health care / medical devices, education / childhood development, or local community development; 0 otherwise; missing if campaign materials are not available and not enclosed with Form C
Food/drink	Equal to 1 if the issuer's business involves food/beverage/cannabis (including bars and restaurants); 0 otherwise; missing if campaign materials are not available
Nonpecuniary gains	Equal to 1 if the issuer's business involves consumer products and services, including food/beverage/cannabis (including bars and restaurants), recreation/fitness, apparel and accessories, and entertainment (gaming, music/film/theater/books), or if social impact equals 1; 0 otherwise; missing if campaign materials are not available
Misc. characteristics	
Intermediary financial interest	Equal to 1 if the compensation charged by the intermediary includes securities in addition to the cash commission, set to 0 if the platform does not take a stake in the issuer.
Intermediary financial interest (%)	Percentage of proceeds received by the platform in the form of securities, set to 0 if the platform does not take a stake in the issuer
Platform rank	Platform's share of funded crowdfunding offerings.
Distance to platform (log)	Log of the number of miles between the issuer's and the platform's zip codes, based on the latest Form C amendment and the latest Form CFPORTAL as of the end of the sample period.
Local intermediary exists	Equal to 1 if at least 1 registered funding portal, or registered broker-dealers engaged in crowdfunding activity during the sample period, is located in the issuer's metro area (MSA); 0 otherwise. Obtained from Census Gazetteer data.
Local area population rank	Rank of the issuer's MSA based on population in 2010 Census. Obtained from Census Gazetteer data.
Funding portal	Equal to 1 if the intermediary is a registered funding portal

Appendix B: Summary statistics of the main variables

Summary statistics of the main variables in the full sample of closed and ongoing offerings with nonmissing proceeds information. Sample and variable definitions are presented in Appendix A.

	Obs.	Mean	Median	Std.Dev.
Proceeds (log)	322	3.44	3.65	2.08
Proceeds (no log)	322	141.67	37.70	233.43
Funded	322	0.49	0.00	0.50
Target amount ($)	322	94.97	56.55	102.16
Maximum amount ($)	322	633.56	998.43	398.74
Offering duration	322	4.08	3.14	2.45
Investment minimum ($)	290	275.31	100.00	336.73
Assets	322	8.20	10.39	5.40
Profitable	322	0.06	0.00	0.24
Issuer age	322	5.89	6.22	1.59
Prior Reg D offering	322	0.10	0.00	0.30
Platform rank	322	0.17	0.09	0.17
Review report	322	0.65	1.00	0.48
Name complexity	322	2.23	2.30	0.40
Social media (FB likes)	322	6.28	6.96	3.28
Social impact	308	0.23	0.00	0.42
Offering perks	286	0.66	1.00	0.47
Equity/equity-linked	322	0.70	1.00	0.46
Investment minimum (log)	290	5.14	4.61	0.92
Target amount (log)	322	11.04	10.94	0.94
Wedge (Max/Target) (log)	322	1.94	2.30	0.91
Wedge (Max/Target) (no log)	322	10.46	10.00	11.89
Distance between issuer and platform (log)	321	6.56	7.32	2.19
Distance between issuer and platform (mi)	321	2008.16	1506.76	1721.09
Issuer and platform in the same MSA	321	0.17	0.00	0.37
Number of signers	322	1.80	1.00	1.13
Signers>1	322	0.44	0.00	0.50

Table 1. Univariate tests

Sample and variable definitions are contained in Appendix A. Two-sided t-tests of differences in means of explanatory variables between funded and unfunded offerings in the sample of closed offerings. Statistical significance at 1%, 5%, and 10% levels is denoted with ***, **, and *, respectively.

	Mean (unfunded)	Mean (funded)	Dif.	
Assets	8.40	9.05	0.66	
Profitable	0.06	0.08	0.02	
Issuer age	5.75	6.13	0.39	
Prior Reg D offering	0.10	0.15	0.05	
Platform rank	0.12	0.24	0.11	***
Review report	0.63	0.85	0.23	***
Name complexity	2.26	2.20	-0.06	
Social media (FB likes)	5.79	7.66	1.88	***
Social impact	0.14	0.24	0.10	*
Offering perks	0.48	0.82	0.35	***
Equity/equity-linked	0.79	0.66	-0.13	*
Investment minimum (log)	5.21	4.96	-0.24	
Target amount (log)	11.25	11.05	-0.20	
Signers>1	0.36	0.56	0.20	***

Table 2. Determinants of offering success and proceeds raised

Regressions of funding success and proceeds raised on issuer and platform characteristics in the sample of closed offerings. Sample and variable definitions are presented in Appendix A. Fama-French 12 industry fixed effects are included. Standard errors are clustered at the platform level. Statistical significance at the 1%, 5%, and 10% level is denoted with ***, ** and *, respectively.

Dep. var.:	*Funded*		*Proceeds*	
	I		II	
Assets	-0.006		-0.017	
	-1.39		*-0.98*	
Profitable	0.181		0.326	
	1.61		*0.68*	
Issuer age	0.015		0.091	
	0.54		*0.99*	
Prior Reg D offering	0.053		0.736	*
	0.58		*1.99*	
Platform rank	0.326		2.376	**
	1.13		*2.18*	
Review report	0.252	***	1.246	***
	4.09		*4.95*	
Name complexity	-0.123	*	-0.160	
	-2.12		*-0.70*	
Social media (FB likes)	0.033	***	0.174	***
	3.88		*4.06*	
Social impact	0.066		-0.281	
	0.76		*-0.75*	
Offering perks	0.206	*	0.731	*
	1.87		*1.96*	
Equity/equity-linked	-0.154		-0.604	
	-1.20		*-1.67*	
Investment minimum	-0.037			
	-0.79			
Target amount	-0.096	*		
	-1.97			
Obs.	173		173	
R^2	0.31		0.47	
Adj. R^2	0.21		0.40	

Table 3. Determinants of offering success and proceeds raised (alternative sample and dependent variable definitions)

Regressions of offering success and proceeds on issuer and platform characteristics. The sample of closed offerings is used in Columns I, VI-IX. The full sample of closed and ongoing offerings is used in Columns II-III. Offerings from a platform that withdrew registration are reintroduced in the sample of closed offerings in Columns IV-V. Sample and variable definitions are presented in Appendix A. Fama-French 12 industry fixed effects are included. Platform fixed effects are included in Columns VIII-IX. Ordinary least squares are used in Columns I-V, VIII-IX. Logit is used in Column VI. Tobit with censoring from below at 0 is used in Column VII. Standard errors are clustered at the platform level in Columns I-VII and at the issuer level in Columns VIII-IX. Statistical significance at the 1%, 5%, and 10% level is denoted with ***, ** and *, respectively.

Dep. var.:	Funded/target		Funded		Proceeds		Funded		Proceeds		Funded		Proceeds	
Sample:	Closed offerings		Closed and ongoing				Closed offerings (+w/d portal)				Closed offerings			
	I		II		III		IV		V		VI		VII	
Assets	0.037		-0.006	*	-0.022		-0.006		0.003		-0.036		-0.016	
	1.48		*-1.74*		*-1.51*		*-1.19*		*0.13*		*-1.41*		*-0.98*	
Profitable	-0.085		-0.039		-0.217		0.196	*	0.356		1.416		0.291	
	-0.11		*-0.32*		*-0.57*		*1.92*		*0.76*		*1.50*		*0.60*	
Issuer age	0.012		0.021		0.148	**	0.007		0.066		0.052		0.100	
	0.09		*1.03*		*2.30*		*0.23*		*0.66*		*0.34*		*1.12*	
Prior Reg D offering	2.237	**	0.023		0.673	**	0.101		0.672	*	0.345		0.710	*
	2.87		*0.22*		*2.54*		*1.02*		*2.13*		*0.58*		*1.97*	
Platform rank	5.181	***	0.185		1.909	*	0.669	**	3.394	***	2.231		2.464	**
	3.91		*0.56*		*1.83*		*2.51*		*3.59*		*1.21*		*2.30*	
Review report	1.501	**	0.283	***	1.138	***	0.302	***	1.649	***	1.446	***	1.250	***
	2.60		*5.89*		*5.42*		*3.52*		*5.24*		*3.88*		*4.89*	
Name complexity	0.642		-0.121	**	-0.211		-0.086		-0.139		-0.825	**	-0.162	
	1.22		*-2.42*		*-1.45*		*-1.23*		*-0.63*		*-2.15*		*-0.73*	
Social media (FB likes)	0.154	*	0.037	***	0.176	***	0.030	***	0.176	***	0.191	***	0.175	***
	1.92		*3.04*		*3.23*		*3.24*		*4.11*		*4.31*		*4.24*	
Social impact	0.130		0.101		-0.130						0.461		-0.304	
	0.33		*1.35*		*-0.49*						*0.72*		*-0.81*	
Offering perks	-0.802		0.134		0.486						0.990	*	0.765	**
	-1.01		*1.26*		*1.47*						*1.79*		*2.08*	
Equity/equity-linked	0.395		-0.058		-0.510		-0.135		-0.538		-1.014		-0.607	*
	0.54		*-0.71*		*-1.54*		*-1.10*		*-1.37*		*-1.44*		*-1.74*	
Investment minimum			0.018								-0.243			

	Funded		Proceeds	
	Closed offerings			
	VIII		IX	
Assets	-0.003		-0.005	
	-0.44		*-0.19*	
Profitable	-0.027		-0.015	
	-0.25		*-0.04*	
Issuer age	0.007		0.066	
	0.29		*0.74*	
Prior Reg D offering	0.001		0.695	**
	0.01		*2.06*	
Platform rank				
Review report	0.179		1.263	***
	1.51		*4.42*	
Name complexity	-0.137	*	-0.180	
	-1.89		*-0.77*	
Social media (FB likes)	0.020		0.116	**
	1.44		*2.49*	
Social impact	0.115		-0.026	
	1.16		*-0.08*	
Offering perks	0.054		0.213	
	0.46		*0.56*	
Equity/equity-linked	-0.048		-0.124	
	-0.50		*-0.40*	
Investment minimum	0.027			

		0.35				*-0.90*		*0.57*	
Target amount		-0.119	***	-0.131	**	-0.513	*	-0.076	
		-3.85		*-2.71*		*-1.83*		*-1.53*	
Days ongoing		-0.027	-0.154						
		-0.26	*-0.50*						
Obs.	173	279	279	202	202	173	173	173	173
R^2	0.28	0.24	0.41	0.37	0.57			0.50	0.64
Adj. R^2	0.19	0.17	0.36	0.31	0.53			0.37	0.55
Pseudo-R^2						0.28	0.15		

Table 4. Determinants of offering success and proceeds raised (alternative explanatory variables)

Regressions of offering success and proceeds on issuer and platform characteristics in the sample of closed offerings. Sample and variable definitions are presented in Appendix A. Fama-French 12 industry fixed effects are included in Columns I-II. Standard errors are clustered at the platform level. Statistical significance at the 1%, 5%, and 10% level is denoted with ***, ** and *, respectively.

Panel A: Additional security type, business type, and local area controls

Dep. var.:	*Funded*		*Proceeds*		*Funded*		*Proceeds*	
	I		II		III		IV	
Assets	-0.006		-0.017		-0.007		-0.018	
	-1.29		*-0.94*		*-1.32*		*-1.02*	
Profitable	0.165		0.288		0.159		0.249	
	1.53		*0.62*		*1.44*		*0.54*	
Issuer age	0.012		0.091		0.024		0.109	
	0.48		*0.94*		*0.68*		*1.00*	
Prior Reg D offering	0.058		0.704	*	0.050		0.819	**
	0.71		*1.90*		*0.62*		*2.59*	
Platform rank	0.304		2.396	**	0.317		2.371	**
	1.05		*2.26*		*1.32*		*2.37*	
Review report	0.233	***	1.198	***	0.259	***	1.311	***
	4.57		*4.55*		*3.81*		*4.37*	
Name complexity	-0.114	*	-0.179		-0.121	*	-0.177	
	-1.90		*-0.78*		*-2.00*		*-0.79*	
Social media (FB likes)	0.038	***	0.182	***	0.034	***	0.155	***
	3.65		*3.55*		*3.53*		*3.02*	
Social impact	0.053		-0.288		0.096		-0.112	
	0.61		*-0.73*		*1.11*		*-0.34*	
Offering perks	0.167		0.708	*	0.172	*	0.618	
	1.38		*1.84*		*1.86*		*1.55*	
Equity/equity-linked					-0.138		-0.660	**
					-1.17		*-2.18*	
Equity	-0.071		0.085					
	-0.69		*0.21*					
Debt	0.133		0.714	*				
	0.92		*2.13*					
Investment minimum	-0.028				-0.038			
	-0.47				*-1.01*			
Target amount	-0.092	*			-0.086			
	-1.82				*-1.68*			
Food/drink/cannabis					0.055		-0.035	
					1.53		*-0.21*	
Local area population rank	0.277		0.283					
	1.17		*0.46*					
Obs.	172		172		173		173	
R^2	0.32		0.47		0.30		0.44	
Adj. R^2	0.21		0.39		0.24		0.39	

Panel B: Alternative social media measures

Dep. var.:	Funded		Proceeds		Funded		Proceeds		Funded		Proceeds	
	I		II		III		IV		V		VI	
Assets	-0.005		-0.006		-0.007		-0.018		-0.006		-0.017	
	-1.10		*-0.31*		*-1.70*		*-1.08*		*-1.63*		*-1.10*	
Profitable	0.178		0.330		0.181		0.334		0.172		0.291	
	1.63		*0.70*		*1.63*		*0.71*		*1.51*		*0.59*	
Issuer age	0.009		0.048		0.016		0.092		0.014		0.086	
	0.31		*0.47*		*0.60*		*1.00*		*0.52*		*0.92*	
Prior Reg D offering	0.055		0.815	**	0.041		0.715	*	0.046		0.706	*
	0.66		*2.21*		*0.49*		*1.97*		*0.54*		*1.94*	
Platform rank	0.397		2.752	**	0.336		2.389	**	0.321		2.325	**
	1.30		*2.36*		*1.18*		*2.21*		*1.11*		*2.18*	
Review report	0.249	***	1.344	***	0.238	***	1.236	***	0.253	***	1.288	***
	3.96		*5.18*		*3.91*		*5.07*		*4.17*		*5.40*	
Name complexity	-0.146	**	-0.280		-0.126	**	-0.165		-0.133	**	-0.206	
	-2.44		*-1.15*		*-2.16*		*-0.72*		*-2.35*		*-0.89*	
Social media (FB likes)					0.026	**	0.157	***				
					2.73		*3.22*					
Social media (Twitter followers)	0.026	***	0.102	**	0.014		0.032					
	3.23		*2.98*		*1.64*		*0.95*					
Social media (factor)									0.113	***	0.601	***
									3.65		*4.02*	
Social impact	0.071		-0.273		0.069		-0.278		0.063		-0.303	
	0.73		*-0.65*		*0.77*		*-0.73*		*0.71*		*-0.78*	
Offering perks	0.211	*	0.784	*	0.202	*	0.725	*	0.206	*	0.734	*
	1.90		*1.85*		*1.83*		*1.93*		*1.88*		*1.93*	
Equity/equity-linked	-0.156		-0.613		-0.161		-0.629	*	-0.153		-0.617	
	-1.22		*-1.66*		*-1.26*		*-1.80*		*-1.21*		*-1.75*	
Investment minimum	-0.033				-0.035				-0.036			
	-0.70				*-0.74*				*-0.77*			
Target amount	-0.078				-0.085	*			-0.088	*		
	-1.67				*-1.88*				*-1.89*			
Obs.	173		173		173		173		173			
R^2	0.30		0.44		0.32		0.47		0.31			
Adj. R^2	0.20		0.36		0.21		0.40		0.21			

Panel C: Additional channels for the dissemination of soft information –communications on the platform

Dep. var.:	*Funded*		*Proceeds*		*Funded*		*Proceeds*		*Funded*		*Proceeds*	
	I		II		III		IV		V		VI	
Assets	-0.010		-0.023		-0.001		0.015		-0.006		-0.012	
	-1.07		*-0.70*		*-0.10*		*0.52*		*-0.91*		*-0.36*	
Profitable	0.113		0.133		0.009		-0.193		0.070		0.047	
	1.68		*0.27*		*0.16*		*-0.52*		*1.01*		*0.09*	
Issuer age	0.032		0.098		-0.003		0.004		0.017		0.066	
	0.91		*0.85*		*-0.09*		*0.04*		*0.46*		*0.44*	
Prior Reg D offering	0.084		0.929	**	0.047		0.762	*	0.062		0.851	**
	0.76		*2.33*		*0.48*		*2.09*		*0.66*		*2.27*	
Platform rank	0.221		1.127		-0.806	***	-1.138		-0.323		0.795	
	0.53		*0.84*		*-3.60*		*-1.49*		*-1.37*		*0.93*	
Review report	0.216	***	1.450	***	0.030		0.704	**	0.208	**	1.482	***
	3.24		*5.56*		*0.35*		*2.27*		*2.99*		*5.66*	
Name complexity	-0.127	**	-0.272		-0.081		-0.066		-0.158	**	-0.389	*
	-2.31		*-1.57*		*-1.28*		*-0.33*		*-2.52*		*-1.96*	
Social media (FB likes)	0.031	**	0.134	***	0.012		0.040	**				
	2.96		*4.04*		*1.51*		*2.30*					
FAQs	-0.076		-0.026									
	-1.57		*-0.14*									
Communications					0.163	***	0.759	***				
					3.96		*3.88*					
Social media/communications (factor)									0.087	**	0.367	***
									2.75		*3.64*	
Social impact	0.133	*	0.044		0.069		-0.012		0.068		0.000	
	1.86		*0.20*		*1.24*		*-0.05*		*1.11*		*0.00*	
Offering perks	0.186		0.855		0.177	*	0.639	*	0.252	**	1.106	*
	1.40		*1.63*		*1.92*		*2.18*		*2.26*		*2.21*	
Equity	-0.028		0.675	*	-0.176	**	0.192		0.020		0.864	***
	-0.29		*2.20*		*-2.59*		*0.77*		*0.26*		*3.85*	
Debt	0.100		0.787	***	0.059		0.696	*	0.131		0.793	**
	0.95		*3.39*		*0.49*		*1.84*		*0.91*		*2.52*	
Investment minimum	-0.038				0.048				-0.009			
	-0.62				*0.87*				*-0.14*			
Target amount	-0.086	*			-0.103	**			-0.099	*		
	-1.90				*-2.99*				*-2.10*			
Obs.	129		129		125		125		125		125	
R^2	0.30		0.48		0.41		0.64		0.31		0.50	
Adj. R^2	0.14		0.37		0.27		0.56		0.16		0.40	

Panel D: Controlling for issuer management team

Dep. var.:	*Funded*		*Proceeds*		*Funded*		*Proceeds*		*Funded*		*Proceeds*	
	I		II		III		IV		V		VI	
Assets	-0.004		-0.011		-0.004		-0.011		-0.004		-0.017	
	-0.85		*-0.57*		*-0.79*		*-0.55*		*-0.94*		*-0.87*	
Profitable	0.154		0.273		0.083		0.153		0.090		0.219	
	1.47		*0.62*		*0.92*		*0.35*		*0.80*		*0.45*	
Issuer age	0.009		0.081		0.012		0.049		0.018		0.090	
	0.34		*0.80*		*0.50*		*0.45*		*0.78*		*0.91*	
Prior Reg D offering	0.016		0.594		0.065		0.736	*	0.084		0.628	
	0.17		*1.58*		*0.78*		*2.01*		*0.86*		*1.52*	
Platform rank	0.300		2.433	**	-0.035		1.630		-0.006		1.872	*
	1.08		*2.30*		*-0.16*		*1.66*		*-0.03*		*2.01*	
Review report	0.225	***	1.225	***	0.113		0.966	**	0.114		0.983	**
	3.54		*4.68*		*1.08*		*2.49*		*1.21*		*2.50*	
Name complexity	-0.119	*	-0.195		-0.183	**	-0.377		-0.154	**	-0.236	
	-2.00		*-0.83*		*-2.71*		*-1.75*		*-2.96*		*-1.12*	
Social media (FB likes)	0.033	***	0.167	***	0.034	***	0.168	**	0.037	***	0.204	**
	4.46		*3.82*		*3.83*		*3.02*		*3.97*		*3.06*	
Social impact	0.067		-0.258		0.058		-0.274		0.066		-0.210	
	0.85		*-0.68*		*0.71*		*-0.67*		*0.91*		*-0.57*	
Offering perks	0.186	*	0.759	*	0.139		0.622		0.081		0.371	
	1.83		*2.13*		*1.23*		*1.70*		*0.51*		*0.80*	
Equity	-0.102		0.063		-0.135		-0.071		-0.198	*	-0.243	
	-1.07		*0.16*		*-1.68*		*-0.14*		*-1.94*		*-0.44*	
Debt	0.071		0.598	*	0.141		0.782	**	0.114		0.615	***
	0.70		*2.03*		*1.15*		*3.04*		*1.04*		*3.14*	
Signers >1	0.156	*	0.413									
	2.15		*1.61*									
Team size (profiles)					0.039		0.348					
					0.76		*1.38*					
Founders >1									-0.003		0.172	
									-0.04		*0.76*	
Investment minimum	-0.023				-0.046				-0.037			
	-0.48				*-0.74*				*-0.66*			
Target amount	-0.077				-0.115	**			-0.124	***		
	-1.64				*-2.37*				*-3.30*			
Obs.	173		173		156		156		148		148	
R^2	0.34		0.48		0.30		0.39		0.31		0.39	
Adj. R^2	0.23		0.40		0.17		0.29		0.18		0.28	

Panel E: Additional measures of third-party certifications (accountants and platforms)

Dep. var.:	*Funded*		*Proceeds*		*Funded*		*Proceeds*		*Funded*		*Proceeds*	
	I		II		III		IV		V		VI	
Assets	-0.003		-0.009		-0.005		-0.014		-0.009		-0.029	
	-0.38		*-0.37*		*-1.40*		*-0.88*		*-1.69*		*-1.49*	
Profitable	-0.030		-0.047		0.182		0.444		0.210		0.545	
	-0.28		*-0.12*		*1.41*		*0.87*		*1.70*		*1.24*	
Issuer age	0.006		0.082		0.005		0.057		0.017		0.102	
	0.21		*0.94*		*0.25*		*0.79*		*0.78*		*1.28*	
Prior Reg D offering	0.011		0.565		0.093		0.812	*	0.040		0.592	
	0.10		*1.64*		*1.19*		*2.14*		*0.45*		*1.50*	
Platform rank					0.152		2.515	*	0.403		3.434	**
					0.44		*1.91*		*1.16*		*2.80*	
Review report	0.173		1.231	***								
	1.49		*4.12*									
Accountant market share					0.248	*	1.111	***				
(within Reg CF)					*2.15*		*3.39*					
Accountant PCAOB registered									0.193	**	0.858	***
									2.56		*3.45*	
Name complexity	-0.136	*	-0.186		-0.077		0.036		-0.070		0.065	
	-1.86		*-0.82*		*-1.15*		*0.15*		*-1.20*		*0.29*	
Social media (FB likes)	0.021		0.108	**	0.036	***	0.178	***	0.034	***	0.170	***
	1.47		*2.29*		*3.85*		*3.64*		*3.73*		*3.75*	
Social impact	0.114		-0.027		0.095		-0.158		0.072		-0.251	
	1.15		*-0.09*		*1.09*		*-0.45*		*0.90*		*-0.79*	
Offering perks	0.045		0.279		0.216		0.943	**	0.193		0.869	**
	0.38		*0.74*		*1.77*		*2.34*		*1.70*		*2.36*	
Equity	-0.081		0.729	**	-0.083		0.405		-0.024		0.567	
	-0.66		*2.19*		*-0.66*		*0.97*		*-0.18*		*1.65*	
Debt	0.015		0.467		0.064		0.576		0.135		0.852	**
	0.13		*1.32*		*0.50*		*1.65*		*1.02*		*2.22*	
Intermediary financial interest					-0.006		0.122		0.016		0.192	
					-0.17		*0.97*		*0.47*		*1.64*	
Investment minimum	0.042				0.003				-0.017			
	0.78				*0.05*				*-0.33*			
Target amount	-0.068				-0.075	*			-0.070			
	-1.34				*-1.86*				*-1.51*			
Obs.	173		173		173		173		173		173	
R^2	0.50		0.65		0.32		0.46		0.32		0.46	
Adj. R^2	0.37		0.56		0.21		0.38		0.21		0.38	

Table 5. Interaction effects

Regressions of offering success and proceeds on issuer and platform characteristics in the sample of closed offerings. Sample and variable definitions are presented in Appendix A. Fama-French 12 industry fixed effects are included. Standard errors are clustered at the platform level. Statistical significance at the 1%, 5%, and 10% level is denoted with ***, ** and *, respectively.

Panel A: Interaction with social media

Dep. var.:	Funded		Proceeds		Funded		Proceeds		Funded		Proceeds	
	I		II		III		IV		V		VI	
Assets	-0.007		-0.018		-0.010		-0.033		-0.006		-0.017	
	-1.59		*-1.01*		*-1.68*		*-1.45*		*-1.48*		*-0.93*	
Profitable	0.190		0.358		0.209	*	0.434		0.180		0.331	
	1.73		*0.76*		*1.96*		*0.94*		*1.58*		*0.71*	
Issuer age	0.018		0.098		0.025		0.132		0.019		0.084	
	0.64		*1.01*		*1.05*		*1.56*		*0.70*		*0.83*	
Prior Reg D offering	0.046		0.718	*	0.036		0.707	*	0.054		0.737	*
	0.49		*1.90*		*0.36*		*1.81*		*0.59*		*1.99*	
Platform rank	1.218	**	4.955	**	0.303		2.389	**	0.317		2.383	**
	2.83		*2.95*		*1.06*		*2.18*		*1.06*		*2.17*	
Review report	0.255	***	1.272	***					0.421	**	1.008	
	4.00		*4.66*						*2.29*		*1.14*	
Accountant PCAOB registered					0.582	***	2.041	**				
					4.47		*2.55*					
Name complexity	-0.129	**	-0.176		-0.068		0.111		-0.124	*	-0.158	
	-2.28		*-0.75*		*-1.19*		*0.49*		*-2.15*		*-0.69*	
Social media (FB likes)	0.051	***	0.226	***	0.053	***	0.250	***	0.055	**	0.142	
	4.69		*4.43*		*4.99*		*6.04*		*2.19*		*1.60*	
Social impact	0.051		-0.330		0.074		-0.309		0.055		-0.264	
	0.60		*-0.86*		*1.00*		*-1.07*		*0.58*		*-0.68*	
Offering perks	0.192	*	0.688	*	0.223	*	0.839	**	0.214	*	0.723	*
	1.86		*1.88*		*1.96*		*2.45*		*1.90*		*1.95*	
Equity/equity-linked	-0.141		-0.575		-0.144		-0.641		-0.146		-0.619	
	-1.12		*-1.62*		*-1.23*		*-1.70*		*-1.13*		*-1.65*	
Investment minimum	-0.034				-0.005				-0.035			
	-0.72				*-0.11*				*-0.80*			
Target amount	-0.090	*			-0.086				-0.102	**		
	-1.88				*-1.73*				*-2.26*			
Social media (FB likes) x Platform rank	-0.120	**	-0.347	*								
	-2.53		*-1.80*									
Social media (FB likes) x Accountant PCAOB					-0.051	***	-0.175	*				
					-3.49		*-1.82*					
Social media (FB likes) x Review report									-0.027		0.039	
									-0.81		*0.31*	
Obs.	173		173		173		173		173		173	
R^2	0.32		0.47		0.33		0.45		0.32		0.47	
Adj. R^2	0.22		0.40		0.23		0.38		0.21		0.39	

Panel B: Interactions with third-party certification

	Funded		Proceeds		Funded		Proceeds	
	I		II		III		IV	
Assets	0.023		0.113	*	0.001		0.030	
	0.92		*2.12*		*0.07*		*0.90*	
Profitable	0.458	***	0.880	*	0.254		0.230	
	3.24		*1.82*		*1.34*		*0.27*	
Issuer age	-0.011		0.011		-0.060	*	-0.091	
	-0.29		*0.12*		*-1.98*		*-0.64*	
Prior Reg D offering	0.088		0.805	*	0.078		0.696	*
	1.05		*2.14*		*0.92*		*1.83*	
Platform rank	0.294		2.422	**	-2.137	**	-1.071	
	1.05		*2.33*		*-2.56*		*-0.27*	
Review report	-0.071		1.108		0.273	***	1.278	***
	-0.21		*0.78*		*4.52*		*4.57*	
Name complexity	-0.114	*	-0.164		-0.121	**	-0.183	
	-1.94		*-0.76*		*-2.17*		*-0.78*	
Social media (FB likes)	0.034	***	0.172	***	0.034	***	0.168	***
	4.22		*3.65*		*4.15*		*3.52*	
Social impact	0.050		-0.354		0.070		-0.187	
	0.56		*-0.86*		*0.76*		*-0.45*	
Offering perks	0.170		0.711	*	0.217	*	0.794	*
	1.55		*2.07*		*1.84*		*2.07*	
Equity	-0.102		0.053		-0.046		0.141	
	-1.05		*0.13*		*-0.42*		*0.33*	
Debt	0.052		0.505		0.121		0.682	*
	0.46		*1.73*		*0.92*		*2.06*	
Investment minimum	-0.021				-0.033			
	-0.40				*-0.66*			
Target amount	-0.083				-0.110	**		
	-1.71				*-2.69*			
Review report x Not profitable	0.435		0.875					
	1.76		*0.84*					
Review report x Assets	-0.036		-0.159	**				
	-1.32		*-2.61*					
Review report x Issuer age	0.044		0.143					
	1.18		*1.08*					
Platform rank x Not profitable					0.228		-0.915	
					0.46		*-0.37*	
Platform rank x Assets					-0.054	*	-0.319	*
					-1.89		*-2.13*	
Platform rank x Issuer age					0.447	***	1.216	**
					5.55		*2.81*	
Obs.	173		173		173		173	
R^2	0.34		0.49		0.35		0.48	
Adj. R^2	0.22		0.40		0.24		0.40	

Panel C: Interactions with security type

Dep. var.:	Funded	Proceeds	Funded	Proceeds
	I	II	III	IV
Assets	-0.019 ***	-0.058 *	-0.005	-0.009
	-4.48	*-1.98*	*-1.23*	*-0.67*
Profitable	0.081	-0.221	0.160	0.218
	0.56	*-0.38*	*1.37*	*0.45*
Issuer age	0.011	0.121	0.014	0.090
	0.26	*0.72*	*0.59*	*1.02*
Prior Reg D offering	0.037	0.678 *	0.039	0.580
	0.43	*1.78*	*0.44*	*1.45*
Platform rank	0.318	2.420 **	0.087	1.078
	1.16	*2.31*	*0.24*	*1.00*
Review report	0.239 ***	1.247 ***	0.353 **	1.721 ***
	3.95	*5.12*	*2.42*	*4.25*
Name complexity	-0.098	-0.127	-0.121 *	-0.210
	-1.67	*-0.50*	*-2.09*	*-1.00*
Social media (FB likes)	0.035 ***	0.174 ***	0.030 ***	0.150 ***
	3.95	*3.57*	*3.77*	*3.20*
Social impact	0.087	-0.205	0.061	-0.263
	1.02	*-0.54*	*0.76*	*-0.80*
Offering perks	0.194	0.835 **	0.193 *	0.792 *
	1.71	*2.25*	*1.80*	*2.10*
Equity	-0.022	1.533	-0.038	0.032
	-0.06	*1.23*	*-0.12*	*0.03*
Debt	0.106	0.702 **	0.094	0.577 *
	0.85	*2.17*	*0.80*	*2.04*
Investment minimum	-0.022		-0.035	
	-0.44		*-0.68*	
Target amount	-0.086 **		-0.090 *	
	-2.21		*-2.13*	
Equity x Assets	0.027 ***	0.089		
	3.24	*1.59*		
Equity x Issuer age	-0.001	-0.094		
	-0.02	*-0.41*		
Equity x Not profitable	-0.312 *	-1.746 **		
	-2.00	*-2.69*		
Equity x Review report			-0.257	-1.192
			-0.99	*-1.40*
Equity x Platform rank			0.799 *	4.845 **
			1.97	*2.82*
Obs.	173	173	173	173
R^2	0.34	0.49	0.34	0.51
Adj. R^2	0.23	0.41	0.22	0.43

Panel D: Interactions with nonpecuniary gains

Dep. var.:	Funded		Proceeds		Funded		Proceeds		Funded		Proceeds		Funded		Proceeds	
	I		II		III		IV		V		VI		VII		VIII	
Assets	-0.012		-0.024		-0.009		-0.020		-0.001		0.061		-0.007		-0.009	
	-1.03		*-0.56*		*-1.64*		*-0.72*		*-0.09*		*1.73*		*-1.21*		*-0.49*	
Profitable	0.757	***	3.562	***	0.204		0.348		0.297		0.150		0.281		0.794	
	9.73		*7.76*		*1.49*		*0.63*		*1.61*		*0.12*		*1.51*		*1.37*	
Issuer age	0.001		0.063		0.009		0.086		0.012		0.099		0.014		0.100	
	0.03		*0.59*		*0.36*		*0.96*		*0.45*		*0.96*		*0.59*		*1.09*	
Prior Reg D offering	0.082		0.728	*	0.060		0.702		0.070		0.718	*	0.049		0.634	
	1.06		*1.94*		*0.58*		*1.59*		*0.80*		*1.77*		*0.54*		*1.60*	
Platform rank	0.250		2.256	**	0.196		2.273	*	0.218		2.410	*	0.258		2.417	**
	0.90		*2.17*		*0.65*		*1.98*		*0.74*		*2.09*		*0.99*		*2.18*	
Review report	0.531	***	1.663	***	0.302	***	1.339	***	0.348	**	1.477	***	0.218	***	1.238	***
	5.14		*3.56*		*3.26*		*3.55*		*2.74*		*3.11*		*3.21*		*5.34*	
Name complexity	-0.106	*	-0.151		-0.112		-0.169		-0.112	*	-0.151		-0.125	**	-0.213	
	-2.02		*-0.69*		*-1.60*		*-0.68*		*-2.08*		*-0.73*		*-2.43*		*-0.90*	
Social media (FB likes)	0.034	***	0.173	***	0.034	***	0.172	***	0.037	***	0.168	***	0.036	***	0.175	***
	5.23		*3.88*		*3.87*		*3.55*		*5.03*		*3.61*		*4.03*		*3.48*	
Social impact					0.015		-0.093		0.058		-0.286		0.083		-0.233	
					0.04		*-0.08*		*0.66*		*-0.71*		*0.97*		*-0.59*	
Offering perks	0.174		0.774	*	0.192		0.762	*	0.220		2.154		0.180		0.748	*
	1.57		*1.94*		*1.70*		*1.99*		*0.67*		*1.45*		*1.61*		*2.07*	
Equity	-0.146		0.047		-0.081		0.095		-0.086		0.122		-0.123		0.078	
	-1.71		*0.13*		*-0.78*		*0.24*		*-0.85*		*0.30*		*-1.05*		*0.19*	
Debt	0.051		0.674	*	0.093		0.643	*	0.097		0.663	*	0.030		0.534	
	0.44		*2.02*		*0.72*		*1.85*		*0.69*		*2.06*		*0.27*		*1.61*	
Investment minimum	-0.007				-0.029				-0.024				-0.007			
	-0.15				*-0.56*				*-0.43*				*-0.13*			
Target amount	-0.078				-0.089	*			-0.094	*			-0.068			
	-1.59				*-2.03*				*-2.08*				*-1.56*			
Nonpecuniary gains x Assets	0.008		0.012													
	0.59		*0.20*													
Nonpecuniary gains x Not profitable	0.670	***	3.545	***												
	5.19		*4.60*													
Nonpecuniary gains x Review report	-0.363	*	-0.555													
	-2.01		*-0.95*													
Social impact x Assets					0.013		0.016									
					0.96		*0.22*									
Social impact x Not profitable					0.113		-0.009									
					0.38		*-0.01*									
Social impact x Review report					-0.215		-0.386									
					-0.93		*-0.55*									
Offering perks x Assets									-0.007		-0.106	**				
									-0.53		*-2.54*					
Offering perks x Not profitable									0.183		-0.227					
									0.76		*-0.17*					
Offering perks x Review report									-0.186		-0.322					

					-1.11	*-0.63*		
Food/drink x Assets							0.003	-0.027
							0.30	*-0.59*
Food/drink x Not profitable							0.341	1.282
							1.55	*1.32*
Food/drink x Review report							0.124	0.570
							0.78	*1.17*
Obs.	173	173	173	173	173	173	173	173
R^2	0.35	0.49	0.33	0.47	0.32	0.48	0.33	0.48
Adj. R^2	0.23	0.40	0.21	0.38	0.20	0.40	0.20	0.39

Table 6. Valuation

Regressions of issuer valuation. Panel A uses the full sample of closed and ongoing offerings. Panel B uses only closed offerings. Sample and variable definitions are presented in Appendix A. Fama-French 12 industry fixed effects are included. Standard errors are clustered at the platform level. Statistical significance at the 1%, 5%, and 10% level is denoted with ***, ** and *, respectively.

Panel A: Determinants of valuation (closed and ongoing offerings)

Dep. var.:	Valuation (log)		Valuation (log)		Valuation (log)		Valuation /assets (log)	
	I		II		III		IV	
Assets	0.055	***	0.069	***	0.056	***		
	4.26		*6.32*		*9.57*			
Profitable	0.075		0.011		0.091		0.976	
	0.24		*0.04*		*0.23*		*1.06*	
Issuer age	0.020		0.015		0.057		-0.896	***
	0.42		*0.25*		*1.37*		*-3.04*	
Issuer has debt	-0.227		-0.178		-0.394	*	-3.167	***
	-1.63		*-1.15*		*-2.08*		*-5.64*	
Prior Reg D offering	0.185		0.283	*	0.108		-0.185	
	1.40		*1.82*		*1.49*		*-0.26*	
Platform rank	0.753		1.136	**	0.052		1.869	
	1.63		*2.27*		*0.07*		*0.96*	
Review report	0.425	***			0.184	**		
	4.98				*2.64*			
Accountant market share			0.391	**			1.395	***
(top 3 within Reg CF)			*2.35*				*3.34*	
Social media (FB likes)	0.074	**	0.082	***	0.092	**	-0.108	
	2.84		*3.12*		*2.35*		*-0.93*	
Communications					0.156	*		
					2.02			
Social impact	0.009		-0.019		0.017		0.990	
	0.07		*-0.13*		*0.13*		*1.58*	
Offering perks	-0.078		-0.002		0.062		0.000	
	-0.61		*-0.02*		*0.31*		*0.00*	
Debt	-0.119		-0.136		-0.120		-1.033	***
	-1.31		*-1.21*		*-0.68*		*-3.56*	
Equity	0.203		0.192		0.099		-0.392	
	1.62		*1.60*		*0.60*		*-0.92*	
Obs.	203		203		138		203	
R^2	0.37		0.37		0.40		0.48	
Adj. R^2	0.30		0.30		0.30		0.42	

Panel B: Determinants of valuation (closed offerings)

Dep. var.:	Valuation (log)		Valuation (log)		Valuation (log)		Valuation/assets (log)	
	I		II		III		IV	
Assets	0.056	***	0.077	***	0.056	***		
	4.50		*8.27*		*7.07*			
Profitable	-0.091		-0.223		0.034		0.202	
	-0.21		*-0.53*		*0.08*		*0.22*	
Issuer age	-0.008		-0.019		-0.008		-0.836	**
	-0.15		*-0.36*		*-0.23*		*-2.84*	
Issuer has debt	-0.264		-0.159		-0.360		-3.219	***
	-1.56		*-1.18*		*-1.47*		*-5.43*	
Prior Reg D offering	0.298		0.438	***	0.236	*	-0.065	
	1.75		*3.51*		*2.03*		*-0.07*	
Platform rank	0.953	*	1.215	*	0.472		0.568	
	1.84		*1.93*		*0.75*		*0.61*	
Review report	0.494	***			0.164			
	3.21				*1.24*			
Accountant market share			0.457	**			2.041	***
(top 3 within Reg CF)			*2.36*				*4.77*	
Social media (FB likes)	0.087	**	0.098	**	0.089	**	-0.065	
	2.75		*3.15*		*2.91*		*-0.76*	
Communications					0.240	**		
					2.86			
Social impact	0.179		0.089		0.229		1.015	
	1.60		*0.68*		*1.51*		*1.68*	
Offering perks	-0.153		-0.026		0.029		0.380	
	-0.74		*-0.16*		*0.10*		*1.08*	
Debt	-0.140		-0.162		0.062		-1.093	*
	-1.00		*-1.06*		*0.32*		*-2.00*	
Equity	0.384		0.376		0.347		-0.262	
	1.15		*1.22*		*0.76*		*-0.60*	
Obs.	123		123		88		123	
R^2	0.38		0.42		0.45		0.53	
Adj. R^2	0.26		0.30		0.29		0.44	

Table 7. Offering characteristics

Regressions of offering characteristics. Columns I and II use the full sample of closed and ongoing offerings. Columns III and IV use only closed offerings. Sample and variable definitions are presented in Appendix A. Fama-French 12 industry fixed effects are included. Standard errors are clustered at the platform level. Statistical significance at the 1%, 5%, and 10% level is denoted with ***, ** and *, respectively.

Sample	Closed and ongoing				Closed		Closed	
Dep. var.:	Wedge (Max/Target)		Duration		Wedge (Max/Target)		Duration	
	I		II		III		IV	
Assets	-0.021	**	0.006		-0.025	*	0.010	
	-2.54		*0.85*		*-2.06*		*1.01*	
Profitable	-0.408	***	-0.289	*	-0.220		-0.387	
	-3.09		*-1.74*		*-0.95*		*-1.50*	
Issuer age	0.073	**	-0.024		0.081	*	-0.024	
	2.52		*-0.94*		*1.92*		*-1.49*	
Issuer has debt	0.146		-0.051		0.029		0.013	
	1.47		*-0.69*		*0.21*		*0.18*	
Prior Reg D offering	-0.113		-0.062		0.162		-0.165	
	-0.86		*-0.46*		*1.29*		*-1.28*	
Successes on the platform	0.322		1.345	***	0.222		1.580	***
	0.92		*3.88*		*0.42*		*5.00*	
Social media (FB likes)	0.047	*	-0.002		0.045		-0.007	
	1.72		*-0.20*		*1.40*		*-0.52*	
Social impact	-0.061		0.032		-0.155	*	0.044	
	-0.65		*0.45*		*-2.04*		*0.65*	
Offering perks	-0.022		-0.060		-0.068		0.009	
	-0.17		*-0.51*		*-0.45*		*0.06*	
Local area population rank	-0.389	*	-0.327	**	-1.152	***	-0.191	
	-1.86		*-2.20*		*-3.59*		*-1.67*	
Equity/equity-linked	0.390	**	0.023		0.496	**	0.110	
	2.78		*0.22*		*2.33*		*1.16*	
Offering duration	0.220	**			0.351	**		
	2.68				*2.19*			
Wedge (Max/Target)			0.086	**			0.092	**
			2.50				*2.83*	
Obs.	291		291		180		180	
R^2	0.23		0.25		0.30		0.43	
Adj. R^2	0.17		0.19		0.20		0.36	

Table 8. Determinants of geographic matching between platforms and issuers

Regressions of geographic matching between issuers and platforms. Columns I and II examine an indicator for the location of the issuer and platform in the same MSA. Columns III and IV examine the log of the distance between issuer and platform. Columns V and VI examine the log of the actual distance between the issuer and platform, divided by the log of the average distance between the issuer and any crowdfunding platform. Columns I, III, and V use the full sample of closed and ongoing offerings. Columns II, IV, and VI use only closed offerings. Sample and variable definitions are presented in Appendix A. Fama-French 12 industry fixed effects are included. Standard errors are clustered at the platform level. Statistical significance at the 1%, 5%, and 10% level is denoted with ***, ** and *, respectively.

Dep. var.	Issuer and portal are located in the same MSA		Distance between issuer and platform		Distance between issuer and platform (actual/counterfactual)	
	I	II	III	IV	V	VI
Local intermediary exists	0.309 ***	0.250 ***	-1.184 **	-0.849 **	-0.165 ***	-0.122 ***
	4.07	*4.29*	*-2.58*	*-2.45*	*-2.94*	*-3.01*
Platform rank	-0.470 ***	-0.356 *	3.812 ***	3.294 ***	0.479 ***	0.388 ***
	-3.09	*-2.01*	*4.83*	*3.63*	*4.60*	*3.19*
Funding portal	0.184 ***	0.200 **	-1.322 ***	-1.501 ***	-0.168 ***	-0.192 ***
	3.36	*2.16*	*-5.07*	*-3.54*	*-4.52*	*-3.19*
Assets	-0.002	-0.006	0.025	0.037	0.004	0.005
	-0.43	*-0.76*	*0.94*	*0.84*	*1.08*	*0.96*
Review report	-0.025	-0.059	0.514 **	0.755 **	0.068 **	0.098 **
	-0.73	*-1.09*	*2.35*	*2.48*	*2.44*	*2.38*
Target amount	0.021	0.057 **	-0.160 *	-0.342 **	-0.023 **	-0.048 **
	1.04	*2.33*	*-1.87*	*-2.37*	*-2.08*	*-2.53*
Profitable	0.133	0.196	-1.158 **	-1.406 *	-0.138 **	-0.171 *
	1.40	*1.62*	*-2.68*	*-2.09*	*-2.46*	*-1.99*
Issuer age	-0.026 **	-0.012	0.103 **	0.056	0.012 *	0.005
	-2.32	*-0.83*	*2.12*	*0.77*	*1.82*	*0.51*
Prior Reg D offering	-0.034	0.015	-0.069	-0.509	-0.010	-0.067
	-0.91	*0.26*	*-0.32*	*-1.42*	*-0.43*	*-1.57*
Local area population rank	-0.047	-0.023	-0.172	-1.178	-0.006	-0.116
	-0.76	*-0.22*	*-0.26*	*-1.12*	*-0.07*	*-1.03*
Obs.	315	193	315	193	315	193
R^2	0.25	0.24	0.22	0.24	0.23	0.24
Adj. R^2	0.20	0.16	0.17	0.16	0.18	0.16