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ABSTRACT

Finance studies on the impact of market timing (or "windows of opportunity") have almost exclusively focused on publicly traded firms and initial public offering (IPO) firms. We provide first-time evidence on the impact of market timing on the capital structure of private firms that raise initial equity crowdfunding (ECF). We capture market timing by differentiating between ECF campaigns launched in hot markets, characterized by high ECF volumes, versus cold markets. Our sample includes firms financed via either Crowdcube or Seedrs, the two largest UK ECF platforms. Consistent with the idea of hot markets serving as windows of opportunity, we find that in hot markets, ECF firms set higher targets, collect more overfunding, and thus raise more equity capital than ECF firms in cold markets. Surprisingly, however, and inconsistent with a market timing theory of capital structure, we fail to find differences between the leverage ratios of hot and cold market firms from the year of the ECF campaign. This finding is explained by hot market ECF firms contemporaneously rebalancing their capital structure by attracting more debt, especially financial debt. We discuss the theoretical and practical implications of these findings.

Keywords. Equity crowdfunding, Entrepreneurial finance, Market timing, Capital structure, Post campaign financing

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1. Introduction

Equity crowdfunding (ECF) is a fast-growing source of financing for innovative ventures (Audretsch et al. 2016; Bruton et al. 2015; Vismara 2021). For instance, in 2020, ECF platforms were the most active UK early-stage equity investors in terms of the number of deals (Beauhurst 2021). In line with the growing importance of ECF, academic research on this topic has also grown dramatically. Extant research has focused on important issues, such as the antecedents of funding success on ECF platforms (e.g., Ahlers et al. 2015; Kleinert and Mochkabadi 2021; Kleinert et al. 2020; Lukkarinen et al. 2016; Mahmood et al. 2019; Rossi et al. 2021), funding dynamics present as campaigns run on ECF platforms (e.g., Hornuf and Schwienbacher 2018;

Vismara 2018), and the consequences for firms with successful ECF campaigns (e.g., Butticè et al. 2020, 2021a; Coakley et al. 2021a,b; Hornuf et al. 2018; Signori and Vismara 2018; Walthoff-Borm et al. 2018a).

To date, however, our understanding of the capital structure of ECF firms and the possible impact of market timing on ECF firms' capital structure is limited. This gap in our understanding is unfortunate for several reasons. First, finance studies that focus on public firms and new IPO firms argue that when hot markets present windows of opportunity with a temporarily low cost of equity capital, firms raise more equity capital (Alti 2006; Baker and Wurgler 2002; Huang and Ritter 2009). Accordingly, understanding how the market context—i.e., hot (cold) ECF markets—impacts the equity raised in ECF campaigns is critical, especially since entrepreneurial firms are often undercapitalized (Laitinen 1992) and/or financially constrained (Kerr and Nanda 2009). Second, market timing theory also suggests that larger hot-market equity issues lead to persistently lower leverage ratios for hot market firms relative to cold market firms (Baker and Wurgler 2002). Again, this can be crucial for ECF firms because prior research has shown that ECF firms are often excessively leveraged when seeking ECF (Rossi et al. 2021; Walthoff-Borm et al. 2018b) and that excessive leverage can threaten firm survival (Bruno et al. 1987; Laitinen 1992). Taken together, the potential advantages of timing the ECF market could be significant for entrepreneurs, but we currently lack evidence on this critical issue.

ECF markets represent an interesting context from which to investigate the consequences of market timing. While ECF markets share some similarities with IPO markets (e.g., Cumming et al. 2021a,b), we cannot simply generalize what we know from prior finance research on the consequences of market timing for capital structure in new IPO firms to private ECF firms. First, crowdinvestors face more uncertainty and greater information asymmetries than investors in public markets simply because ECF firms are smaller and younger than most IPO firms. Second,

small investors in ECF markets often lack the experience to do their due diligence, and given their small investments, they may further lack incentives to do so (Ahlers et al. 2015; Audretsch et al. 2016). Indeed, previous research has shown that crowdinvestors often do not attend to important information even when it is available on campaign pages (Butticè et al. 2021b); rather, crowdinvestors are guided by, for example, previous investors in an ECF campaign (e.g., Vismara 2018). IPO markets, however, have specialized information intermediaries (e.g., investment banks, stock analysts and rating agencies) to guide investors, but these are lacking in ECF markets. Accordingly, ECF markets are particularly prone to misvaluation (whether real or perceived), which lies precisely at the heart of market timing.

For the purpose of this study, we use a dataset of 591 firms that raised initial ECF from either Crowdcube or Seedrs, the two largest UK ECF platforms, between 2012 and 2018 (inclusive). Data from the Crowdcube and Seedrs platforms are augmented with other data sources, including Orbis Europe. We find that hot-market ECF firms set significantly higher funding targets, collect more overfunding, and thus raise more equity capital than cold-market ECF firms. These effects, however, do not lead to hot-market ECF firms having persistently lower leverage ratios than cold-market ECF firms. Rather, hot-market ECF firms contemporaneously also attract more debt financing (especially financial debt) than their cold-market counterparts.

The remainder of this paper is structured as follows. Section 2 briefly presents capital structure theories, including a market timing theory of capital structure, to then develop hypotheses on the effects of market timing on the financing of ECF firms. Section 3 presents the employed data sources, sample, and variables. Next, Section 4 presents descriptive statistics and discusses the multivariate results and additional robustness tests. Section 5 concludes.

2. Theory and hypotheses

2.1 Capital structure theories, market timing, and ECF

How entrepreneurs finance their ventures is a central question in entrepreneurial finance (Cassar 2004; Cosh et al. 2009; Deloof et al. 2019; Robb and Robinson 2014). To address this question, scholars have primarily used traditional capital structure theories from corporate finance developed with a focus on publicly held firms. Below, we present an overview of these theories to then focus on market timing theory and ECF markets specifically. A more detailed discussion of traditional capital structure theories can be found in excellent reviews such as those of Cole (2013) and Frank and Goyal (2008; 2009).

In particular, static trade-off theory and pecking order theory have been the focus of a vast stream of research on entrepreneurial finance, often with mixed evidence on their explanatory power (see, for example, Landström 2017 for a review). According to static trade-off theory (e.g., Modigliani and Miller 1963; Kraus and Litzenberger 1973), entrepreneurs are expected to weigh the costs of debt against its benefits. Ultimately, there is an optimal capital structure for a firm where the marginal cost equals the marginal benefit of using an additional amount of debt. According to pecking order theory (e.g., Myers 1984; Myers and Majluf 1984), entrepreneurs prefer to use internal funds (e.g., retained earnings) when available. The reason is that the use of internal funds is not subject to asymmetric information costs. When internal funds are insufficient, entrepreneurs next prefer to raise debt financing, and it is only when debt capacity is exhausted that they finally resort to external equity. Ultimately, this leads to a pecking order of financing alternatives for entrepreneurs. Entrepreneurs do not have an optimal capital structure, but the capital structure is a consequence of previous financing deficits.

A theory that has rarely been studied in reference to private firms is market timing (windows of opportunity) theory. Baker and Wurgler (2002: 1) suggest a theory of capital structure where capital structure is defined as "the cumulative outcome of past attempts to time

the equity market". One version of the theory is consistent with Myers and Majluf (1984) in that managers and investors are rational, but timing opportunities exist because the degree of asymmetric information (and adverse selection costs) varies across firms and time. A second version suggests that managers think that investors are irrational and can sell overvalued equity. Here, hot markets are periods with favorable equity market conditions, which lead to a clustering of equity issues. According to traditional market timing theory, changes in capital structure due to market timing are persistent because firms do not care to adjust their capital structure later on (given, for example, significant adjustment costs).

What we currently know about market timing focuses almost exclusively on publicly held firms and new IPO firms. This focus may not be surprising because entrepreneurial firms seldom attract outside sources of equity finance (Brav 2009). Traditionally, entrepreneurs raising external equity finance had two types of opportunities, namely, private equity (e.g., venture capital or business angel) or public equity, but these options are generally not available to the 'average' entrepreneur. Nevertheless, there is evidence that entrepreneurs who target venture capital in hot markets can attract equity capital under more favorable conditions as well (e.g., Gompers and Lerner 2000; Que and Zhang 2021), calling for an application of market timing theory to the context of entrepreneurial financing, and, as we detail below, to ECF in particular.

ECF markets have been growing quickly over the last decade, which provides new opportunities for entrepreneurs to issue equity to a broad pool of "unsophisticated" outside investors (Cumming et al. 2021b). ECF is distinct from both IPOs and private (venture capital or business angel) investments. Similar to stock exchanges, ECF platforms list offerings open to the public. However, unlike public offerings, which are subject to a host of regulations designed to protect the interests of investors, ECF is available to a wide variety of early-stage entrepreneurial firms and is substantially less costly for issuers. Crowdfunding platforms often allow anyone to

view projects posted online, allowing for a more heterogeneous population of backers, including small investors. Moreover, while many specialized information intermediaries (e.g., investment banks, stock analysts and rating agencies) actively target firms in public markets, they rarely target firms in ECF markets (Cumming et al. 2021b).

Moreover, private venture capital investors or business angel investors only invest in firms with extraordinarily high growth potential, often clustered in specific industries and specific geographic locations (e.g., Colombo et al. 2016). This focus limits their appeal and accessibility to the 'average' entrepreneur. Conversely, such a focus is less common in ECF markets, where many offerings do occur in traditional sectors and outside traditional geographic boundaries (e.g., financial centers) (Johan and Zhang 2021; Vismara 2016). In addition, traditional private investors take significant time and resources to perform detailed due diligence research on entrepreneurial firms. However, small, unsophisticated investors in ECF markets may lack the necessary skills to do so and further lack the incentives given their generally small investments (Ahlers et al. 2015; Audretsch et al. 2016; Cumming et al. 2021b).

Overall, the significant growth of ECF markets in recent years has provided new opportunities for entrepreneurs to sell their equity to a broad pool of investors without approaching traditional stock markets or traditional private investors. However, some characteristics of ECF markets (e.g., limited incentives and skills of the crowd to perform due diligence, less strict regulations and a lack of specialized information intermediaries) suggest that ECF markets may be less equipped to deal with asymmetric information and potential adverse selection issues. Therefore, there is significant room for—real or perceived—misvaluation and for entrepreneurs to time the ECF market and sell (what they believe is) overvalued equity. Below, we develop hypotheses on the impact of market timing on the financing and capital structure of ECF firms.

2.2 Hypothesis development

The notion that publicly held firms and new IPO firms time equity markets is well established. Consistent with market timing theory, Graham and Harvey (2001: 216) present survey evidence from 392 chief financial officers indicating that 67% view "the amount by which [their] stock is undervalued or overvalued by the market" as an important or very important factor shaping a firm's decision to issue stock. Studies focused on real-life financing events are consistent with this survey evidence in that firms are found to be more likely to issue equity (rather than debt) when their market valuations are high relative to book or past market values (Taggart 1977; Hovakimian et al. 2001). Additionally, IPOs coincide with high valuations (e.g., Loughran et al. 1994). In addition, there is convincing evidence that firms are more likely to issue equity in periods when investors are too optimistic about future earnings prospects (e.g., Loughran and Ritter 1997). Overall, for public firms, there is consistent evidence that firms are more likely to issue equity when shares are at high prices, the cost of equity is lower, or more generally equity market conditions are favorable.

However, what are the implications of such market timing by firms for the amount of equity capital raised? Likely most closely related to our study, Alti's (2006) work identifies firms that time markets as those firms that go public in hot markets. The author finds a very sizable impact of market timing in that while controlling for possible differences in firm size, IPO proceeds are approximately 40% higher for hot-market IPO firms relative to those of cold-market IPO firms.

Entrepreneurs who raise money in hot ECF markets can also take advantage of favorable market conditions. First, entrepreneurs need to set a fundraising target at the beginning of the ECF offering. This decision entails a tradeoff in that higher targets allow more money to be raised, but higher targets also increase the risk of not attracting enough capital to reach the target

(e.g., Rossi et al. 2021). The latter is problematic because ECF platforms operate using an "all-or-nothing" model (Cumming et al. 2020). Under this model, entrepreneurs raise nothing until the goal is reached. Market timing theory (e.g., Alti 2006) suggests that when hot markets present windows of opportunity with temporarily favorable ECF market conditions, ECF firms can set higher fundraising targets to take advantage of these favorable market conditions.

Second, if an ECF firm reaches its fundraising target before the campaign end date, entrepreneurs can collect additional investment in exchange for additional equity (Vismara 2018). This situation entails overfunding, which an entrepreneur is not obliged to accept but can choose to. Crowdinvestors who contribute to overfunding are subject to the same terms as other investors. Ultimately, if hot markets represent windows of opportunity with favorable ECF market conditions (e.g., a low cost of equity capital), entrepreneurs should react according to market timing theory by collecting more of the overfunding than they would otherwise. By doing so, entrepreneurs eventually will also raise more equity capital than their ex ante target amount.

Therefore, as market timers are expected to set higher targets and collect more overfunding, these firms should also raise more equity capital overall. As we note above, ECF markets are arguably less equipped to deal with asymmetric information and potential adverse selection issues (Vismara 2018). This situation leave significant room for misvaluation, which is at the root of market timing theory, and thus can provide entrepreneurs with an opportunity to take advantage of favorable ECF market conditions. Based on the above argumentations, we propose the following related hypotheses:

Hypothesis 1a In hot ECF markets, firms set higher *ex ante* fundraising targets.

Hypothesis 1b In hot ECF markets, firms raise a larger total amount of funding.

Baker and Wurgler (2002) in their seminal work argue that a firm's capital structure is the cumulative outcome of past attempts made to time the equity market. Using evidence from public

firms, the authors show that a weighted average of a firm's past market-to-book ratios—which, for example, takes high values for firms raising their external finance when their market-to-book ratios are high—is negatively related to leverage. The authors find large, persistent timing effects on leverage that extend beyond 10 years. As Alti (2006: 1681) argues, "the importance of this issue cannot be overstated: if true, high persistence of market timing effects would imply very loose leverage targets, suggesting a minimal role for traditional determinants of capital structure". To explain how market timing can have persistent effects on firms' capital structure, Baker and Wurgler (2002) argue that adjustment costs reduce the desirability of undoing market timing. Thus, in their model, "firms do not care to adjust their debt ratios towards a target in subsequent years" (Hovakimian 2006).

Following the logic of Baker and Wurgler's (2002) market timing theory of capital structure, one would expect to find a persistent difference in leverage between hot- and cold-market ECF firms. Hot-market ECF firms are expected to raise more equity capital, which should lead to persistently lower leverage ratios than those of cold-market ECF firms. Moreover, as Brav (2009) argues and shows, compared to those of publicly held firms, private firms' financial policies are more passive. If any effect is present, passive financial policies are expected to lead to more persistent effects of market timing in private ECF firms. Consistent with these principles, we hypothesize the following:

Hypothesis 2 Market timing by hot-market ECF firms has a long-term impact on their leverage, so leverage remains persistently lower for these firms than for cold-market ECF firms.

However, the notion that market timing has a persistent influence on capital structure is heavily debated. For example, Alti (2006) shows that hot-market IPO firms raise significantly more equity capital and, accordingly, lower their leverage ratios more than cold-market IPO firms. However, the author also finds that much of the sizable effect of market timing on leverage

is removed after one year, and two years after an IPO, the effect has completely vanished. In a similar vein, Leary and Roberts (2005) find that the effect of equity issues on leverage vanishes after approximately two to four years following the issue. Welch (2004) even shows that the effect of equity issue timing disappears immediately once dividend payments are accounted for.

Ultimately, it is possible that even when hot-market ECF firms raise more equity than cold-market ECF firms, this has only a short-term impact or even no impact at all on their capital structure. One reason is that hot-market ECF firms rebalance their capital structure quickly. Adjustment costs could actually be limited for hot-market ECF firms. Many ECF firms do have prior access to, for example, debt financing (Blaseg et al. 2021; Walthoff-Borm et al. 2018b). A larger equity buffer obtained through a hot-market issue might provide more power to negotiate with debt providers to access additional debt finance. In addition, debt providers themselves may be more willing to provide additional debt given the renewed and larger equity buffer of hot-market ECF firms. Accordingly, contrary to the prior hypothesis, we also present the following alternative hypothesis:

Hypothesis 3 Market timing by hot-market ECF firms has a short-term impact on their leverage such that any leverage differences to cold-market ECF firms quickly disappear.

3. Method

3.1 Data sources and sample

Our data come from several sources. Consistent with previous work (Butticè et al. 2020, 2021a; Ralcheva and Roosenboom 2020; Vismara 2016, 2019; Walthoff-Borm et al. 2018a), we focus on the two largest UK ECF platforms, Crowdcube and Seedrs, to identify UK firms that have successfully raised initial ECF. As noted in earlier work, platforms do not necessarily list all successful ECF campaigns on their websites (e.g., Butticè et al. 2021a; Walthoff-Borm et al. 2018b). To ensure maximum coverage, we used multiple online resources, including the

Wayback machine[1] and Crunchbase[2], to retrieve information about successful first-time ECF campaigns that, for some reason, were no longer listed on platform websites. We further used the Crowdfunding Tracker website[3], which lists all firms that launched ECF campaigns on either Crowdcube or Seedrs but went bankrupt in subsequent years. We focus on UK firms only to limit extrafinancial reasons for seeking crowdfunding in the UK (such as fostering internationalization) and to reduce cross-country heterogeneity related to different reporting and regulatory frameworks (Cumming and Johan 2017).

We start our data collection using the Crowdcube and Seedrs websites to identify and collect data on firms that have raised initial ECF. We select only ECF campaigns successfully completed before 2019 to allow for the availability of post-ECF year firm financial data in Orbis Europe (see below). For Crowdcube, we started by collecting all firm names, firm identifiers, and campaign-related information for firms raising initial ECF as listed on the Crowdcube web page. We then cross-checked these data with the Crunchbase data. After cleaning Crunchbase data related to Crowdcube campaigns (e.g., by removing all bond-type crowdfunding campaigns and campaigns by non-UK firms and addressing campaign date inconsistencies found between Crowdcube and Crunchbase), we did not identify additional ECF campaigns. As a last check, we also found that all firms with Crowdcube campaigns listed as failed on Crowdfunding Tracker were also present in our Crowdcube dataset. In total, we identified 584 firms that successfully raised initial ECF on Crowdcube.

[1] The Wayback Machine (web.archive.org) allows scholars to revisit previous versions of web pages by collecting website snapshots over time.

[2] Crunchbase is a database on start-ups and innovative companies, which is increasingly used (e.g., Cumming et al. 2016; Fisch and Block 2021). The database includes—besides information on team, technology and recent news—an overview of firms' previous financing rounds.

[3] See https://crowdfundingtracker.co.uk/company-status/liquidation/crowdcube/ and https://crowdfundingtracker.co.uk/financials/finance-payments/seedrs-insolvencies/

For Seedrs, we collected all firm names, firm identifiers, and campaign-related information for firms raising initial ECF as listed on the Seedrs website (206 firms). As we did for Crowdcube campaigns, we used Crunchbase to cross-check all campaigns available on the Seedrs website; this resulted in the addition of 24 firms that raised initial ECF but were no longer listed on the Seedrs website. Second, comparing our dataset to the Crowdfunding Tracker data resulted in the addition of another 22 firms that raised initial ECF. As a last check, we used the Wayback Machine to identify all possible historical snapshots of the website to identify firms that raised initial ECF but were not yet included in the sample. This resulted in the addition of another 69 firms to the dataset. Once we identified a firm funded via Seedrs (but not directly displayed on this site anymore) using either Crunchbase, Crowdfunding Tracker, or the Wayback Machine, it was possible to retrieve all campaign-related information. Seedrs does not remove campaign pages from the internet (although they cannot be directly found via the Seedrs website itself, all campaign pages on Seedrs share a similar link structure and could eventually be found via Google when searching with keywords "Seedrs campaign" and "company name"). In total, we identified 321 firms that successfully raised initial ECF on Seedrs.

Combining data from both platforms gave us an initial sample of 905 UK firms that successfully raised initial ECF. Using firm identifiers retrieved from the Crowdcube and Seedrs websites, we collected accounting data for the pre-ECF year (ECF_{-1}) to up to three years after the ECF campaign (ECF_{+3}). Disclosure requirements in the UK require privately held firms to publish annual accounting data via Companies House. We obtained these data from Orbis Europe, which is managed by Bureau Van Dijk. Orbis Europe contains high-quality accounting data on privately held (and publicly traded) firms and has been used in several previous studies (Butticè et al. 2021a; Duval et al. 2020; Vanacker et al. 2017). Some key data (e.g., shareholder

funds) have also been cross-checked with Fame (another Bureau Van Dijk database specifically focused on the UK). This database has also been used extensively (e.g., Brav 2009).

Firms had to fulfill several criteria to be part of our final sample. First, from the initial sample of 905 firms with first-time ECF campaigns, we excluded firms active in SIC code 6 "Finance, Insurance and Real Estate," as is typically done in capital structure studies. Second, we excluded firms for which total assets were different from total liabilities and shareholder funds. Third, we removed firms with missing information on our campaign characteristics of interest or that held their first ECF campaign in 2011. For 2011, we found only a handful of firms that completed their first ECF campaign on Crowdcube (only seven campaigns were completed on Crowdcube in 2011; Seedrs was only founded in 2012). Moreover, Orbis Europe provides only (post) 2011 firm financial data (while we needed firm financial data for the ECF_{-1} year as well for our regression analyses); thus, we excluded firms that raised equity crowdfunding in 2011 from the final sample. Fourth, we excluded firms that never filed financial statements and excluded firm-year observations with missing information on our variables of interest for a particular year. This reduced our sample to 738 firms for which all variables were available for the ECF_0 year. Finally, because we work with lagged independent variables in our regressions, we can only use firms with complete firm financial information for the ECF_{-1} year. As a result, the final sample includes 591 firms.

3.2 Variables

Detailed definitions for all variables used in the descriptive tables and regression analyses are provided in Appendix Table A.1.

Dependent variables. The first set of dependent variables relates to the equity crowdfunding campaign outcomes and is used in the analyses in Section 4.2. We measure the *target* amount, *overfunding* amount, and *raised* amount (all expressed in GBP). Equity

crowdfunding platforms operate in an all-or-nothing manner where campaigns need to raise at least the target amount for funds to be transferred to entrepreneurs (Cumming et al. 2020). As mentioned above, campaigns can raise more than the target amount, but entrepreneurs decide to accept this overfunding (or part of the overfunding). Consequently, the target amount and funding actually raised can differ on ECF platforms. In our multivariate regressions, we employ the natural logarithm (+1) of the *target* amount, *overfunding* amount, and *raised* amount as dependent variables.

The dependent variable of the capital structure regressions used in Section 4.3 is the *leverage ratio*. This ratio is measured as total debt divided by total assets, where total debt is defined as the sum of current and noncurrent liabilities (Rajan and Zingales 1995). In the multivariate regressions, we use the natural logarithm (+1) of this measure (e.g., Opler et al. 1999). In the robustness section, we also use a winsorized leverage variable.

A third set of dependent variables relates to debt financing and is used in Section 4.4. We examine the *total debt increase*, which includes the increase in both current and noncurrent liabilities. We also examine debt increase effects by dividing the total debt increase into both the *financial debt increase*, defined as the increase in the sum of long-term debt and loans, and the *operational debt increase*, defined as the increase in the sum of creditors, other current liabilities, and other noncurrent liabilities. All debt increase measures are expressed in GBP. In our multivariate regressions, we use the natural logarithm (+1) of these measures as dependent variables.

Independent variable: Definition of hot (and cold) markets. Market timing has two related implications (e.g., Alti 2006). First, firms are more likely to go to capital markets to raise equity capital when entrepreneurs perceive market conditions to be favorable. Indeed, as highlighted above, earlier work on, for example, IPOs has found that firms are more likely to go

public when investors are optimistic about future earnings and when valuations are higher (Loughran and Ritter 1997; Lucas and McDonald 1990; Ritter and Welch 2002; Vismara et al. 2012). Second, firms that raise equity capital when the market is favorable are likely to sell more equity than when market conditions are less favorable, which can have implications for firms' capital structure. We construct a hot market dummy that captures the market timing context on the basis of the first implication: when market conditions are favorable, at least from the perspective of firms, firms decide to issue equity, and clustered equity issues are observed. Empirically, we examine the second implication: the effect of market timing (i.e., issuing equity in a hot market context) on equity issuance size and capital structure.

As suggested above, we employ a volume-based definition to specify hot (and cold) ECF markets as our proxy for market timing attempts (Alti 2006; Coakley et al. 2008; Helwege and Liang 2004). We define hot (and cold) markets based on the volume of first-time ECF campaigns 6 months before the start of an ECF campaign on Crowdcube or Seedrs. We count all first-time ECF campaigns that were live during the six-month period before the start of a respective campaign.[4]

In line with earlier market timing studies in the IPO literature, we only use initial equity offerings (e.g., Alti 2006; Baker and Wurgler 2002). Studies in the ECF literature usually focus on initial and seasoned (follow-on) ECFs separately (e.g., Coakley et al. 2021b,c) because initial and seasoned ECFs are very different in nature. For example, initial (crowdfunding) equity offerings suffer from more information asymmetry because they have no prior campaign

[4] When we closely examine the monthly volume of initial ECF campaigns, we observe clear swings in initial ECF volume over time. For instance, December and January are generally months with lower activity, while October and May are generally months with higher activity. For other months, the picture is more complex. For example, April was characterized by high activity in 2016 but by low activity in 2018.

information and have to attract investors with whom firms have often not yet established a financing relationship (Coakley et al. 2021b; Butticè et al. 2017).

Moreover, we use a 6-month reference period to measure market sentiment (Bertoni et al. 2014; Cogliati et al. 2011): using a 6-month period (instead of a 3-month reference period, see, e.g., Alti 2006; Helwege and Liang 2004) allows enough time for entrepreneurs to react to changes in ECF market sentiment and to prepare the launch of their own ECF campaigns. Moreover, this period allows for the necessary due diligence activities to be undertaken by the platform before the launch of a campaign (Cumming et al. 2019). We also rerun all our analyses using a 3-month reference period as discussed in the robustness section. Our conclusions remain the same.

Eventually, hot (cold) periods are then defined as those that are above (below) the median in the distribution of the ECF volume: dummy variable *hot* takes a value of one if a firm launches its initial ECF campaign in a hot period (i.e., a six-month reference period with a volume of first-time ECF campaigns above the median) and zero otherwise. Rather than using a median cutoff to define hot market periods, we also use the top 25% cutoff.

Controls. We control for a range of variables found to be important capital structure determinants, including firm size, profitability, tangibility, and growth opportunities, among others (e.g., Brav 2009; Colla et al. 2013; Degryse et al. 2012; Rajan and Zingales 1995; Titman and Wessels 1988). Tangibility (the *tangible fixed assets ratio*) is defined as the ratio of tangible fixed assets to total assets (Degryse et al. 2012). Small UK firms report a balance sheet, but they often do not report a profit and loss statement. Accordingly, we measure profitability (the *profitability ratio*) as the difference in other shareholder funds (which primarily includes retained earnings/losses) between the current (*t*) and previous year (*t-1*) scaled by total assets (*t*) (see also Walthoff-Borm et al., 2018b). As a portion of the equity capital raised may be recorded in the

share premium account (which is part of the other shareholder funds), we subtract the part of the equity raised not recorded as capital increase (between *t-1* and *t*) from the difference in other shareholder funds (between *t-1* and *t*).[5] To minimize concerns that outliers are driving our findings, we winsorize the profitability ratio (which we found to be prone to outliers) at the 5% level (at both the low and high sides) (Cole 2013). The *intangible fixed assets ratio*—used as a proxy for growth opportunities—is defined as the ratio of intangible fixed assets to total assets (Degryse et al. 2012). We control for firm *size*, which is defined as the natural logarithm (+1) of total assets (Degryse et al. 2012). Moreover, we include firm *age*, which is defined as the Orbis Europe year relating to firm financial information minus the incorporation year (Ralcheva and Roosenboom 2020). We also include a *platform* dummy (1=Seedrs) to control for the possibility that different platforms may attract different types of firms and that the availability of different platform characteristics may lead to different outcomes (Coakley et al., 2021c; Ralcheva and Roosenboom 2020). Finally, we include *industry-fixed effects* (SIC 1-digit) to capture industry effects.

4. Results

4.1 Descriptive statistics

Table 1 presents a dynamic account of several firm characteristics for the year before a campaign (ECF_{-1}), the year of a campaign (ECF_0) and up to three years after a campaign ($ECF_{+1, +2, +3}$). We focus on all firms that also have available ECF_{-1} data (591 firms).[6]

[5] The correlation between our profitability measure based on the difference in other shareholder funds between *t-1* and *t* (corrected for the part of the amount raised not recorded in a capital increase between *t-1* and *t*) and net income/total assets in *t* equals 0.99 (for 146 firm-year observations that report detailed profit and loss information for the sample period ranging from the ECF_{-1} to ECF_{+3} year). This provides clear evidence that our profitability measure works well.

[6] The number of observations drops in each year post-ECF for several reasons. As an example, for the ECF_{+1} year, the number of observations decreases by 61, as a consequence of i) firm discontinuation in the year after the ECF campaign (43 firms); ii) firms still being active but with the campaign taking place in the last year of available Orbis

[Insert Table 1 about here]

For the year before firms raised initial equity crowdfunding (ECF_{-1}), two important observations can be made. First, firms incurred significant losses. Specifically, for the average firm, losses equaled a staggering 97% of total assets. For the median firm, losses equaled 11% of total assets. Second, firms had excessively high leverage ratios. The average firm had more liabilities than assets (thus, the average firm has negative equity due to accumulated losses for previous years). The median firm is also very highly leveraged. These findings are consistent with previous work showing that firms that approach equity crowdfunding platforms lack internal funds and additional debt capacity (Walthoff-Borm et al., 2018b). Unsurprisingly, in the year of an equity crowdfunding campaign (ECF_0), firms grow significantly in size (total assets) and leverage decreases significantly. However, losses remain significant and are even greater than in the pre-ECF campaign year. For the average firm, losses are now greater than total assets, and for the median firm, losses equal approximately 57% of total assets. In the years following a crowdfunding campaign ($ECF_{+1, +2, +3}$), leverage gradually increases again. For the average firm, leverage quickly returns to excessive levels. This finding may be explained by the fact that firms continue to make significant losses, which gradually reduces their equity buffers.

Table 2 provides summary statistics on variables related to the ECF campaign (Panel A) and firm financial characteristics (Panel B) of the full sample and for the hot and cold market subsamples. As highlighted above, we present statistics defining hot markets using the median cutoff and top 25% cutoff in terms of the number of campaigns running over the past 6 months.

[Insert Table 2 about here]

Europe information (12 firms); and iii) other reasons, including a missing gap year in Orbis Europe, prolonged book year, or other issues with accounting data (6 firms).

The ECF campaign characteristics for hot and cold markets highlight that in hot markets, firms set higher targets. In addition, when campaigns surpass the target, firms can also decide to collect "overfunding." In hot markets, firms also collect more overfunding. As ECF firms in hot markets set their targets higher and as they accept more overfunding, unsurprisingly, their amounts raised are significantly higher than those of cold market ECF firms. All mean amounts are significantly different between hot and cold markets at 5% or less (two-tailed t-test).

Regarding firm financial characteristics, there are few differences between hot- and cold-market ECF firms. Hot market firms are larger than cold market firms. Surprisingly, the mean leverage ratios do not differ between hot- and cold-market ECF firms for the ECF_0 year (although we find preliminary evidence that hot-market firms raise more equity than cold-market firms). We do find that the mean leverage ratios significantly differ in the ECF_{-1} year (at less than 1%), so hot market ECF firms are less leveraged than cold market firms.

Table 3 shows the correlations between the dependent variables, the hot market dummies, and the control variables, except for the industry-fixed effects. The positive and significant correlations found between the hot market dummies and target amount, overfunding amount, and raised amount again provide preliminary evidence that firms launching an ECF in a hot market set their targets higher, experience higher overfunding, and raise more money overall. Unsurprisingly, ECF firms raising more money through a campaign have lower leverage ratios.

[Insert Table 3 about here]

4.2 Hot markets and ECF campaign outcomes

In the ECF context, launching a first-time ECF campaign in a hot ECF market can have two related implications. First, firms are more likely to set higher targets when entrepreneurs perceive market conditions to be favorable, as they are more confident that their targets will be reached. Second, firms that launch their ECF campaign in a hot market can take further advantage of

favorable market conditions by selling additional equity (more than the target they initially set) and thus further increasing the total amount raised.

Table 4 reports the results of OLS regressions examining the drivers of the target amount, overfunding and total amount raised through a firm's initial ECF campaign.

[Insert Table 4 about here]

While controlling for a set of important variables, Table 4 confirms the descriptive observations listed above showing that hot market firms tend to set higher targets (consistent with Hypothesis 1a), experience more overfunding, and eventually raise more money than cold market firms (consistent with Hypothesis 1b). These findings are also economically significant. For example, hot-market ECF firms (based on the top 25% quartile split) set target ratios that are approximately 17% higher, accept 208% more overfunding, and eventually raise 23% more than cold-market ECF firms.

Various firm characteristics are significant determinants of ECF issuance activity. Larger and older ECF firms set their targets higher, accept more overfunding, and raise more money. ECF firms with more tangible fixed assets and firms with campaigns listed on the Seedrs platform set their targets lower, resulting in less money being raised (there is no effect on the amount of overfunding).

Hot market firms could issue more equity capital than cold market firms for reasons other than market timing (Alti 2006). One reason is that hot market firms might have higher growth ambitions and therefore need more equity capital to finance their growth in the ECF_0 year or in the years following. For these firms, entrepreneurs may then not perceive favorable market conditions, causing them to raise more money, but their future growth plans (which need to be financed) cause them to raise more financing. However, it is unlikely that such anticipation of future growth plans is driving our results. First, we control for the intangible assets ratio, which is

frequently used in previous literature as a proxy for future growth opportunities (Degryse et al. 2012; Michaelas et al. 1999; Sogorb-Mira 2005). Second, when we regress total asset growth or fixed asset growth[7] (Carpenter and Petersen 2002; Decramer and Vanormelingen 2016) for the ECF_0 year to the ECF_{+3} year on the same set of independent variables used before, we find no evidence that hot market firms tend to grow faster (i.e., invest more in total or fixed assets) in (post) ECF years.

Another alternative explanation for our findings could be that when hot market firms have *more* leverage in the ECF_{-1} year compared to cold market firms, hot market firms issue more equity to revert back to their leverage targets in the ECF_0 year. However, we find no indications that hot market firms do so. First, hot market firms actually have significantly *less* leverage than cold market firms in the ECF_{-1} year. Second, we rerun the regressions from Table 4 controlling for leverage in the ECF_{-1} year. Our findings remain the same. Consequently, we find no evidence that hot market firms issue more equity capital because they want to revert their leverage back to lower levels in the ECF_0 year.

4.3 Hot markets and firm capital structure

The findings listed in the previous section show that market timing affects the amounts raised by firms that successfully complete their initial ECF campaign such that hot market firms raise more equity capital (and set their targets higher and experience more overfunding). Therefore, the impact of market timing on firms' leverage ratios is likely negative, and this negative effect may be persistent over time.

[7] Using fixed asset growth only has the advantage of excluding the effect of ECF capital being recorded as cash in the ECF year, which influences the growth measure based on total assets.

In Table 5, we examine the impact of market timing on firm capital structure.[8] Surprisingly, we fail to find an effect of market timing on firm leverage for the year of a campaign and all post-ECF years. Clearly, as we show above, for the average (median) ECF firm, leverage decreases in the year of a campaign (Table 1). However, the above finding suggests that although hot market ECF firms raise more equity capital than cold market ECF firms, this effect does not lead to significant differences in leverage between hot and cold market ECF firms in the year of a campaign (or afterward). This finding is consistent with Hypothesis 3 (but not with the alternative, Hypothesis 2).

[Insert Table 5 about here]

Before we delve deeper into what drives the above finding, we first present more insights on the control variables listed in Table 5, as we know little about the drivers of capital structure in ECF firms. Surprisingly, we fail to find an effect of the tangible fixed assets ratio on ECF firm leverage. However, consistent with pecking order theory, more profitable firms have lower leverage ratios. In addition, larger firms have higher leverage ratios in the ECF_0 year but lower leverage ratios in post-ECF years. Older firms tend to have higher leverage ratios (although not significant across all years).

4.4 Hot markets and debt issues

The overall conclusion that can be drawn from the results presented thus far is as follows: although hot market firms raise more equity capital during their first ECF campaign than cold market firms, their leverage ratios do not differ in the ECF_0 year (and in post-ECF years). Combined, these findings suggest that relative to cold market firms, hot market firms not only

[8] Our qualitative results are not affected when using the (nonlog-transformed) leverage ratio as the dependent variable (unreported).

raise more equity (which should lower their leverage) but also contemporaneously attract more debt in the ECF_0 year. We examine this idea in more detail below.

In Table 6, we report Tobit regressions that examine the drivers of total debt increases, financial debt increases, and operational debt increases.

[Insert Table 6 about here]

After controlling for firm and industry characteristics, we find that hot market firms attract more debt in the ECF_0 year than cold market firms. To disentangle the effects on total debt increases further, we examine increases in financial and operational debt separately. The significant coefficients of the hot market dummies of the financial debt increase regressions indicate that the greater increase in total debt for hot market firms is mainly driven by an increase in financial debt. However, the regression with which we define a hot market based on the median split criterion also provides evidence that hot market firms tend to increase their operational debt more than cold market firms in the ECF_0 year.

To facilitate interpretation, we employ McDonald and Moffitt's (1980) decomposition method (results are reported below the coefficient estimates in Table 6). This involves a transformation of the Tobit coefficient into (a) the effect of the hot market dummy on the probability of raising debt (also called the extensive margin effect) and (b) the effect on the amount of debt raised, conditional on the firm raising debt (also called the intensive margin effect). We first discuss the extensive margin effects: when using the median split criterion, hot market firms have a 7% higher probability of raising debt (9% for financial debt and 7% for operational debt), while when using the top quartile split criterion, hot market firms have a 5.5% higher probability of raising debt (10% for financial debt). Related to the intensive margin effects, we find that hot market ECF firms raised significantly more total debt (financial debt, and operational debt) once controlling for the propensity to raise debt. Under the top quartile split

criterion, hot market firms also raised more total debt (and financial debt; we fail to find a significant effect for operational debt).

Taken together, these results show that firms in hot markets have a higher probability of raising debt (extensive margin) and of raising more debt once controlling for the propensity to increase debt (intensive margin), where the intensive margin effects outweigh the extensive margin effects. Consequently, the effect of market timing on the capital structure of ECF firms is not persistent but vanishes immediately. This evidence is once again consistent with Hypothesis 3.

4.5 Robustness tests

We conducted several additional regressions to assess the robustness of our main findings. First, we used 3 months (rather than 6 months) as a reference period to define the hot market dummy. The findings remain similar. Second, we rerun all regressions while controlling for leverage. We winsorized leverage at the 5% level to reduce the likelihood of extreme observations driving our results. Our findings remain unaltered. Finally, we rerun the regressions on capital structure using the winsorized version of leverage instead of the natural logarithm (+1). Again, the findings remain similar.

5. Conclusion

ECF is an innovative form of financing that is increasingly used by innovative ventures to finance their growth. In this paper, we provide first-time evidence of the consequences of market timing for ECF firms' capital structures. To do so, we use a dataset of 591 firms raising initial ECF from either Crowdcube or Seedrs, two of the UK's leading ECF platforms.

Our paper has important contributions for several streams of literature. First, we contribute to the entrepreneurial finance literature and, in particular, the literature on ECF. While research on ECF has been growing rapidly, to date, we still know little about the capital structure

of ECF firms. Consistent with previous work, we find that ECF firms are heavily leveraged *before* an ECF campaign and have accumulated significant losses (Walthoff-Borm et al. 2018b). We add to previous research by providing initial evidence on how market timing in the ECF context (proxied by firms issuing equity in hot ECF markets) influences several capital-raising outcomes. More specifically, we show that in hot markets, ECF firms set higher fundraising targets, experience higher overfunding and eventually raise more equity overall. These findings are extremely important because entrepreneurs often require significant external financial resources to support their growth and/or contribute innovations to the market (Cassar 2004). By timing the market, entrepreneurs can attract significantly more equity capital to support their firms. Certainly, our study does not capture all possible market timing effects. Future studies could examine possible additional effects, such as changes in equity pricing preceding and during hot (cold) markets and their effects on ECF campaign outcomes.

In addition, previous ECF studies have focused on interrelationships between successful ECF campaigns and follow-on equity fundraising (see Vanacker et al. 2019 for a review). For example, Butticè et al. (2020) show that ECF facilitates the attraction of venture capital financing, especially when firms select a nominee shareholder structure (i.e., a structure wherein the shares of the crowd are managed by a nominee). Our study adds to this stream of work by providing unique insights into how hot-market ECF firms often contemporaneously attract new *financial debt* in the year of a successful campaign. Our findings are nontrivial; hot market ECF firms raise more financial debt while controlling for the propensity to raise financial debt, which is also higher for hot market ECF firms. By showing links between ECF campaigns and financial debt, our study contributes to a further "desegmentation" of research in entrepreneurial finance (Cumming and Vismara 2017).

Second, we contribute to capital structure research. While the market timing theory of capital structure (Baker and Wurgler 2002) has emerged as an influential theory, it has been almost exclusively tested in a public firm context. We extend this perspective to an ECF context. Such an extension is nontrivial because entrepreneurs currently increasingly sell equity in ECF markets. While these markets share similarities with IPO markets, they are also different (Cumming et al. 2021a,b; Vismara 2018). For example, ECF markets are arguably less equipped to deal with information asymmetry and potential adverse selection. These issues are at the core of market timing theory and the ability of entrepreneurs to time markets. In light of our finding that hot-market ECF firms raise significantly more equity during an ECF campaign, it is rather surprising that we failed to find an effect of market timing on leverage. By doing so, we add to an important debate on capital structure theory. On the one hand, the evidence that market timing does not affect leverage is inconsistent with a market timing theory of capital structure (Baker and Wurgler 2002). On the other hand, it provides evidence more in line with traditional capital structure theories in that entrepreneurs rebalance quickly to move toward a target capital structure (e.g., Alti 2006). As we highlight above, hot market ECF firms do so by attracting more (financial) debt in the year of an ECF campaign.

Our findings also have important implications for entrepreneurs and policy-makers. For entrepreneurs, our study suggests that all else being equal, a well-timed offering can have significant effects on ECF fundraising. For policy-makers, our findings highlight that ECF is especially used by overleveraged firms. Unsurprisingly, a successful ECF campaign can significantly reduce the leverage of firms (in both hot and cold ECF markets). However, we also find that leverage increases quickly in the years after a successful ECF campaign to again reach excessive levels. Given that an initial ECF campaign represents only one event in a venture's financing history, future studies may wish to take a broader perspective and, for example,

examine the consequences of ECF firms' capital structure for subsequent firm growth and survival.

References

Ahlers, G. K., Cumming, D. J., Günther, C., & Schweizer, D. (2015). Signaling in equity crowdfunding. *Entrepreneurship Theory and Practice*, 39(4), 955-980. https://doi.org/10.1111/etap.12157

Alti, A. (2006). How persistent is the impact of market timing on capital structure? *The Journal of Finance*, 61(4), 1681–1710. https://doi.org/10.1111/j.1540-6261.2006.00886.x

Audretsch, D. B., Lehmann, E. E., Paleari, S., & Vismara, S. (2016). Entrepreneurial finance and technology transfer. *The Journal of Technology Transfer*, 41(1), 1-9. https://doi.org/10.1007/s10961-014-9381-8

Baker, M., & Wurgler, J. (2002). Market timing and capital structure. *The Journal of Finance*, 57(1), 1-32. https://doi.org/10.1111/1540-6261.00414

Beauhurst. (2021). The deal equity investment in the UK in 2020. Available at: https://www.beauhurst.com/research/the-deal/.

Bertoni, F., Meoli, M., & Vismara, S. (2014). Board independence, ownership structure and the valuation of IPOs in continental Europe. *Corporate Governance: An International Review*, 22(2), 116–131. https://doi.org/10.1111/corg.12051

Blaseg, D., Cumming, D. J., & Koetter, M. (2021). Equity crowdfunding: High-quality or low-quality entrepreneurs? *Entrepreneurship Theory and Practice*, 45(3), 505-530. https://doi.org/10.1177/1042258719899427

Brav, O. (2009). Access to capital, capital structure, and the funding of the firm. *The Journal of Finance*, 64(1), 263–308. https://doi.org/10.1111/j.1540-6261.2008.01434.x

Bruno, A. V., Leidecker, J. K., & Harder, J. W. (1987). Why firms fail. *Business Horizons*, 30(2), 50-58. https://doi.org/10.1016/0007-6813(87)90009-7

Bruton, G., Khavul, S., Siegel, D., & Wright, M. (2015). New financial alternatives in seeding entrepreneurship: Microfinance, crowdfunding, and peer-to-peer innovations. *Entrepreneurship Theory and Practice*, 39(1), 9-26. https://doi.org/10.1111/etap.12143

Butticè, V., Colombo, M. G., & Wright, M. (2017). Serial crowdfunding, social capital, and project success. *Entrepreneurship Theory and Practice*, 41(2), 183-207. https://doi.org/10.1111/etap.12271

Butticè, V., Di Pietro, F., & Tenca, F. (2020). Is equity crowdfunding always good? Deal structure and the attraction of venture capital investors. *Journal of Corporate Finance*, 65, 101773. https://doi.org/10.1016/j.jcorpfin.2020.101773

Butticè, V., Di Pietro, F., & Tenca, F. (2021a). They do not look alike: What kind of private investors do equity crowdfunded firms attract? *The Journal of Technology Transfer*. (Forthcoming).

Butticè, V., Collewaert, V., Stroe, S., Vanacker, T., Vismara, S., & Walthoff-Borm, X. (2021b). Equity crowdfunders' human capital and signal set formation: Evidence from eye tracking. *Entrepreneurship Theory and Practice*. https://doi.org/10.1177/10422587211026860

Carpenter, R. E., & Petersen, B. C. (2002). Is the growth of small firms constrained by internal finance? *Review of Economics and Statistics*, 84(2), 298–309. https://doi.org/10.1162/003465302317411541

Cassar, G. (2004). The financing of business start-ups. *Journal of Business Venturing*, 19(2), 261-283. https://doi.org/10.1016/S0883-9026(03)00029-6

Coakley, J., Hadass, L., & Wood, A. (2008). Hot IPOs can damage your long-run wealth! *Applied Financial Economics*, 18(14), 1111–1120. https://doi.org/10.1080/09603100701564353

Coakley, J., Lazos, A., Liñares-Zegarra, J. M. (2021a). Equity crowdfunding founder teams: Campaign success and venture failure. *British Journal of Management*, 1467-8551, 12494. https://doi.org/10.1111/1467-8551.12494

Coakley, J., Lazos, A., Liñares-Zegarra, J. M. (2021b). Seasoned equity crowdfunded offerings. *Journal of Corporate Finance*, 101880. https://doi.org/10.1016/j.jcorpfin.2020.101880

Coakley, J., Lazos, A., Liñares-Zegarra, J. M. (2021c). Strategic entrepreneurial choice between competing crowdfunding platforms. *The Journal of Technology Transfer*. (Forthcoming).

Cogliati, G. M., Paleari, S., & Vismara, S. (2011). IPO pricing: Growth rates implied in offer prices. *Annals of Finance*, 7(1), 53–82. https://doi.org/10.1007/s10436-010-0170-6

Cole, R. A. (2013). What do we know about the capital structure of privately held US firms? Evidence from the surveys of small business finance. *Financial Management*, 42(4), 777–813. https://doi.org/10.1111/fima.12015

Colombo, M. G., Cumming, D. J., & Vismara, S. (2016). Governmental venture capital for innovative young firms. *The Journal of Technology Transfer*, 41(1), 10-24. https://doi.org/10.1007/s10961-014-9380-9

Colla, P., Ippolito, F., & Li, K. (2013). Debt specialization. *The Journal of Finance*, 68(5), 2117–2141. https://doi.org/10.1111/jofi.12052

Cosh, A., Cumming, D. J., & Hughes, A. (2009). Outside entrepreneurial capital. *The Economic Journal*, 119(540), 1494-1533. https://doi.org/10.1111/j.1468-0297.2009.02270.x

Cumming, D. J., Walz, U., & Werth, J. C. (2016). Entrepreneurial spawning: experience, education, and exit. *Financial Review*, 51(4), 507-525. https://doi.org/10.1111/fire.12109

Cumming, D. J., & Johan, S. (2017). Crowdfunding and entrepreneurial internationalization. In The world scientific reference on entrepreneurship: Volume 2: Entrepreneurial finance—Managerial and policy implications (pp. 109–126). London: World Scientific. https://doi.org/10.1142/9789813220607_0005

Cumming, D. J., & Vismara, S. (2017). De-segmenting research in entrepreneurial finance. *Venture Capital*, 19(1-2), 17-27. https://doi.org/10.1080/13691066.2016.1225910

Cumming, D. J., Johan, S., & Zhang, Y. (2019). The role of due diligence in crowdfunding platforms. *Journal of Banking & Finance*, 108, 105661. https://doi.org/10.1016/j.jbankfin.2019.105661

Cumming, D. J., Leboeuf, G., & Schwienbacher, A. (2020). Crowdfunding models: Keep-it-all vs. all-or-nothing. *Financial Management*, 49(2), 331-360. https://doi.org/10.1111/fima.12262

Cumming, D. J., Meoli, M., & Vismara, S. (2021a). Does equity crowdfunding democratize entrepreneurial finance? *Small Business Economics*, 56(2), 533-552. https://doi.org/10.1007/s11187-019-00188-z

Cumming, D. J., Vanacker, T., & Zahra, S. A. (2021b). Equity crowdfunding and governance: Toward an integrative model and research agenda. *Academy of Management Perspectives*, 35(1), 69-95. https://doi.org/10.5465/amp.2017.0208

Decramer, S., & Vanormelingen, S. (2016). The effectiveness of investment subsidies: Evidence from a regression discontinuity design. *Small Business Economics*, 47(4), 1007–1032. https://doi.org/10.1007/s11187-016-9749-2

Degryse, H., de Goeij, P., & Kappert, P. (2012). The impact of firm and industry characteristics on small firms' capital structure. *Small Business Economics*, 38(4), 431–447. https://doi.org/10.1007/s11187-010-9281-8

Deloof, M., La Rocca, M., & Vanacker, T. (2019). Local banking development and the use of debt financing by new firms. *Entrepreneurship Theory and Practice*, 43(6), 1250-1276. https://doi.org/10.1177/1042258718783486

Duval, R., Hong, G. H., & Timmer, Y. (2020). Financial frictions and the great productivity slowdown. *The Review of Financial Studies*, 33(2), 475–503. https://doi.org/10.1093/rfs/hhz063

Fisch, C., & Block, J. H. (2021). How does entrepreneurial failure change an entrepreneur's digital identity? Evidence from Twitter data. *Journal of Business Venturing*, 36(1), 106015. https://doi.org/10.1016/j.jbusvent.2020.106015

Frank, M. Z., & Goyal, V. K. (2008). *Trade-off and pecking order theories of debt*. Amsterdam: Elsevier Science. https://doi.org/10.1016/B978-0-444-53265-7.50004-4

Frank, M. Z., & Goyal, V. K. (2009). Capital structure decisions: Which factors are reliably important? *Financial Management*, 38(1), 1-37. https://doi.org/10.1111/j.1755-053X.2009.01026.x

Gompers, P., & Lerner, J. (2000). Money chasing deals? The impact of fund inflows on private equity valuations. *Journal of Financial Economics*, 55(2), 281-325. https://doi.org/10.1016/S0304-405X(99)00052-5

Graham, J. R., & Harvey, C. R. (2001). The theory and practice of corporate finance: Evidence from the field. *Journal of Financial Economics*, 60(2-3), 187-243. https://doi.org/10.1016/S0304-405X(01)00044-7

Helwege, J., & Liang, N. (2004). Initial public offerings in hot and cold markets. *Journal of Financial and Quantitative Analysis*, 541–569. https://doi.org/10.1017/S0022109000004026

Hornuf, L., Schmitt, M., & Stenzhorn, E. (2018). Equity crowdfunding in Germany and the United Kingdom: Follow-up funding and firm failure. *Corporate Governance: An International Review*, 26(5), 331-354. https://doi.org/10.1111/corg.12260

Hornuf, L., & Schwienbacher, A. (2018). Market mechanisms and funding dynamics in equity crowdfunding. *Journal of Corporate Finance*, 50, 556-574. https://doi.org/10.1016/j.jcorpfin.2017.08.009

Hovakimian, A., Opler, T., & Titman, S. (2001). The debt-equity choice. *Journal of Financial and Quantitative Analysis*, 36(1), 1-24. https://doi.org/10.2307/2676195

Hovakimian, A. (2006). Are observed capital structures determined by equity market timing? *Journal of Financial and Quantitative Analysis*, 41(1), 221-243. https://doi.org/10.1017/S0022109000002489

Huang, R., & Ritter, J. R. (2009). Testing theories of capital structure and estimating the speed of adjustment. *Journal of Financial and Quantitative analysis*, 44(2), 237-271. https://doi.org/10.1017/S0022109009090152

Johan, S., & Zhang, Y. (2021). Investors' industry preference in equity crowdfunding. *The Journal of Technology Transfer*. (Forthcoming).

Kerr, W., & Nanda, R. (2009). *Financing constraints and entrepreneurship*. Working paper no. 15498, National Bureau of Economic Research. Washington, DC. https://doi.org/10.3386/w15498

Kleinert, S., Volkmann, C., & Grünhagen, M. (2020). Third-party signals in equity crowdfunding: The role of prior financing. *Small Business Economics*, 54(1), 341-365. https://doi.org/10.1007/s11187-018-0125-2

Kleinert, S., & Mochkabadi, K. (2021). Gender stereotypes in equity crowdfunding: the effect of gender bias on the interpretation of quality signals. *The Journal of Technology Transfer*. (Forthcoming).

Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. *The Journal of Finance*, 28(4), 911-922. https://doi.org/10.2307/2978343

Laitinen, E. K. (1992). Prediction of failure of a newly founded firm. *Journal of Business Venturing*, 7(4), 323-340. https://doi.org/10.1016/0883-9026(92)90005-C

Landström, H. (2017). Advanced introduction to entrepreneurial finance. Cheltenham: Edward Elgar Publishing.

Leary, M. T., & Roberts, M. R. (2005). Do firms rebalance their capital structures? *The Journal of Finance*, 60(6), 2575-2619. https://doi.org/10.1111/j.1540-6261.2005.00811.x

Loughran, T., Ritter, J. R., & Rydqvist, K. (1994). Initial public offerings: International insights. *Pacific-Basin Finance Journal*, 2(2-3), 165-199. https://doi.org/10.1016/0927-538X(94)90016-7

Loughran, T., & Ritter, J. R. (1997). The operating performance of firms conducting seasoned equity offerings. *The Journal of Finance*, 52(5), 1823-1850. https://doi.org/10.1111/j.1540-6261.1997.tb02743.x

Lucas, D. J., & McDonald, R. L. (1990). Equity issues and stock price dynamics. *The Journal of Finance*, 45(4), 1019-1043. https://doi.org/10.1111/j.1540-6261.1990.tb02425.x

Lukkarinen, A., Teich, J. E., Wallenius, H., & Wallenius, J. (2016). Success drivers of online equity crowdfunding campaigns. *Decision Support Systems*, 87, 26-38. https://doi.org/10.1016/j.dss.2016.04.006

Mahmood, A., Luffarelli, J., & Mukesh, M. (2019). What's in a logo? The impact of complex visual cues in equity crowdfunding. *Journal of Business Venturing*, 34(1), 41-62. https://doi.org/10.1016/j.jbusvent.2018.09.006

McDonald, J. F., & Moffitt, R. A. (1980). The uses of Tobit analysis. *The review of Economics and Statistics*, 318–321. https://doi.org/10.2307/1924766

Michaelas, N., Chittenden, F., & Poutziouris, P. (1999). Financial policy and capital structure choice in UK SMEs: Empirical evidence from company panel data. *Small Business Economics*, 12(2), 113–130. https://doi.org/10.1023/A:1008010724051

Myers, S. C. (1984). The capital structure puzzle. *The Journal of Finance*, 39(3), 574-592. https://doi.org/10.2307/2327916

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187-221. https://doi.org/10.1016/0304-405X(84)90023-0

Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: A correction. *The American Economic Review*, 53(3), 433-443.

Opler, T., Pinkowitz, L., Stulz, R., & Williamson, R. (1999). The determinants and implications of corporate cash holdings. *Journal of Financial Economics*, 52(1), 3-46. https://doi.org/10.1016/S0304-405X(99)00003-3

Que, J., & Zhang, X. (2021). Money chasing hot industries? Investor attention and valuation of venture capital backed firms. *Journal of Corporate Finance*, 68, 101949. https://doi.org/10.1016/j.jcorpfin.2021.101949

Rajan, R. G., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *The Journal of Finance*, 50(5), 1421–1460. https://doi.org/10.1111/j.1540-6261.1995.tb05184.x

Ralcheva, A., & Roosenboom, P. (2020). Forecasting success in equity crowdfunding. *Small Business Economics*, 55, 39–56. https://doi.org/10.1007/s11187-019-00144-x

Ritter, J. R., & Welch, I. (2002). A review of IPO activity, pricing, and allocations. *The Journal of Finance*, 57(4), 1795-1828. https://doi.org/10.1111/1540-6261.00478

Robb, A. M., & Robinson, D. T. (2014). The capital structure decisions of new firms. *The Review of Financial Studies*, 27(1), 153-179. https://doi.org/10.1093/rfs/hhs072

Rossi, A., Vanacker, T., & Vismara, S. (2021). Equity crowdfunding: New evidence from US and UK markets. *Review of Corporate Finance*, 1(3-4), 407–453. http://dx.doi.org/10.1561/114.00000009

Signori, A., & Vismara, S. (2018). Does success bring success? The post-offering lives of equity-crowdfunded firms. *Journal of Corporate Finance*, 50, 575-591. https://doi.org/10.1016/j.jcorpfin.2017.10.018

Sogorb-Mira, F. (2005). How SME uniqueness affects capital structure: Evidence from a 1994-1998 Spanish data panel. *Small Business Economics*, 25, 447–457. https://doi.org/10.1007/s11187-004-6486-8

Taggart, R. A. (1977). A model of corporate financing decisions. *The Journal of Finance*, 32(5), 1467-1484. https://doi.org/10.2307/2326804

Titman, S., & Wessels, R. (1988). The determinants of capital structure choice. *The Journal of Finance*, 43(1), 1–19. https://doi.org/10.1111/j.1540-6261.1988.tb02585.x

Vanacker, T., Collewaert, V., & Zahra, S. A. (2017). Slack resources, firm performance, and the institutional context: Evidence from privately held European firms. *Strategic Management Journal*, 38(6), 1305–1326. https://doi.org/10.1002/smj.2583

Vanacker, T., Vismara, S., & Walthoff-Borm, X. (2019). *What happens after a crowdfunding campaign?* Cheltenham: Edward Elgar Publishing. https://doi.org/10.4337/9781788117210.00015

Vismara, S., Paleari, S., & Ritter, J. R. (2012). Europe's second markets for small companies. *European Financial Management*, 18(3), 352-388. https://doi.org/10.1111/j.1468-036X.2012.00641.x

Vismara, S. (2016). Equity retention and social network theory in equity crowdfunding. *Small Business Economics*, 46, 579–590. https://doi.org/10.1007/s11187-016-9710-4

Vismara, S. (2018). Information cascades among investors in equity crowdfunding. *Entrepreneurship Theory and Practice*, 42(3), 467-497. https://doi.org/10.1111/etap.12261

Vismara, S. (2019). Sustainability in equity crowdfunding. *Technological Forecasting and Social Change*, 141, 98–106. https://doi.org/10.1016/j.techfore.2018.07.014

Vismara, S. (2021). Expanding corporate finance perspectives to equity crowdfunding. *The Journal of Technology Transfer*.

Walthoff-Borm, X., Vanacker, T., & Collewaert, V. (2018a). Equity crowdfunding, shareholder structures, and firm performance. *Corporate Governance: An International Review*, 26(5), 314–330. https://doi.org/10.1111/corg.12259

Walthoff-Borm, X., Schwienbacher, A., & Vanacker, T. (2018b). Equity crowdfunding: First resort or last resort? *Journal of Business Venturing*, 33(4), 513–533. https://doi.org/10.1016/j.jbusvent.2018.04.001

Welch, I. (2004). Capital structure and stock return. *Journal of Political Economy*, 112, 106-131. https://doi.org/10.1086/379933

Zingales, L. (1995). Insider ownership and the decision to go public. *The Review of Economic Studies*, 62(3), 425-448. https://doi.org/10.2307/2298036

Table 1 Basic firm characteristics in ECF time

Panel A: Means (S.D.)								
Year (t)	N	Total assets$_t$	Size$_t$	Age$_t$	Tangible fixed assets ratio$_t$	Intangible fixed assets ratio$_t$	Profitability ratio$_t$	Leverage ratio$_t$
ECF$_{-1}$	591	452,154	10.81	2.80	0.15	0.09	-0.97	1.71
		(1,763,233)	(2.78)	(2.74)	(0.24)	(0.22)	(2.12)	(1.96)
ECF$_0$	591	781,227	12.37	3.80	0.12	0.07	-1.23	0.80
		(2,759,965)	(1.56)	(2.74)	(0.20)	(0.17)	(1.79)	(1.14)
ECF$_{+1}$	530	1,062,707	12.42	4.79	0.14	0.08	-0.69	1.13
		(4,339,934)	(1.72)	(2.78)	(0.23)	(0.20)	(1.61)	(1.52)
ECF$_{+2}$	393	1,626,836	12.46	5.63	0.14	0.09	-0.62	1.27
		(10,600,000)	(1.95)	(2.68)	(0.23)	(0.21)	(1.70)	(1.65)
ECF$_{+3}$	260	1,914,947	12.34	6.51	0.13	0.08	-0.56	1.34
		(14,600,000)	(2.14)	(2.67)	(0.22)	(0.19)	(1.51)	(1.66)
Panel B: Medians								
ECF$_{-1}$	591	82,943	11.33	2.00	0.02	0.00	-0.11	0.96
ECF$_0$	591	214,021	12.27	3.00	0.03	0.00	-0.57	0.42
ECF$_{+1}$	530	278,349	12.54	4.00	0.03	0.00	-0.21	0.58
ECF$_{+2}$	393	304,104	12.63	5.00	0.03	0.00	-0.13	0.60
ECF$_{+3}$	260	307,372	12.64	6.00	0.02	0.00	-0.18	0.75

This table reports the means and standard deviations (in parentheses) (panel A), and medians (panel B) of several firm characteristics in ECF time. The time subscripts $_{-1,0,1,2,3}$ denote the year relative to the ECF$_0$ year. Variable definitions are provided in Appendix Table A.1.

Table 2 ECF campaign and firm characteristics at time of the initial ECF campaign (ECF_0 year) for hot and cold market ECF campaigns from 2012-2018

Panel A: ECF characteristics	Full Sample (N=591)		Hot=Median Split			Hot=Top 25% Quartile Split		
			Hot (N=319)	Cold (N=272)		Hot (N=154)	Cold (N=437)	
	Mean [Median]	S.D.	Mean [Median]	Mean [Median]	T-test	Mean [Median]	Mean [Median]	T-test
$Target_0$	310,872	325,296	342,583	273,681	**	355,920	294,997	**
	[196,000]		[250,000]	[150,000]		[277,501]	[150,000]	
$Ln(target_0)$	12.19	1.00	12.36	12.00	***	12.44	12.11	***
	[12.19]		[12.43]	[11.92]		[12.53]	[11.92]	
$Overfunding_0$	162,120	358,738	195,165	123,364	**	225,051	139,942	**
	[49,610]		[61,414]	[38,445]		[74,990]	[44,630]	
$Ln(overfunding_0)$	9.76	3.79	10.46	8.94	***	10.87	9.37	***
	[10.81]		[11.03]	[10.56]		[11.22]	[10.71]	
$Raised_0$	477,665	578,586	541,413	402,902	***	583,795	440,265	***
	[261,400]		[311,270]	[199,740]		[360,046]	[218,760]	
$Ln(raised_0)$	12.53	1.08	12.70	12.32	***	12.82	12.42	***
	[12.45]		[12.62]	[12.20]		[12.79]	[12.27]	
$Platform_0$	0.33	0.47	0.33	0.32		0.32	0.33	
	[0.00]		[0.33]	[0.00]		[0.00]	[0.00]	
Panel B: Firm financial characteristics								
Total $assets_0$	781,227	2,759,965	984,982	542,264	*	1,395,498	564,756	***
	[214,021]		[267,369]	[179,858]		[325,707]	[186,089]	
Tangible fixed assets $ratio_0$	0.12	0.20	0.12	0.12		0.14	0.11	
	[0.03]		[0.02]	[0.03]		[0.03]	[0.03]	
Profitability $ratio_0$	-1.23	1.79	-1.18	-1.30		-1.11	-1.28	
	[-0.57]		[-0.53]	[-0.67]		[-0.55]	[-0.57]	
Intangible fixed assets $ratio_0$	0.07	0.17	0.08	0.06		0.08	0.07	
	[0.00]		[0.00]	[0.00]		[0.00]	[0.00]	
$Size_0$	12.37	1.56	12.61	12.09	***	12.80	12.22	***
	[12.27]		[12.50]	[12.10]		[12.69]	[12.13]	
Age_0	3.80	2.74	3.96	3.62		4.17	3.68	*
	[3.00]		[3.00]	[3.00]		[3.50]	[3.00]	
Leverage $ratio_{-1}$	1.71	1.96	1.41	2.06	***	1.23	1.88	***
	[0.96]		[0.83]	[1.12]		[0.78]	[1.01]	
Leverage $ratio_0$	0.80	1.14	0.76	0.84		0.76	0.81	
	[0.42]		[0.40]	[0.45]		[0.40]	[0.44]	

This table reports the means and standard deviations, and medians for ECF characteristics (panel A) and firm financial characteristics (panel B). The time subscript $_{(-1)\,0}$ denotes the (pre-) ECF year. Hot and cold markets are defined based on the ECF campaign volume 6 months before the the pitch start date. Hot is a dummy variable equal to 1 if the firm issues equity in a hot period, where hot is defined as either a higher ECF volume during the preceding 6 months than the median volume or top 25% quartile across all firms' 6 month reference periods. Industry dummies are excluded from the descriptives table. Asteriks values indicate different hot vs. cold market means (conservative 2-tailed t-test) at $p<0.10$(*), $p<0.05$(**), $p<0.01$(***). Ln indicates the logarithm (+1) of the variable is shown. Amount variables are expressed in GBP. Variable definitions are provided in Appendix Table A.1.

Table 3 Correlation matrix ECF-year regressions (N=591)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1)	$Target_0^L$	1.00														
(2)	$Overfunding_0^L$	0.35	1.00													
(3)	$Raised_0^L$	0.95	0.52	1.00												
(4)	$Leverage\ ratio_0^L$	-0.16	-0.10	-0.16	1.00											
(5)	$Total\ debt\ increase_0^L$	0.11	0.02	0.12	0.13	1.00										
(6)	$Financial\ debt\ increase_0^L$	0.18	0.12	0.21	0.04	0.16	1.00									
(7)	$Operational\ debt\ increase_0^L$	0.07	-0.01	0.07	0.09	0.86	-0.10	1.00								
(8)	$Hot\ (median\ split)_0^D$	0.17	0.20	0.18	-0.06	0.10	0.14	0.09	1.00							
(9)	$Hot\ (top\ 25\%\ quartile\ split)_0^D$	0.14	0.17	0.16	-0.03	0.08	0.18	0.05	0.55	1.00						
(10)	$Tangible\ fixed\ assets\ ratio_{-1}$	-0.04	0.04	-0.02	0.00	-0.03	0.10	-0.04	0.06	0.05	1.00					
(11)	$Profitability\ ratio_{-1}$	0.17	0.12	0.16	-0.25	0.11	0.07	0.11	0.17	0.13	-0.01	1.00				
(12)	$Intangible\ assets\ ratio_{-1}$	0.07	0.07	0.07	-0.07	0.04	0.00	0.04	0.05	0.04	-0.18	0.12	1.00			
(13)	$Size_{-1}$	0.50	0.29	0.52	-0.02	0.03	0.22	0.01	0.15	0.15	0.13	0.34	0.15	1.00		
(14)	Age_{-1}	0.31	0.22	0.34	0.01	0.01	0.24	-0.05	0.06	0.08	0.05	0.12	-0.01	0.40	1.00	
(15)	$Platform_0^D$	-0.17	-0.05	-0.16	0.00	-0.10	-0.03	-0.09	0.01	-0.01	-0.04	-0.02	-0.04	0.00	-0.11	1.00

All correlations with an absolute value equal or higher than 0.09 are statistically significant at the 5% significance level. ^{L} superscript indicates the natural logarithm (+1) of a variable is used. ^{D} superscript indicates a dummy variable. The time subscript $_{(-1)\ 0}$ indicates that the (pre-) ECF year value is used. Variable definitions are provided in Appendix Table A.1.

Table 4 Market timing effects on equity crowdfunding issuance activity

	Hot=Median Split			Hot=Top 25% Quartile Split		
	$Ln(target_0)$	$Ln(overfunding_0)$	$Ln(raised_0)$	$Ln(target_0)$	$Ln(overfunding_0)$	$Ln(raised_0)$
Hot_0	0.214***	1.178***	0.233***	0.159**	1.127***	0.209***
	(0.073)	(0.311)	(0.078)	(0.070)	(0.269)	(0.076)
Tangible fixed assets ratio$_{-1}$	-0.432***	-0.164	-0.418***	-0.416***	-0.098	-0.404***
	(0.133)	(0.622)	(0.149)	(0.134)	(0.624)	(0.148)
Profitability ratio$_{-1}$	-0.001	0.001	-0.008	0.003	0.018	-0.005
	(0.019)	(0.088)	(0.020)	(0.019)	(0.086)	(0.020)
Intangible assets ratio$_{-1}$	-0.163	0.289	-0.177	-0.158	0.307	-0.173
	(0.144)	(0.592)	(0.153)	(0.148)	(0.593)	(0.157)
$Size_{-1}$	0.170***	0.310***	0.188***	0.171***	0.313***	0.188***
	(0.020)	(0.077)	(0.021)	(0.020)	(0.079)	(0.021)
Age_{-1}	0.042***	0.135**	0.053***	0.042***	0.132**	0.053***
	(0.013)	(0.053)	(0.015)	(0.013)	(0.053)	(0.015)
$Platform_0$	-0.360***	-0.170	-0.371***	-0.355***	-0.144	-0.365***
	(0.081)	(0.317)	(0.085)	(0.081)	(0.318)	(0.085)
Industry-fixed effects	yes	yes	yes	yes	yes	yes
R^2	0.334	0.143	0.347	0.328	0.137	0.343
N	591	591	591	591	591	591

This table reports the results of OLS regressions of the form

$$Ln(Y_0) = c_0 + c_1 Hot_0 + c_2 Tangible\ fixed\ assets\ ratio_{-1} + c_3 Profitability\ ratio_{-1} + c_4 Intangible\ assets\ ratio_{-1} + c_5 Size_{-1} + c_6 Age_{-1} + c_7 Platform_0 + \varepsilon_0$$

using a sample of 591 ECF campaigns. The dependent variables are the logarithms (+1) of the target amount, the overfunding amount, and the raised amount expressed in GBP. All OLS regressions are estimated with industry-fixed effects defined by one-digit SIC codes. The time subscript $_{(-1)\,0}$ denotes the (pre-) ECF year. The constant term is not reported. Robust standard errors are in parentheses. Asteriks values indicate significant coefficients at p<0.10(*), p<0.05(**), p<0.01(***). Variable definitions are provided in Appendix Table A.1.

Table 5 Market timing effects on ECF firm leverage

	Hot=Median Split				Hot=Top 25% Quartile Split			
	Ln(leverage ratio$_t$)				Ln(leverage ratio$_t$)			
	ECF_0	ECF_{+1}	ECF_{+2}	ECF_{+3}	ECF_0	ECF_{+1}	ECF_{+2}	ECF_{+3}
Hot_0	-0.025	-0.001	0.034	0.056	-0.003	-0.023	-0.024	-0.048
	(0.052)	(0.060)	(0.071)	(0.097)	(0.052)	(0.075)	(0.087)	(0.139)
Tangible fixed assets ratio$_{t-1}$	-0.032	0.216	0.032	0.460	-0.035	0.219	0.035	0.454
	(0.092)	(0.177)	(0.172)	(0.291)	(0.093)	(0.179)	(0.171)	(0.290)
Profitability ratio$_{t-1}$	-0.086***	-0.110***	-0.137***	-0.196***	-0.087***	-0.110***	-0.138***	-0.200***
	(0.021)	(0.029)	(0.050)	(0.069)	(0.021)	(0.029)	(0.050)	(0.068)
Intangible assets ratio$_{t-1}$	-0.121	-0.206*	-0.099	0.187	-0.122	-0.204*	-0.089	0.198
	(0.082)	(0.111)	(0.105)	(0.374)	(0.082)	(0.112)	(0.104)	(0.379)
$Size_{t-1}$	0.018**	-0.077***	-0.136***	-0.152***	0.018**	-0.076***	-0.134***	-0.149***
	(0.009)	(0.028)	(0.042)	(0.039)	(0.009)	(0.028)	(0.042)	(0.039)
Age_{t-1}	0.006	0.019**	0.027**	0.015	0.006	0.020**	0.027**	0.015
	(0.007)	(0.009)	(0.011)	(0.013)	(0.007)	(0.009)	(0.011)	(0.013)
$Platform_0$	-0.025	-0.068	0.003	0.076	-0.025	-0.067	0.005	0.078
	(0.058)	(0.061)	(0.084)	(0.102)	(0.058)	(0.061)	(0.085)	(0.102)
Industry-fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
R^2	0.078	0.167	0.254	0.350	0.078	0.167	0.253	0.349
N	591	530	393	260	591	530	393	260

This table reports the results of OLS regressions of the form

$$Ln(Y_t) = c_0 + c_1 Hot_0 + c_2 Tangible\ fixed\ assets\ ratio_{t-1} + c_3 Profitability\ ratio_{t-1} + c_4 Intangible\ assets\ ratio_{t-1} + c_5 Size_{t-1} + c_6 Age_{t-1} + c_7 Platform_0 + \varepsilon_t$$

using all observations with available data in the (post-) ECF years. The time subscript $_{0\,(+1,+2,+3)}$ denotes the (post-) ECF year. The dependent variable is the logarithm (+1) of the leverage ratio. All OLS regressions are estimated with industry-fixed effects defined by one-digit SIC codes. The time subscript $_{t-1}$ denotes that independent variables one year before the dependent variable is measured are used. The constant term is not reported. Robust standard errors are in parentheses. Asteriks values indicate significant coefficients at p<0.10(*), p<0.05(**), p<0.01(***). Variable definitions are provided in Appendix Table A.1.

Table 6 Market timing effects on debt financing raised in the ECF year

	Hot=Median Split			Hot=Top 25% Quartile Split		
	Ln(total debt increase$_0$)	Ln(financial debt increase$_0$)	Ln(operational debt increase$_0$)	Ln(total debt increase$_0$)	Ln(financial debt increase$_0$)	Ln(operational debt increase$_0$)
Hot_0	1.741**	5.070***	1.548**	1.326*	5.932***	0.842
	(0.719)	(1.685)	(0.726)	(0.788)	(1.689)	(0.815)
Extensive margin	*0.072***	*0.089****	*0.065***	*0.055**	*0.104****	*0.035*
	(0.030)	*(0.030)*	*(0.030)*	*(0.033)*	*(0.030)*	*(0.034)*
Intensive margin	*0.889***	*1.063****	*0.775***	*0.676**	*1.246****	*0.421*
	(0.366)	*(0.351)*	*(0.363)*	*(0.401)*	*(0.354)*	*(0.407)*
Tangible fixed assets ratio$_{-1}$	-1.377	2.685	-1.477	-1.250	2.689	-1.351
	(1.647)	(3.227)	(1.639)	(1.641)	(3.185)	(1.635)
Profitability ratio$_{-1}$	0.376**	-0.404	0.479**	0.409**	-0.401	0.514***
	(0.186)	(0.531)	(0.191)	(0.185)	(0.521)	(0.190)
Intangible assets ratio$_{-1}$	0.921	-0.201	0.865	0.945	0.099	0.891
	(1.567)	(4.148)	(1.633)	(1.568)	(4.089)	(1.634)
Size$_{-1}$	-0.126	1.152**	-0.090	-0.116	1.123**	-0.075
	(0.134)	(0.581)	(0.136)	(0.134)	(0.560)	(0.136)
Age$_{-1}$	-0.042	0.856***	-0.300*	-0.045	0.826***	-0.302**
	(0.146)	(0.309)	(0.153)	(0.147)	(0.309)	(0.154)
$Platform_0$	-1.668**	-0.386	-1.746**	-1.634**	-0.180	-1.720**
	(0.790)	(1.759)	(0.797)	(0.793)	(1.758)	(0.800)
Industry-fixed effects	yes	yes	yes	yes	yes	yes
F	2.159***	62.480***	2.445***	1.920**	71.690***	2.150***
N (censored)	225	486	231	225	486	231
N	591	591	591	591	591	591

This table reports the results of Tobit regressions of the form

$$Ln(Y_0) = c_0 + c_1 Hot_0 + c_2 Tangible\ fixed\ assets\ ratio_{-1} + c_3 Profitability\ ratio_{-1} + c_4 Intangible\ assets\ ratio_{-1} + c_5 Size_{-1} + c_6 Age_{-1} + c_7 Platform_0 + \varepsilon_0$$

using a sample of 591 ECF campaigns. The dependent variables are the logarithms (+1) of total debt increase, financial debt increase, and operational debt increase expressed in GBP. Below the coefficient estimates for the hot market dummy, we report the extensive margin effect, which is the change in the probability of increasing debt and the intensive margin effect, which is the change in debt increase for those firms with positive debt increase values. All Tobit regressions are estimated with industry-fixed effects defined by one-digit SIC codes. The time subscript $_{0\,(-1)}$ denotes the (pre-) ECF year. The constant term is not reported. Robust standard errors are in parentheses. Asteriks values indicate significant coefficients at p<0.10(*), p<0.05(**), p<0.01(***). Variable definitions are provided in Appendix Table A.1.

Appendix

Table A.1 Variable definitions

Variables	Definitions
Target	Target amount of the ECF campaign (in GBP)
Overfunding	Overfunding amount, defined as the raised amount - target amount of the ECF campaign (in GBP)
Raised	Raised amount (including overfunding) of the ECF campaign (in GBP)
Leverage ratio$_{(W)}$	Total debt/total assets (not winsorized when used as ln(+1))
Total debt increase	total debt in year *t* - total debt in year *t-1* (in GBP)
Financial debt increase	(loans + long-term debt in year *t*) - (loans + long-term debt in year *t-1*) (in GBP)
Operational debt increase	(creditors + other current liabilities + other non-current liabilities in year *t*) - (creditors + other current liabilities + other non-current liabilities in year *t-1*) (in GBP)
Hot	A dummy that equals 1 for campaigns launched in a hot market. A hot market ECF is defined as an ECF with a 6 month pre-ECF period during which the number of live initial ECF campaigns was higher than (1) the median of the distribution of all 6 month pre-ECF periods, or higher than (2) the top 25% quartile value of the distribution of all 6 month pre-ECF periods.
Tangible fixed assets ratio	Tangible fixed assets/total assets
Profitability ratio$_{(W)}$	Net income/total assets, if not available: ((Other shareholder funds in year *t* - other shareholder funds in year *t-1*) - amount raised not part of (capital in year *t* - capital in year *t-1*))/total assets
Intangible fixed assets ratio	Intangible fixed assets/total assets
Size	Ln(total assets+1)
Age	Accounts year (Orbis) - year of incorporation
Platform	A dummy that equals 1 for campaigns launched on Seedrs (0= Crowdcube)
Other current assets ratio	Other current assets/total assets

$_{(W)}$ Indicates that the variable is winsorized (two-sided) at 0.05, so that extreme values are converted to the variable's 5th or 95th percentiles.