

Do offer contracts, platform yield in deal structure matter? Analyses of U.S. securities-based crowdfunding markets

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Abstract:

Securities-based crowdfunding marks an exciting stage in capital formation with an open invitation to everyone to participate, but real risks persist. Compared to other forms of crowdfunding, securities-based crowdfunding has considerably more hurdles, as it involves offers associated with the issuance of *financial contracts* for money invested by crowd investors. Since the legalisation of securities-based crowdfunding, this form of financing has been brought within the extensive and intricate body of securities legislation. However, market innovation challenges regulatory classification, investor protection and risks. For instance, in June 2025, Republic, a crowdfunding platform, introduced ‘mirror tokens’ that are tied to the performance of SpaceX stock, priced at \$1 each and available to crowd investors with a minimum investment of \$50. The token does not grant equity nor is affiliated with SpaceX, but functions as a synthetic forward contract where tokens mimic the economic return of the private company.

*“rSpaceX lets anyone invest in the performance of SpaceX”
~ Republic ~*

*“The token does not give you any equity, debt, contractual claim, option, warrant, or other right against SpaceX... Republic will eventually owe you the value of the SpaceX shares on a liquidity event, but how it comes up with the money to pay you is its problem”
~ Matt Levine (Bloomberg columnist) ~*

Securities-based crowdfunding is a contemporary development in financial innovation that occupies a hybrid space between public and private capital markets. Although heralded as a democratising force in startup financing, the lack of investor protections inherent in the model is exemplified by the prevalence of opaque financial contracts, which are not only poorly understood, but whose adoption remains largely unexplored.

Our preliminary study examines U.S. securities-based crowdfunding markets over six years. We find that, other than *common stock* offers, *debt* contracts, *preference stock* and *convertible* contracts are conventional types of financing contracts, but can come with modified terms. The use of less conventional forms for the average retail investor includes *simple agreement for future equity (SAFEs)* and *digital securities*. SAFEs are commonly applied in startup financing deals within private markets. This prevailing practice offers investors future equity, but has its critics concerned about its use in securities-based crowdfunding. This is because it can leave investors in a state of uncertainty, without equity or recourse, when there are multiple funding rounds. The absence of standardised terms across SAFEs further complicates calculation or clarity about future ownership. Crowd investors are also offered *digital securities* that entitle holders to value *tokens* endogenously created in decentralised networks. These are mostly found embedded in financing contracts which are clump with conventional securities (*mixed* contracts). Our empirical work reveals that financing contracts that entitle holders to SAFEs are strongly linked to funding campaigns. Their influential effect in attracting crowd investor participation is highly context dependent, as they are advantageous when campaigns aim to raise higher target amounts, are particularly fee sensitive, with potential diminishing effects on longer fundraising campaigns. Campaigns with *mixed* contract structure may benefit from longer campaign duration, while conventional forms like *debt* and *preference* contracts are highly likely to be funded. Implications of findings suggest that, in campaigns with conventional contracts, crowd investors tend to favour those with lower perceived risk. However, when campaigns use unconventional contracts, investors appear to be willing to accept higher levels of risk. This raises concerns regarding the viability of these firms and whether unconventional offer contracts are in practice genuinely appropriate for firms seeking capital or if other factors like platform or firm incentives are influencing outcomes, which potentially leaves investors exposed.

Keywords: Securities/equity-based crowdfunding, digital capital raising, platforms, alternative finance

1. INTRODUCTION

The 2015 film ‘*The Big Short*’ vividly portrays how the 2008 financial crisis was triggered by the collapse of the U.S. housing bubble. It follows a group of investors who, before the crisis, identified deep flaws and corruption within the system and sought profit by betting on the mortgage market. Central to the plot are features of the complex financial instruments used by Wall Street and the nation’s largest banks. The film cleverly uses metaphors to help audiences grasp the nature of these products, which were, in essence, often shrouded in jargon and opacity that masked inherent risks. In fact, the belief and trust that we have in our regulated markets makes it unimaginable that such exposure to risks exists.

Today, a similar concern arises in the evolving landscape of securities-based crowdfunding, which in recent years has been legalised in various jurisdictions. Traditionally, public fundraising was confined to listed exchanges, but crowdfunding now occupies a middle ground between public and private finance. While proponents hail it as a new frontier for private capital formation, the risks to investors are real and significant. Start-up failure rates are high, returns are uncertain, and investments are often illiquid. Moreover, the potential for fraud and capital loss cannot be ignored. Just as ‘*The Big Short*’ highlighted the dangers of opaque financial products, this study seeks to understand what crowd investors are receiving in exchange for their financial commitments, and whether these financial contracts have positive signaling effects or if they are important instruments that incentivise funding.

Securities-based crowdfunding allows capital seekers to pitch investors to the potential of investing in successful enterprises of tomorrow, on online ‘platforms’ that host them. A fundraising ‘campaign’ by the capital seeker provides information about its business proposition, product or service to potential investors and tends to run over a period of time. Campaigns are funded when the amount raised meets the minimum ‘target amount’ of the campaign. They come with open offers to invest in, using a variety of *financial contracts*, and may not be limited to equity offers in some jurisdictions. The digital online capital raising activity has become part of the growing world of ‘alternative finance’. Globally, according to a global survey of 111 regulatory jurisdictions, 39% of jurisdictions formally regulate equity/securities based crowdfunding and 22% in the case of initial coin offerings (World Bank and Cambridge Centre for Alternative Finance (CCAF) 2019).

Our work examines data in the United States, which is one of the largest markets for securities-based crowdfunding (Cambridge Centre for Alternative Finance (CCAF) 2021). As of June 2025, U.S. platforms have raised up to US\$21.5 million (Kingscrowd 2025). The legalisation of securities-based crowdfunding via Title III of the Jumpstart Our Business Startups (JOBS) Act 2012, introduced changes to the Securities Act of 1933 (“Securities Act”) through the enactment of Regulation Crowdfunding (*RegCF*). With effect from May 2016, *RegCF* issuing firms can raise up to US\$5million annually via intermediaries registered with the Securities and Exchange Commission (SEC) and the Financial Industry Regulatory Authority (FINRA). SEC permit eligible investors to participate, subject to income and wealth thresholds. Under *RegCF* there is no restrictions on the type of security (*‘offer contract’*) that campaigns can offer to investors. From inception, SEC has taken the position to allow the market this flexibility, but calls on issuers to provide adequate disclosure about the structure and terms of the offer (Green and Coyle 2016). More recent SEC harmonisation efforts in 2020 observe that the SEC’s position remains unchanged, despite concerns raised regarding the use of certain contracts, including non-traditional securities, which pose risks to investors (U.S. Securities and Exchange Commission (SEC) 2020).

Scant literature documents the importance of platforms in the online fundraising process. Platforms are involved in pre-campaign services such as business plan development, promotional activities, pitch preparation, ongoing updates, and post-campaign funding advisory (Rossi and Vismara 2018), strategic support services like project packaging, promotional support and notably, design and structuring *offer contracts* (Cumming *et al.* 2019). On campaign deals, contracting practices are commonly predetermined by platforms that facilitate the offer process (Rossi *et al.* 2019; Hornuf *et al.* 2018a). German evidence suggests that firms seldom negotiate the contents of those contracts, and the process is characteristically homogenous, and investors tend to be bound by the same terms (Hornuf *et al.* 2018a). At the inception of *RegCF*, early U.S. evidence indicates that platforms play an influential role and contractual terms of offer contracts were closely similar to those used by professional venture capital firms, but standardised and simplified in their design (Wroldsen 2017).

While early studies highlight the diversity of fee structures across these platforms (Vulkan *et al.* 2016; Hornuf *et al.* 2018b; Hornuf *et al.* 2018a) more recent evidence suggests that *fee* structure is linked to platforms’ operational roles, and platforms with simpler fee structures spend less on compliance than average platforms. Those that charge management fees and carry percentages, on average, spend more than platforms with other fee structures (Cumming *et al.* 2019). Based on prior studies, we expect that, as platforms have aims no different to any for-profit business, they will apply fees that meet costs related to providing required services to firms. Furthermore, certain platforms maintain *investment interests* in firms they host, which can influence their involvement in funding campaigns. Platforms as gatekeepers in the eco-system, have intrinsic motivations, because successfully funded campaigns enhance their reputation and long-term viability. Consequently, in view of the important role that

platforms' play, our preliminary analyses incorporate platforms' yield, *via platforms' fee* and *investment interest*, in our model specifications to capture these dynamics.

The rest of this paper is as follows: Section 2 describes the data and method. Section 3 reports results and Section 4 concludes with findings, provides limitations and recommendations for future inquiry.

2. DATA AND METHOD

Data is sourced from SEC *RegCF* filings from May 2016 to December 2021, comprising 23 quarters totalling 4,945 *RegCF* Form C offer filings. Each filing is matched to its corresponding progress update (Form C-U) if filing exists (issuers are to file updates when offers meet 50% and 100% of their target amount). Where there has been more than one update filed, they are matched to data extracted from the most recent progress update filing, and withdrawals are excluded. From these, we filter for 'campaigns' with offer invitations that close on and before 31 December 2021 (i.e., are *RegCF* 'closed offers') and are campaigns which are charged platform fees at 'fixed rate terms' (see (ii) below for definition). We arrive at a final sample of 3,825 observations.

Table 1: Variable definition

Variable(s)	Description
<i>fund outcome</i>	dichotomous variable 1= fund raised (dollar amounts in US dollars) > \$nil; 0 = otherwise
<i>offer contract</i>	type of offer contract, categorised into seven groups: common stock (base), agreements, debt, preference stock, convertibles, units, and mix
<i>platform fee</i>	platform fee at fixed rate terms, discretised into 3 tiers: below 6% median (base), at 6% median, and above 6% median
<i>platform investment interest</i>	dichotomous variable 1= if platforms are offered an investment interest to the value of a percentage of funds raised in the form of security; 0=otherwise
<i>target amount</i>	target amounts (in US dollars) (in natural logarithm)
<i>offer duration</i>	duration of campaign, is the number of days from filing date up to offer close date (in natural logarithm)
<i>platform t2</i>	dichotomous variable 1= campaigns hosted on two most prominent platforms; 0=otherwise
<i>age of firm</i>	age of firm at offer date (in years) (in natural logarithm)
<i>frequency of funding</i>	dichotomous variable 1=one filing during the research period; 0=otherwise
<i>firm incorp Del</i>	dichotomous variable 1=firm incorporated in Delaware; 0=otherwise
<i>firm size</i>	size of issuer firm proxied by the number of employees
<i>firm reports revenue</i>	dichotomous variable 1=firm financials report revenue in its most recent fiscal year, disclosed when offer filed with SEC; 0=otherwise
<i>firm reports debt</i>	dichotomous variable 1=firm financials report debt in its most recent fiscal year, disclosed when offer filed with SEC; 0=otherwise

The outcome variable used in our analysis is the fund outcome, which takes the value of 1 if the fund raises capital and 0 otherwise. Given the nature of this variable, logistic regression models are used. We use this in our analyses because raising even a dollar provides an indication of the likelihood for campaigns to attract potential investors' interest (given a contract), regardless of the ultimate outcome that a campaign is funded. We acknowledge while this differs to the definition of campaign outcome having reached target amounts (Cumming *et al.* 2025), our measure of the dependent variable has also been employed in other studies (Lukkarinen *et al.* 2016; Shafi 2021; Ahlers *et al.* 2015). Explanatory variables of interest are: (i) *offer contract*, comprised of contractual arrangements that broadly fall into equity, quasi-equity, debt, deferred and non-traditional contracts, and are sub-categorised into prominent sub-groups based on SEC filings (Table 2). Common stock serves as a base/reference category, due to its familiarity, and inherent ownership rights to investors, providing meaningful reference as comparison, to all other types; (ii) *platform fee*, in the universe of *RegCF* filings comprise of those that are charged at a fixed percentage of amounts raised ('fixed rate terms'), or are on variable terms (refer Table 3 for examples)¹; (iii) *platform investment interest* captures platforms' vested interest if they hold financial interest in campaigns they host. In addition to this, there are several control variables, which has been used in literature: *target amounts* (Piva and Rossi-Lamastra 2018; Vulkan *et al.* 2016), campaign *offer duration* (Lukkarinen *et al.* 2016; Cumming *et al.* 2020), *age of firm at offer*, *firms incorporated in Delaware*, *size of firms (proxy by number of employees)*, and *firm financial metrics (report revenue or debt)* (Cumming *et al.* 2025). Platform effect, *platform t2* for belonging on two platforms with significant market share, firm effect, *frequency of funding* identifies if firms have multiple campaigns, and year effects controls for time-specific influences. Variables are defined in Table 1.

3. ANALYSES

Over the snapshot period, *common stock* was the most frequently offered form of *offer contract* from 2016 to 2018. From 2019 onwards, *debt* offers surpassed earlier levels and became the dominant form while *agreements* consistently ranked second throughout the period up to 2020 (see Figure 1). *Agreement* campaigns include those that entitle holders to deferred securities in the form of equity (SAFEs) or digital tokens, upon a trigger event.

¹ Due to considerable variability in fee structures that do not charge a predetermined percentage on amount raised, analyses exclude campaigns based on variable terms.

Over the six-year period, there are 44 campaigns that offer some form of digital token in a mixed financing contract structure (*mix*) and four as stand-alone contracts. Some platforms offer only certain types of contracts, and contract terms may include non-standard clauses. For example, some *common stock* offers can attach non-voting rights, and interest on *convertible* contracts may be repaid in the form of future equity instead of cash at maturity.

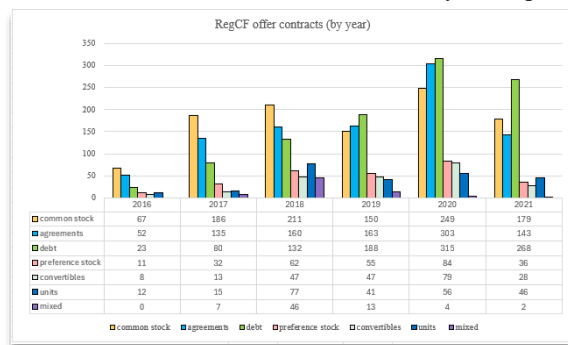


Figure 1: Number of campaigns (by offer contracts)

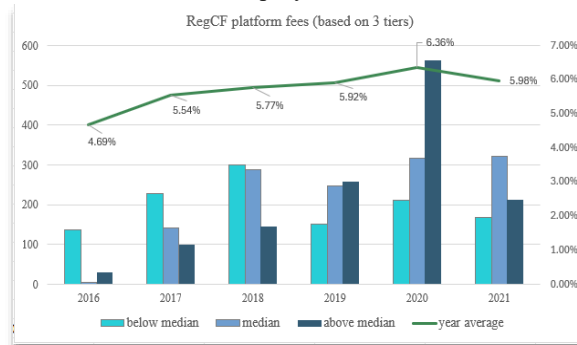


Figure 2: Number of campaigns (by platform fee tier)

Table 2: RegCF offer contracts

Contract	Features	Examples of terms used
<u>Equity contracts</u>		
Common Stock	voting/non-voting rights, proportional equity share	Common stockholders are entitled to proportional share in equity of the firm, and can be voting and non-voting common stock offers. Usually notated as "common stock", "common voting", "non-voting common stock", multi/dual class stock that comprise of "common stock class A, class B, or class C".
Preference Stock	dividend rights, liquidation preference, anti-dilution, no voting	Preference stockholders normally rank above common stockholders in the event of liquidation, and often entitled to dividend. They tend to come with anti-dilution clauses, and do not carry voting rights. Notations include "preferential stock", "preferred stock", "preference stock class A of class B", "class B series A or series B, or seed preferred".
Units	voting/ non-voting. LLC membership interests	Units pertain to holders interest in a limited liability company. Labelled as "member interest", "member units", "non-voting units" "units of membership interests", "limited liability interests" "series seed member units" "LLC units", "class A or B member units".
<u>Quasi-equity contracts</u>		
Convertible Stock	convertible to equity at trigger event, discount rate	Contracts that take the form of debt obligation with conversion to equity at a trigger event. Commonly converts the invested amount into an equity investment, based on a subsequent valuation amount. If the note is not converted, the investor has a right to repayment of the principal and accrued interest at maturity. The discount rate determines the proportion of par value which is discounted to arrive at the number of equities rights the holder maybe entitled to at conversion date. Notation used include "convertible note", "convertible security", "convertible promissory note", "convertible debenture".
<u>Debt contracts</u>		
Debt	interest (non-cash included), revenue-based repayment, unsecured	Contracts that entitle the holder to interest payments or minimum cash return. Labelled as "crowd note" or "debt promissory note". Include repayment tied to revenue, called "revenue participation notes," "crowd revenue note", "revenue sharing notes". They can be at a percentage of gross revenue (monthly) for a particular period until the debt amount is repaid and tend to be unsecured (payback at some multiple is required, based on terms).
<u>Deferred and non-traditional</u>		
Agreements	future rights to equity or tokens, contingent on event	Contracts where holders entitlement is converted at a trigger event, to equity or other right to future security. Usually described as "simple agreement for future equity (SAFEs)" (some customised SAFEs may include provisions like maximum valuation cap that allow a holder to receive more equity with lower valuation or vice versa; and/or discount so holder pays a reduced price on conversion); "crowd SAFEs" are adapted SAFEs that are issued under platforms with nominee models; "simple agreement for future tokens (SAFT)", "token purchase agreement (TPA)", "crowd token rights agreement", give holder rights to tokens in the future.
Mixed	combination of equity, tokens, agreements	Contract characteristics which combine two or more financing arrangements. Some are contracts with preference stock and digital tokens, common stock and SAFT, units and digital tokens, or multiclass common stock and digital tokens. Labelled as "A class stock and CC token", "class A common stock and XPOP tokens", "common stock and CannCoin tokens", "SAFE plus REV".
Note: offer contracts disclosed in SEC filings permit classification into criteria described above, based on general information about them that is offered on platform websites/blogs, but specific terms are commonly found in offering documents filed and can vary. Our data is not granulated beyond disclosures in filings.		

Platform *fees* charged at a percentage of amounts raised range up to a maximum of 12%, with a median of 6%. Over the six-year period, 31% of campaigns were at below the median platform fee of 6%, 35% were charged exactly at the median, and 34% were charged above it. In the early years, most campaigns were at fees below 6%, with annual averages ranging from 4.69% to 5.77% during the first three years. However, from 2019, the number of campaigns at and above the median fee tier exceeded the number of campaigns at the lowest fee tier, reflecting a general upward trend in average fees from 2019 to 2021 (Figure 2).

Table 3: Platform fee structure (examples)

<i>Fixed/agreed rate terms:</i> Fee at a percentage of amount raised
<i>Variable fee' terms:</i> fee at a percentage of amount raised, if it reaches a specified dollar value range, commonly higher fee at lower amounts raised. Examples include (a) 4% x amount raised up to first \$1m, then 3% x amount raised over \$1m; (b) 5% x amount raised less 0.5% if reaches \$1m; (c) 6% x amount raised up to \$2.5m else 6.5% x amount raised; (d) 10% x amount raised up to \$250k, else 9% if \$250-\$500k, else 8% if \$500-750k, else 7% if greater than \$750k; Other variations include, (e) fee at a percentage of amounts raised plus a flat fee; (f) fee at a percentage of amounts raised plus a lower fee option if amounts raised is sourced through the issuer; (g) fee at a percentage of amount raised plus a fee based on invested amounts received from the investor (e.g., fee at \$10,000 plus 3.5-9.5% x amount raised plus 3.5% fee on invested amount from investor), (h) fees in a range, but conditions are not specified.

There are 30 out of 80 platforms in the sample that hold investment interests in firms they host campaigns for (or 1188 out of 3,825 campaigns). The maximum interest observed is 10% and the minimum is 1%. OpenDeal Portal has the highest number of hosted campaigns in which it holds an investment interest in the firms featured, with interest ranging from a minimum of 1% and maximum of 6%. The Wefunder Portal holds interest of 1% to 2% in 17% of its hosted campaigns, while StartEngine typically holds 2% interest and does so in 35% of its campaigns.

Table 4 reports logistic regression coefficients for the base model (*model 1*) and the model with interaction terms (*model 1_int*). *Model 1* shows statistically significant positive effects for *debt* and *preference stocks* with an increase in the odds of raising at about 1.449 and 1.457 times, respectively. A modest negative effect for *convertible contracts* ($\exp(\beta) = 0.610$) is observed. The *Platform fee* at 6% median shows a positive effect on offers being funded at 2.821 times. Contrary to expectation, *platform investment interest* does not show any statistical relevance. The level of *target amount* has a negative association with the odds of raising funds. This was also observed in Italian and UK studies (Piva and Rossi-Lamastra 2018; Vulkan *et al.* 2016; Vismara 2016). *Offer duration* shows positive effects on the odds of raising funds. Although contrary to North European (Lukkarinen *et al.* 2016) and UK studies (Cumming *et al.* 2020), our results suggest favourable effects associated with longer campaigns. Firm factors like *age of firm*, *firm size* show positive effects, suggesting that more mature firms (and larger firms) have greater odds of being funded (Mamonov and Malaga 2018). Legal incorporation in Delaware signals positive effects (Cumming *et al.* 2025) and firm financials that *report revenue* signal positively with investors.

The model with interaction terms captures the combined effects of *offer contracts* on the outcome if they are affected or depend on *platform investment interest*, *platform fee*, campaign *target* and *duration*. The main effects for *debt* and *preference stocks* remain meaningful, and *agreements* report strong positive effects on the odds. *Platform fee* at 6% median remains positively associated with an increase in the odds.

Interaction effects with platform factors show: (i) *offer contracts x platform fee 1 (at median)* is statistically relevant and positive for *agreement*, at about 4.842 times increase in the odds. The positive impact of fees is pronounced for campaigns that use *agreements*. This suggests that when platforms are able to charge fees of at least at median rates when running *agreement* structured campaigns, platforms are more likely to incentivise funding; (ii) *offer contracts x platform fee 2 (above median)* show marginal negative effects for *agreement*, *debt* and *mix* contracts when fees creep up to the highest fee tier. Results show the positive effects of campaigns that use *agreement*, and *debt* may reverse when platform fees are at above the median fee terms. Overall, the statistically meaningful coefficient observed for *agreement* campaigns across both platform fee tiers suggests that the level of platform fees is important, particularly when structuring *agreements* campaigns (similar results reported when *platform fee* is modelled as a continuous variable; these results are not reported).

Interaction with campaign factors show (iii) *offer contract x target amounts* show positive coefficient for *agreements*, which translates to an increase in the odds at about 1.373 times or 37% increase. This suggests that *agreements* are particularly effective in campaign deals at higher target amounts, which may be indicative of firms that aim for broader reach. SAFEs are commonly suited for firms which are strong candidates for future investments, or have high growth trajectories, in view of promised return to investors when firm exits or is acquired (Green and Coyle 2016). For that reason, the sensitivity of higher target amounts on *agreement* campaigns, likely signals to crowd investors about the campaigns' potential. Additionally, the flexibility of these contracts allows issuers to configure terms to suit their funding requirements without immediately giving up equity, control or cashflow; Similarly, campaigns where *units* in limited liability companies are offered, the positive effect on the odds of raising funds is observed at about 1.481 times or 48%. (iv) *offer contract x offer duration* interaction has a negative effect on the odds of raising funds for *agreements*, *debt contracts*, *preference stock* and *units* but its magnitude is minimal on the odds (all at $\exp(\beta) < 1$). In contrast, *mix contracts* exhibit a strong positive effect at about 14.28-fold increase in the odds of securing funding. This suggests that *offer duration* has modest influence on more familiar contract types, but extending offer duration significantly benefits campaigns which use less conventional forms, like mixed financing contracts.

Table 4: Logistic regression on fund outcome

<i>Variables</i>	<i>(I)</i>	<i>(I) int</i>
	β	β
target amount	-0.563***	-0.704***
offer duration	0.924***	1.747***
offer contract		
<i>common stock</i>	(base)	(base)
<i>agreement</i>	0.145	6.843***
<i>debt</i>	0.371**	6.167***
<i>preference</i>	0.377*	3.963*
<i>convertible</i>	-0.494*	-6.222
<i>units</i>	-0.049	1.760
<i>mix</i>	-0.425	12.992
platform fee		
0=below median	(base)	(base)
1=median	1.037***	0.564**
2=above median	0.005	0.281
platform interest	0.042	0.091
age of firm	0.073*	0.080*
firm incorp Del	0.508***	0.403***
firm size	0.020***	0.021***
firm reports revenue	0.300**	0.180
firm reports debt	0.084	-0.030
frequency of funding	-0.900***	-0.921***
platform t2	-0.898***	-0.733***
year	Yes	Yes
agmt x plfm interest		0.151
debt x plfm interest		-0.101
pref x plfm interest		0.039
convert x plfm interest		-0.231
units x plfm interest		-0.160
mix x plfm interest		-1.367
agmt x fee 1		1.577***
debt x fee 1		-0.170
pref x fee 1		-0.516
convert x fee 1		1.138
units x fee 1		0.589
mix x fee 1		-6.331
agmt x fee 2		-0.804**
debt x fee 2		-0.894**
pref x fee 2		-0.438
convert x fee 2		0.340
units x fee 2		-0.652
mix x fee 2		-9.955*
agmt x tar		0.317*
debt x tar		0.106
pref x tar		0.153
convert x tar		0.313
units x tar		0.393*
mix x tar		-1.954
agmt x dur		-2.141***
debt x dur		-1.353***
pref x dur		-1.025***
convert x dur		0.436
units x dur		-1.189***
mix x dur		2.659*
_cons	1.450*	-0.895
aic	4,344	4,179
bic	4,494	4,516
chi2	906	1,131
Prob>chi2	0.000	0.000
log likelihood	-2,148	-2,036
n	3,814	3,814

***, ** and * correspond to statistical significance at 1%, 5% and 10% levels respectively.

The results align with expectations that when investors are not pressured to make quick investment decisions or are given more time to evaluate unfamiliar contractual arrangements, they may more likely commit, thereby enhances the ability to secure funding. The interaction model shows campaign factors like *target amount*, *offer duration*, and other covariates that relate to firm factors, are statistically relevant, similar to base *model 1*. Overall, they show similar directional results but with nominal differences in magnitude.

Model efficacy matrices indicate good model performance, for base *model 1*, with the area under the receiver operating characteristics (ROC) curve or AUC-ROC of 0.797 (with 1 representing better discrimination between classes), and model accuracy at 72.23%. The model measures true positive rate at 62.27% and true negatives at 79.70%. *Model 1_int* with interactions report AUC-ROC of 0.803 which show significant improvement to the base model. Model accuracy is at 73.05%, and true positives rate at 60.42% and true negatives at 82.39%. The improvement of *model 1_int* over *model 1* evident by lower AIC (Akaike Information Criterion) indicates the interaction terms do capture more nuance relationships that exists which are meaningful, even though BIC (Bayesian Information Criterion) for the more complex model is higher, as BIC tends to penalize complexity more heavily.

4. CONCLUSION

Debt contracts are strongly favourable as *offer contracts* in securities-based crowdfunding. Its features such as priority in repayment, and defined repayment period likely makes debt more appealing to investors, as it tends to be less volatile than equity and carries lower risks. The effect of longer *offer duration* appears to reduce the positive effect of *debt contracts* marginally. Given that debt offers are commonly attractive, campaigns with longer duration can have diminishing effects on the perceived attractiveness of campaigns. The advantage of *debt* campaigns also shrinks if platforms that host *debt contracts* are on fee terms at higher than median terms (or top fee tier). Thus, *debt contract* offers potential advantages, but context matters.

The effect of *agreements* appear highly context dependent. *Agreement campaigns* have positive effect on outcome but sensitive to platform fees. When platforms are rewarded with at least median fee rates, *agreement* campaigns are effective tools but tend to have modest diminishing effect when fees are at higher than median. More importantly, *agreement* offers are effective tools as campaigns aim for higher *target amounts*. This supports the notion that campaigns with higher target will likely require stronger incentives to attract investors. Contracts classified here as *agreements* are comprised of those that reward future equity, or digital security have shown to be incentivising instruments - as they offer flexibility to issuers who can embed contract terms that suit firms. It also has the effect of positively signalling to investors that campaigns have potentially high future returns. Thus, *agreements* campaigns are marketed to appeal to investors particularly when funding goal is high, and longer *campaign duration* may signal weak demand or reduce perceived value.

Campaigns that reward investors with *preference stock* also positively influences funding outcomes. This may be due to features of preference stock that have superior claim over common stock in liquidation, that reduces perceived investment risk. Similarly, longer campaigns can potentially affect *preference stock* campaigns negatively. Finally, the effect of *convertible stocks*, *units* and non-traditional forms involving *mixed* financing contracts on funding campaigns are inconclusive, and may depend on context. In particular, *offer duration* has a

significant positive influence on campaigns structured using *mixed* financing contracts, whereby campaigns that stay open for longer is likely to enhance the ability to secure funding.

We acknowledge several limitations of this work. First, the classification of *offer contracts* is based on descriptions provided in regulatory filings. While categorisation was verified using publicly available information, some could not be confirmed. In such cases, we rely on commonly understood terminology, which may introduce minor inconsistencies or misclassifications. Second, the variables *fund outcome/fund raised* is determined only from SEC filings. As some firms may have raised funds but failed to report or underreported their outcomes, which could affect the accuracy of the findings. Third, platform-level differences, shaped by legal ownership structures—could not be captured due to limitations in data availability. These structural differences may influence platform behaviours and funding models, and their absence from the analysis may affect the conclusions drawn. Finally, future inquiry could extend analyses to address these limitations, as well as examine if the positive signalling effects of these *offer contracts* is linked to firm viability or platform survival. Alternatively, research could address the extent that investors have reaped returns from their investments. Acknowledging the varied terms which can be embedded in *offer contracts*, we urge scholars to examine if features are associated with patterns that have adverse consequences for investors.

REFERENCES

- Ahlers GKC, Cumming D, Günther C and Schweizer D (2015) Signaling in Equity Crowdfunding. *Entrepreneurship: Theory & Practice* 39(4), 955–980.
- Cambridge Centre for Alternative Finance (CCAF) (2021). viewed 31 July 2023, The 2nd Global Alternative Finance Market Benchmarking Report. <https://www.jbs.cam.ac.uk/wp-content/uploads/2021/06/ccaf-2021-06-report-2nd-global-alternative-finance-benchmarking-study-report.pdf>.
- Cumming D, Johan S and Zhang Y (2019) The role of due diligence in crowdfunding platforms. *Journal of Banking & Finance* 108, 105661.
- Cumming DJ, Leboeuf G and Schwienbacher A (2020) Crowdfunding models: Keep-It-All vs. All-Or-Nothing. *Financial Management* 49(2), 331–360.
- Cumming DJ, Johan S and Reardon RS (2025) Institutional quality and success in U.S. equity crowdfunding. *Research Policy* 54(1), 105114.
- Green JM and Coyle JF (2016) Crowdfunding and the Not-So-Safe SAFE. 102 *Virginia Law Review Online* 168 (2016), UNC Legal Studies Research Paper No. 2830213.
- Hornuf L, Klöhn L and Schilling T (2018a) Financial Contracting in Crowdfunding: Lessons from the German Market. *German law journal* 19(3), 509–578.
- Hornuf L and Schwienbacher A (2018b) Internet-Based Entrepreneurial Finance: Lessons from Germany. *California Management Review* 60(2), 150–175.
- Kingscrowd (2025) Startup Investing Markets. viewed 25 July 2025, <https://kingscrowd.com/markets/>.
- Lukkarinen A, Teich JE, Wallenius H and Wallenius J (2016) Success drivers of online equity crowdfunding campaigns. *Decision Support Systems* 87, 26–38.
- Mamonov S and Malaga R (2018) Success factors in Title III equity crowdfunding in the United States. *Electronic Commerce Research & Applications* 27, 65–73.
- Piva E and Rossi-Lamastra C (2018) Human capital signals and entrepreneurs' success in equity crowdfunding. *Small Business Economics* 51(3), 667–686.
- Rossi A and Vismara S (2018) What do crowdfunding platforms do? A comparison between investment-based platforms in Europe. *Eurasian Business Review* 8(1), 93–118.
- Rossi A, Vismara S and Meoli M (2019) Voting rights delivery in investment-based crowdfunding: a cross-platform analysis. *Economia e politica industriale* 46(2), 251–281.
- Shafi K (2021) Investors' evaluation criteria in equity crowdfunding. *Small Business Economics* 56(1), 3–37.
- U.S. Securities and Exchange Commission (SEC) (2020) Facilitating Capital Formation and Expanding Investment Opportunities by Improving Access to Capital in Private Markets. viewed 22 December 2022, <https://www.sec.gov/files/rules/final/2020/33-10884.pdf>.
- Vismara S (2016) Equity retention and social network theory in equity crowdfunding. *Small Business Economics* 46(4), 579–590.
- Vulkan N, Åstebro T and Sierra MF (2016) Equity crowdfunding: A new phenomenon. *Journal of Business Venturing Insights* 5, 37–49.
- World Bank and Cambridge Centre for Alternative Finance (CCAF) (2019) Regulating Alternative Finance: Results from a Global Regulator Survey. <https://openknowledge.worldbank.org/server/api/core/bitstreams/4d8e205f-6a93-5f4a-ae0f-e04c3ffb9b2f/content>.
- Wroldsen J (2017) Crowdfunding investment contracts. *Virginia law & business review* 11(3), 543–612.