

Peer-to-peer lending: exploring borrowers' motivations and expectations

Luisa Anderloni*, Alla Petukhina†, Alessandra Tanda ‡

Abstract

This paper explores the motivations, expectations and satisfaction of small businesses using peer-to-peer lending platforms in five different European countries. We address a gap in the recent literature, which examines platforms and investments through the lenses of risk management, but often neglects the perspective of entrepreneurs. Our findings indicate that borrowers are primarily motivated by the need for immediate and flexible financial solutions and by the desire to diversify their funding sources and reduce reliance on traditional banking channels. Notably, our research reveals a significant lack of awareness among borrowers regarding the specific financial instruments they use to raise debt. Although we explore variations across countries and firm characteristics, our results do not show any significant differences. Future research could further investigate these issues, with a particular emphasis on the financial literacy of entrepreneurs, which policymakers suggest is crucial for fostering the orderly and sustainable financial development of small businesses.

Keywords: peer-to-peer lending, digital finance, Fintech, entrepreneurs

*Università degli Studi di Milano, Department of Law "Cesare Beccaria".

†Hochschule für Technik und Wirtschaft Berlin, School of Computer Science, Communication and Economics petukhina@htw-berlin.de

‡University of Pavia, Department of Economics and Management.

1 Introduction

Crowdfunding, including peer-to-peer (P2P) lending, is an innovative approach to financing the economy in both the consumer (personal loans and mortgages) and business sectors (Bachmann et al., 2011; Bruton et al., 2015; OECD, 2022). The strong development of crowdfunding has attracted policymakers’ interest, in many jurisdictions, and eventually spurred a long-sought harmonization, at least at the European Union level (Cicchello, 2020). Among other characteristics, crowdfunding and Fintech platforms have the potential to contribute to sustainable development (United Nations environment programme, 2016; Arner et al., 2020). In the business sector, there has been a notable increase in the focus on financing environmentally friendly projects, including energy efficiency efforts, the granting of tax credits through fiscal incentives, and the installation of photovoltaic systems and wind farms (Ma, 2023). In addition, financing options with favorable terms and conditions are often made available to the communities that are directly affected by these environmentally significant projects (Mansouri and Momtaz, 2022; Zhang et al., 2019).

The rapidly changing landscape in this context has stimulated the experimentation with a wide range of innovative strategies, involving both borrowers and investors, especially in the domain of SMEs (Palladino, 2021; Citterio et al., 2024). According to the most recent statistics available, P2P lending holds a dominant position in the market of alternative finance instruments, with an 89 percent market share encompassing various models of fund providers (Table 1) (World Bank and CCAF, 2022). Some common features of P2P lending that distinguish it from traditional financing channels include:

- Direct market funding from multiple investors, facilitated by a platform that acts as an enabler and sometimes assigns ratings to proposals (Jagtiani and Lemieux, 2019; Wang et al., 2021; Zhu, 2018);
- Use of Artificial Intelligence (AI) technology for evaluation processes and primarily online interactions (Gupta and Tham, 2018; Giudici et al., 2020; Ariza-Garzon et al., 2021; Behl et al., 2021; John et al., 2023);
- Presentation of the funded activity or project and the entrepreneur or management team running the business on the platform (Duarte et al., 2012; Gonzalez and Loureiro, 2014; Wang et al., 2023).

However, there are differences between platforms in the information provided to support contracts that can include Chamber of Commerce records, financial statements or details

Alternative Finance Model	2020 Global market (excluding China)		
	Volume (mln USD)	Market Share (percent)	Ranking
P2P/ Marketplace Consumer Lending	34,733	31	1
Balance Sheet Business Lending	28,018	25	2
P2P/ Marketplace Business Lending	15,374	14	3
Balance Sheet Consumer Lending	11,893	11	4
Invoice Trading	3,870	3	6
P2P/ Marketplace Property Lending	3,073	3	7
Balance Sheet Property Lending	1,808	2	9
Total P2P lending	98,769	89	
Donation-based Crowdfunding	7,002	6	5
Real Estate Crowdfunding	2,777	2	8
Equity-based Crowdfunding	1,520	1	10
Reward-based Crowdfunding	1,243	1	11
Consumer Purchase Finance/BNPL	505	0	12
Debt-based securities	385	0	13
Crow-led Microfinance	151	0	14
Revenue/Profit Sharing	86	0	15
Mini Bonds	44	0	16
Community Shares	24	0	17
Other	3	0	18

Table 1: Volume and market share of different alternative finance models. Source: authors calculations based on [Cambridge Centre for Alternative Finance \(CCAF\) \(2021\)](#).

of the purpose of the loan. In addition, differences can be observed in the terms of the contract, including the maturity of the loan, the repayment plan and the options available to the entrepreneurs that obtain the loans ([Jagtiani and Lemieux, 2019](#)).

Platforms typically provide statistics on their contract portfolios, which facilitate the analysis of transaction profiles, such as loan amounts, maturities, interest rates and default rates. They also often provide insights into the industries involved in these transactions. By examining the online “showcases” used to display projects and cross-referencing this information with other databases, it is possible to identify the characteristics of companies accessing such finance.

The current literature provides a limited understanding of the motivations that push small companies to use P2P lending, the levels of satisfaction and barriers faced, the perceived methods of assessing creditworthiness, and the recommendations for better alignment with

borrowers' needs. For instance, [Xiang et al. \(2018\)](#) only focus on Chinese borrowers, while [Syamil et al. \(2020\)](#) and [\(Hamundu et al., 2023\)](#) on the Indonesian ecosystem. Among others, [Pierrakis \(2019\)](#) and [\(Martinez-Climent et al., 2021\)](#) examine investors' motivations rather than borrowers' motivations. [Klein et al. \(2023\)](#) study the gap between lenders' and platforms' preferences and intentions.

In this paper we take the hint by [Tiberius and Hauptmeijer \(2021\)](#), and provide preliminary evidence to understand entrepreneurs' decision criteria and decision process.

Although some platforms include interviews with entrepreneurs that cite their main motivations to raise finance, these often focus on success stories or projects that are actively seeking investor participation and do not clarify why they employ P2P lending platforms.

Our paper aims to fill this knowledge gap by providing a deeper understanding of the motivations and expectations of small firms borrowing funds through P2P platforms. We run a survey of businesses that have used P2P lending tools and administered a questionnaire to collect information on the outlined elements. Our results show the main motivations of borrowers are related to speed and flexibility and to the possibility of expanding financing through non-banking channels. We also find an average high level of satisfaction. Around half of the respondents are in general not aware of the information required for this process and show a lack of understanding despite the use of the instrument. When considering country differences, we find no significant differences in the responses of entrepreneurs and this makes our results consistent across institutional features and extendable without loss of generality to the whole European market. Our evidence supports the need for a better understanding of Fintech innovative instruments by small companies, including the advantages and the limits that characterize this type of digital channel. Policymakers should develop suitable measures to increase financial literacy and education also among the small companies that do not have access to highly qualified skills and competencies compared to their larger peers. Managers would then be able to access with more awareness to this type of lending that can complement the banking channel, especially when banks implement a reduction in their lending policies.

The paper is organized as follows: Section 2 presents a brief literature review on P2P funding for SMEs; 3 describes the objectives and methodology of the survey; Section 4 presents some preliminary qualitative results (Par. 4.1), it discusses the results of the survey (Par. 4.2) and, finally, it provides empirical analyses of the firm characteristics and the responses provided (Par. 4.3). Section 5 concludes.

2 Literature Review

Despite the literature on Fintech and P2P lending has experienced intense growth (Rabani et al., 2022), it currently offers a somewhat limited understanding of the motivations that drive small companies to utilize peer-to-peer (P2P) lending platforms. It also fails to address comprehensively the consequences of this decision, e.g., the levels of satisfaction and the various barriers these companies encounter in the process. Overall, there is a limited exploration of the perceived methods used to assess creditworthiness within this context, as suggested by Tiberius and Hauptmeijer (2021).

Indeed, most of the studies take the investors' perspective, to understand the drivers in choosing P2P projects to fund and formulate decision rules (Luo and Lin, 2013; Guo et al., 2016). Interestingly, Brass (2015) investigates the decisions by the friends of the borrower to act as lenders and the consequent effects on the success of the campaign. Their results show a different pattern with respect to the channel of investment. Online investments discourage further investments by third parties, while offline investments by friends ignite a herding behaviour by other potential investors.

Within this stream of studies, the evaluation of the creditworthiness of borrowers has become particularly relevant. Similarly to traditional channels, borrowers' characteristics are very relevant in determining the probability of default. Nevertheless, in P2P lending, the availability of hard information to estimate creditworthiness is scant (Tao et al., 2017). The recent literature has therefore investigated the ability of innovative methods, such as machine learning algorithms, to estimate the creditworthiness of borrowers. Among others, Zhu et al. (2019) apply Random forest to predict default on loans extended by the P2P platform Lending Club, while Bitetto et al. (2024) compare traditional probit and machine learning to evaluate the creditworthiness in the context of invoice lending. Results generally show a good ability of ML to predict the probability of default with accuracy, also when employing explainable AI approaches (Ariza-Garzón et al., 2020). Other papers exploit different types of information to reduce the information asymmetry characterising especially smaller firms, such as signals (Iyer et al., 2009; Yum et al., 2012), soft information included in narrative data (Luo and Lin, 2013) or behavioural data (Wang, Jiang, Ding, Lyu and Liu, 2018).

With reference to the borrowers' perspective, only a few studies investigate the motivations and decisions of borrowers to collect funds through P2P platforms.

Previous literature has formulated theories to understand the drivers for companies to collect funds through alternative sources of financing. While the preferred channel for companies remains the banking sector (e.g., informationally opaque SMEs), at the same

time, the banking channel might present features that prevent companies from requesting or obtaining funds (Sommer, 2024; Sanga and Aziakpono, 2023). The first behaviour is known as 'reluctance to apply' or 'discouraged borrowers' and induces companies to refrain from requesting funds from banks due to the asymmetries of information (Kon and Storey, 2003; Bertrand and Mazza, 2022; Bertrand et al., 2021). Asymmetries of information indeed induce errors in credit riskiness evaluation, increase financial and administrative costs on the borrower and increase the lending rate to compensate for loan hidden riskiness (Kon and Storey, 2003).

The second phenomenon relates to credit rationing and also derives from asymmetries of information (Jaffee and Russell, 1976; Stiglitz and Weiss, 1981), when banks are unable to evaluate the counterpart and might implement borrower rationing or loan size rationing (Kirschenmann, 2016). As discussed by the literature, if the banks decide to increase the interest rate to compensate for the increased risk, this might in turn change the pool of risks, with only highly risky borrowers willing to pay such a high interest rate. This phenomenon is known as the adverse selection is linked to incentive effects and has been extensively discussed by the literature (Akerlof, 1978; Stiglitz and Weiss, 1981; Bester, 1985).

These hurdles are generally softened by good firm-bank relationships (Cenni et al., 2015) that generate information used in the lending process for smaller borrowers (Data, 1994; Berger and Udell, 1995; Bitetto et al., 2023). Informal lenders might face lower asymmetries of information because of superior information and inferior monitoring costs (Stiglitz, 1990; Galema, 2020) and this could be the case also for P2P lending platforms (Allen et al., 2019; Galema, 2020; Allen et al., 2022) that can reduce information frictions through innovative processes and technologies (Berg et al., 2020; Fuster et al., 2022).

The financial crisis that occurred in 2007-2008 brought banks to a shift in risk appetite, the need to compensate for losses and, together with the post-crisis regulatory revisions and the emergence of technologically advanced tools in the financial market, paved the way for the emergence of P2P platforms. The latter can act as a complement (rather than substitute) of the bank channel and both lenders can benefit from the incentives placed on the borrower to repay the loan, which are reputational for the P2P lending platform and legal for the bank loan (Madestam, 2014). Nevertheless, the literature on the benefits of P2P lending on credit rationing and overall market riskiness is not unanimous, as some P2P platforms might lack the right incentives to implement a rigorous credit screening process, yielding to increased riskiness in the system (Vallee and Zeng, 2019; Balyuk, 2023).

Among the most recent and pertinent empirical studies, Xiang et al. (2018) investigate

Chinese borrowers and focus on the shareholder structure as a determinant of the decision to use a Fintech channel. Namely, the authors find that this channel is particularly useful for high-tech SMEs, while it has fewer advantages for State-owned enterprises and family firms. [Syamil et al. \(2020\)](#) analyse the motivations of lenders, borrowers and regulators in Indonesia to engage in Fintech lending. Through a qualitative study, they find that business opportunities and convenience of the P2P platform can increase borrowers' participation in Fintech lending, but challenges also arise, e.g. related to data privacy issues. Also [Hamundu et al. \(2023\)](#) investigates the Indonesian environment, namely they study MSMEs' motivation in using P2P lending platforms. They test different drivers of the behavioural intention to adopt P2P lending services, e.g. performance expectancy, social influence, and habits. [Purwanto et al. \(2023\)](#) investigate the benefits of P2P lending for MSMEs by analyzing credible sources and conducting interviews with MSME actors who have utilized these lending facilities.

As the contribution on the borrowers' perspective are fewer, this substantial gap results in the inability of the literature to provide adequate recommendations for better aligning P2P lending services with the specific needs and expectations of small business borrowers. As a result, there remains a significant gap in our knowledge about how these entities navigate and perceive the P2P lending landscape.

3 Research Method

The primary objective of our research was to investigate the demand side of P2P lending in the European context. Specifically, we sought to explore the experiences of entrepreneurs and businesses that have engaged with this innovative approach to finance. Our research aimed to gain insights into: (i) the motivations and expectations that underpin their choice, (ii) the levels of satisfaction experienced at different stages of the process, (iii) the methods and types of data used by platforms to assess credit risk, and (iv) any suggestions for improving current offerings. In order to gain a comprehensive and globally relevant understanding of the phenomenon, and to identify the characteristics associated with different banking markets, we conducted a cross-country analysis of P2P lending practices and investigated potential country differences in the collected information.

We selected Italy, France, the Netherlands, Spain and the United Kingdom (UK) for our comparative study. We identified P2P lending crowdfunding platforms that specifically target businesses and allow direct funding from individual investors through various sources. More specifically, we used annual reports from national associations, the Cambridge Fintech

Ecosystem Atlas provided by the Cambridge Center for Alternative Finance¹ and industry reports from major consulting firms (for instance, PwC, KPMG, etc.). We have selected the major platforms based on the number of deals or campaigns available.

These platforms typically categorized deals as either proposed, in progress or previously funded. We then built a database of completed deals; through a combination of business databases, social networks, platform websites and individual company websites, we identified relevant contacts, such as entrepreneurs, CEOs, CFOs or administrative managers, and obtained their email and phone contact information.

We formulated a questionnaire to explore the following dimensions:

1. Rationale for using P2P lending
2. Satisfaction with P2P lending as a fundraising mechanism for business financing
3. Data collection methods and typologies used by crowdfunding platforms
4. Recommendations for refining the services offered

Given that entrepreneurs often have limited time to engage with surveys, and given the prevalence of institutional research questionnaires, we deliberately kept our questionnaire short to minimise the attention span required. We refined the questionnaire iteratively, which included conducting test interviews with entrepreneurs. We translated the questionnaire into English, French and Spanish to accommodate the different countries involved in our study. We used Survey Monkey as the software platform for distributing the questionnaire.

The distribution of the questionnaire was often preceded by telephone calls to verify the accuracy of the identified contact person and their details, and numerous reminders were subsequently sent through various channels, including telephone, email and LinkedIn. In some cases, contacts opted to give their answers over the phone, referring to the text of the questionnaire.

The survey was launched in Italy and France in June 2021, followed by the Netherlands and Spain in September and October 2021, and finally the UK in March 2022. Unfortunately, this time frame proved to be sub-optimal due to a number of complicating factors. First, the COVID crisis severely disrupted many activities, leaving companies struggling to make up for lost time and staff shortages. This had a negative impact on the willingness of potential respondents to participate in the survey, despite its brevity. Second, the provision of public guarantee support to meet the liquidity needs of businesses during the COVID pandemic

¹<https://ccaf.io/>.

turned access to credit into a commodity, thereby reducing the recognition of innovative financing methods (Financial Stability Board, 2022; Ziegler et al., 2022). This phenomenon was partly due to consultants who made entrepreneurs or financial managers less attentive to fund providers. Lastly, in Italy, the exclusion of P2P financing from the state guarantee significantly reduced the availability of this type of loan, thus limiting the pool of companies that could be interviewed.

In total, our study involved the distribution of over 3,800 submissions, including reminders, to a sample of over 1,300 companies. Specifically, we contacted 400 companies in Italy, 300 each in the Netherlands and France, 100 in Spain and 300 in the UK. These covered around 15 platforms, some of which had temporarily ceased operations, re-branded or merged with other platforms.

4 Results

4.1 Preliminary qualitative results

Before discussing the data collected, it is useful to highlight some indirect results that cannot be derived from the completed questionnaires. These results can be summarised as follows

- The “short” memory of many entrepreneurs/financial managers of companies that have used peer-to-peer lending: the response rate of companies that carried out the transaction more than 18 months ago drops drastically and simultaneously.
- The high number of people who, despite their willingness to cooperate and their participation in the email exchange, did not admit to having used peer-to-peer financing via the platform: the proof of the transaction, provided by the forwarding of the project presentation poster, stimulated their memory and revealed their lack of understanding of the differences compared to a traditional bank loan. Surveyed entrepreneurs claimed that the transaction had been proposed by a business consultant or an intermediary; additionally, the contract had been followed up without understanding the specific elements.
- Similarly, previous transactions, sometimes carried out on the same platform in subsequent periods, were found to have been forgotten.

We made sure that those with “clouded memories” were not asked again. In addition, we excluded questionnaires from respondents who said they had never used such a funding

method and who had given abstract answers.

It would be interesting to investigate further the lack of perception of the specificity of crowdfunding as a form of finance. However, as noted above, the provision of relatively small amounts of funding (often 15,000 or 20,000) with full or partial state guarantees may have reduced the specificity of project funding, which in theory attracts investor appreciation and resource allocation.

The analysis we carried out to characterize the companies using this form of financing and the entrepreneurs or management to be contacted for interviews required careful examination of the presentations on the platform websites and consultation of the supporting documentation provided there. We found that in many cases the accuracy of the descriptions of the "projects" to be financed had deteriorated over time. We noted the frequent use of standard formulas such as "funding is required to ensure continuity following the impact of the COVID-19 crisis on its activities", often accompanied by a general forecast such as "the project will be implemented in the coming months".

As mentioned above, the characteristics of the credit market during the COVID crisis affected both the presentation of projects and the behavior of companies during the loan application phase. On the one hand, they were driven by considerable concern about the difficulties associated with the economic and financial crisis, and on the other hand, the presence of public guarantees limited costs and facilitated access to credit.

The analysis of financing operations on different platforms revealed a wide variety of economic activities being financed. In general, firms using peer-to-peer lending are SMEs and often start-ups. We find innovative start-ups operating in the fields of technology, biotechnology, design and experimentation or, more commonly, support and consultancy. Alternatively, start-ups operate in traditional sectors aimed at opening up commercial activities such as catering, maintenance and construction services, and professional activities ranging from business consultancy to architects' or doctors' practices.

Some forms of specialization have emerged, particularly in the green sector and renewable energy production projects, and more recently in real estate development. Another important aspect of the Italian market is the financing of energy efficiency projects stimulated by fiscal incentives. In these cases, the applicants for funds are often condominiums or consortia, which are different in nature from more traditional companies and were therefore not appropriate respondents for our survey using the questionnaire designed for this purpose.

It should also be noted that the borrowing of short-term debt, with monthly repayment schedules and without an early amortization period, has been used to finance operations

which, by their nature, require capital to be provided as risk capital or, in any case, with a medium- or long-term repayment horizon. This is the case for financing the acquisition of other companies or real estate for projects that are not immediately operational. It can be concluded that in these cases it was essentially bridging finance, even if it was not presented as such to investors on the platform. This insight came from a number of respondents with whom we had more in-depth discussions to clarify the operation in question, while at the same time, they had equity crowdfunding operations in progress or in preparation.

4.2 Survey Results

4.2.1 The Composition of the Sample of Respondents

A total of 307 companies responded to the survey, primarily using crowdfunding in the form of peer-to-peer lending over the last 24 months through approximately fifteen platforms we analyzed. The breakdown by country is as provided by Table 2. The higher amount of responses from Italian firms is due to the earlier start of the research in this country (due to the early July holidays in other countries) and the greater ease of communication, as well as a higher willingness to pay attention to the request and participate in the research.

Countries	N.	percentage
Italy	129	42.0
France	77	25.1
Netherlands	46	15.0
Spain	24	7.8
UK	31	10.1
Total	307	100.0

Table 2: Distribution of companies/respondents in the survey sample across countries

There are no specific trends in the type of respondents and the amount of funding received: from micro-enterprises with only one employee, represented by the owner himself, through small family businesses, to medium-sized enterprises and even a few cases of listed companies. Given the small sample size and the presence of “anonymous” responses - those who preferred to receive the link rather than respond by email (about 20 percent on average) - it was not considered appropriate at this stage to process the data according to size and economic activity.

4.2.2 The motivation, costs and relative importance of P2P Funding

We asked the respondents to provide the main motivation to use P2P lending facilities. Results are reported in Figure 1 in the form of a radar representation that highlights country differences for each question². The Figure shows that three main reasons underpin the decision to seek funding directly from investors via a digital platform: the expectation of a more immediate and flexible response to financial needs is the most common (30.9 percent) (*reason_use_5*), closely followed by the desire to broaden funding sources (28.3 percent in total) (*reason_use_1*) and, at a greater distance, the desire to reduce dependence on the banking sector (with percentages of almost 21 percent) (*reason_use_2*). When comparing countries, we observe that Spanish companies especially give more importance to *reason_use_2* (33.3 percent for Spain vs 21 percent for the full sample), while UK companies provided a higher relevance to *reason_use_1* compared to the sample average (38 percent for the UK vs 28.3 percent for the sample).

The innovative nature of this form of peer-to-peer financing with a direct link to the market is the motivation for about 10 percent of the participants (*reason_use_3*) (Figure 1). The expectation of reducing the cost of financing (*reason_use_4*) is hardly taken into account (3.3 percent). It is well known that start-ups and SMEs suffer from credit rationing and therefore higher costs, but access to credit is often the most pressing need, as our results confirm. Return on investment in terms of image and marketing (*reason_use_6*) is an insignificant reason (2 percent), contrary to other research. For instance, Wang et al. (2023) find that borrowers use self-reported loan descriptions to hype their loan applications rather than to provide soft information to reduce information asymmetries and hence the cost of funding.

There are differences between countries, but they are not pronounced. Reducing dependence on the banking sector *reason_use_2* is a more important need in Spain and the Netherlands, while the innovative potential of the funding channel is perceived to be less important in these countries *reason_use_3*. The desire to broaden the possibilities for financing projects *reason_use_1* is the strongest motivation in the UK, while Italy and France are in line with the overall results (Fig. 1).

As mentioned above, the choice of P2P finance is often not driven by the expectation of reducing the financing costs. Given that credit rationing and high costs are often cited as factors hindering the growth potential of businesses and the sustainability of smaller firms, this study examines also the importance of the cost of finance for businesses using

²Detailed statistics per country are reported in Table A1 in the Appendix

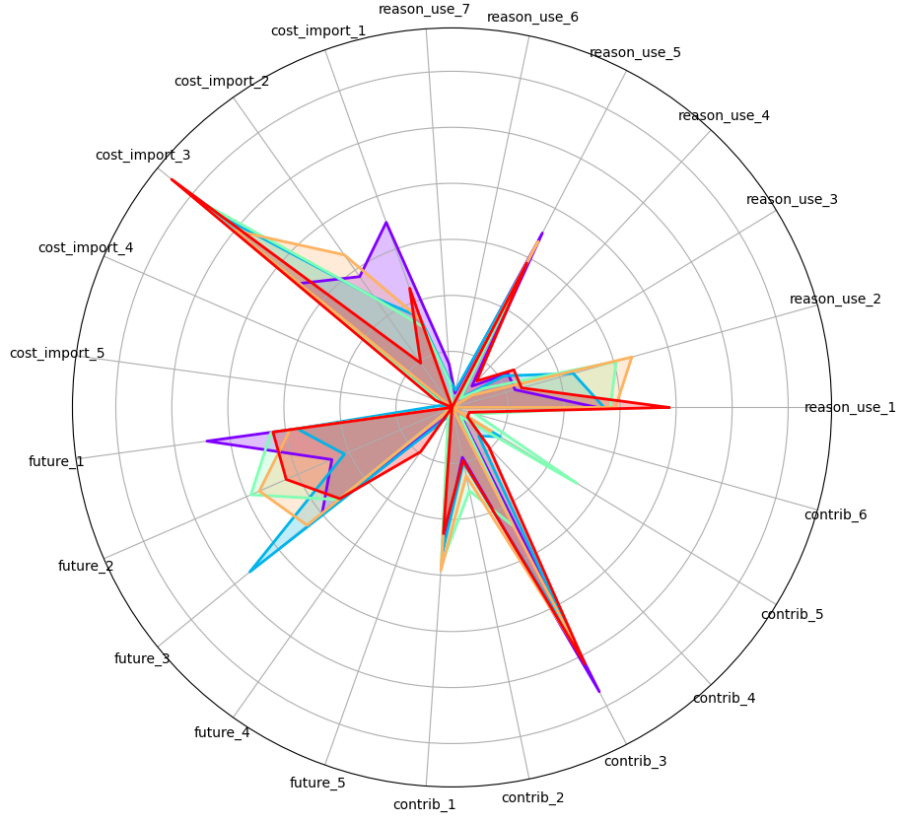


Figure 1: Distribution of reasons, cost importance and contribution for using crowdfunding platforms. In the Radar we report percentages for France, Italy, Netherlands, Spain, UK.

crowdfunding to obtain credit.

The speed of approval of loan applications, coupled with the certainty of the availability of finance for investment projects (*cost_import_3*), is the most important factor in financing decisions for the full sample (51.5 percent). Approximately one in four (24.4 percent) considers the set of terms and conditions of the loan, including interest rates, service fees, commissions for options (for instance, early repayment or, conversely, an extension of the repayment period offered by some platforms) and penalties (*cost_import_2*). In addition, 21.8 percent consider the cost itself to be extremely important (*cost_import_1*). This evidence appears to be consistent with the rationale outlined above, which focuses on finding more immediate and flexible solutions to financial needs.

Figure 1 highlights the country distribution of responses. France differs from other countries in showing greater value for *cost_import_1* than the full sample (35.1 percent for France 21.8 percent) and less emphasis on the variable *cost_import_3* related to speed of application (35.1 percent for France vs 51.5 percent)³.

Thus, when the two cost configurations are considered together, about half of the re-

³See Table A2 in the Appendix to gain more detailed insights on country statistics.

spondents give priority to the economic profile, while the other half give priority to the timeliness and certainty of investment realisation. It should be noted, however, that the survey was conducted during a period of sustained low-interest rates and the availability of public contributions to lower interest rates, as well as public guarantees to mitigate risk and the remuneration demanded by investors during the pandemic crisis. In France, the distribution of responses is broadly similar for the three elements, suggesting that measures to reduce credit constraints through the action of the public bank BPI France have probably had positive effects.

Furthermore, we investigate what is the relative importance of P2P lending with respect to overall company external financing. During the design phase of the survey, we relied on a textbook conception of crowdfunding as an opportunity for a business to present itself directly to the market and solicit funds - such as loans in P2P lending - to finance its activities, preferably when configured as an entrepreneurial project with a high likelihood of gaining approval and support. Consequently, the question arose as to how the whole project could be financed through one or more solutions, or how different sources could be involved.

Across the sample of businesses surveyed, regardless of country context, over 46.6 percent of cases combined P2P loans with traditional bank loans (*contrib_3* in Figure 1). Funding via P2P platforms accounted for around 47 percent of cases, with higher percentages of cases using the same platform entirely (*contrib_1*), mainly in a single solution (26.4 percent) and less frequently in multiple solutions (10.7 percent) (*contrib_2*). The use of multiple platforms (*contrib_4*) was very rare (4.9 percent), especially in Spain (0 percent). External resources (shares or bonds) or internal resources supplemented the financing of the project/activity in 10.4 percent of cases (Figure 1), with a higher percentage only for the Netherlands (26.1 percent). Overall differences between countries appear negligible, but in the Netherlands, where the role of bank financing was largely replaced by domestic or market financing through equity or more complex transactions using bridge financing (*contrib_5*) (see Table A3 in the Appendix for details).

In interpreting these results, it is important to recall the previously reported information: over the past 24 months, the frequency of small transactions (in absolute terms, in the order of 15,000-20,000 euros or 15,000-20,000 pounds) has increased, due to loans granted with government support to overcome the cash flow constraints caused by the COVID pandemic. These transactions have to some extent changed the way the market operates.

As a further extension of the understanding of this novel form of financing, we explored expectations for the future of this instrument. Overall, the most common view is that this

innovative form of financing will continue to create new avenues and mechanisms of financial intermediation (36.2 percent). However, it should be noted that this percentage is largely due to responses from Italy (46.5 percent) (See Table A5 in the Appendix).

Overall, around a third of respondents consider it to be a valuable complement to bank finance, with slight differences between countries. However, this view is more prevalent in France and less so in Italy. A further 26.7 percent see it as an alternative to traditional bank financing, although here the differences between countries are more pronounced: in the Netherlands, the percentage rises to 39.1 percent, while in Italy it falls to 20.9 percent (Figure 1).

Those who chose “other” mainly stressed the potential coexistence of several perspectives and the need to simplify procedural aspects, reduce costs and ensure a more certain legal framework as conditions for wider diffusion.

4.2.3 The degree of satisfaction

The innovative nature of P2P lending and its unique approach to fostering relationships between platforms and investors makes it worthwhile to assess the level of satisfaction with their experience.

Respondents were asked to rate their satisfaction with their P2P lending experience on a scale from one (low satisfaction) to five (high satisfaction). The ratings are predominantly moderate to high: around 48 percent gave a rating of four, with Spain and the UK having the highest proportion of responses (respectively 66.7 percent and 61.3 percent). When including the highest rating of five, the total is just over 78 percent of responses. The remaining 20 percent tended towards the middle of the scale, with very few cases of low satisfaction (Table 3). All the countries have less than 5 percent of respondents expressing a low level of satisfaction (one or two), with Spain and France having no responses in these scores.

Level of satisfaction	Total		Italy		France		Netherlands		Spain		UK	
	N.	percent	N.	percent	N.	percent	N.	percent	N.	percent	N.	percent
1-Low	2	0.7	1	0.8	0	0.0	0	0.0	0	0.0	1	3.2
2	4	1.3	2	1.6	0	0.0	2	4.3	0	0.0	0	0.0
3	61	19.9	35	27.1	11	14.3	8	17.4	3	12.5	4	12.9
4	147	47.9	52	40.3	41	53.2	19	41.3	16	66.7	19	61.3
5-High	93	30.3	39	30.2	25	32.5	17	37.0	5	20.8	7	22.6
Total	307	100.0	129	100.0	77	100.0	46	100.0	24	100.0	31	100.0

Table 3: Level of satisfaction across different countries.

Our research into the level of satisfaction in the peer-to-peer lending landscape reveals

a largely positive picture. However, this general approval should be seen in the context of the fact that many potential respondents chose not to participate in the survey. This could be due to a negative memory of their experience, a reluctance to take part in such surveys, or because they were too busy with their day-to-day business.

Notably, respondents in the UK and Spain expressed high levels of satisfaction, with around 84 percent and 87.5 percent respectively rating their experience in the top range. However, Italy scored slightly below average in this respect.

Despite these positive results, it is important to note certain nuances when assessing the different stages of the relationship. In particular, a smaller proportion of respondents - around two-thirds for the renegotiation of terms and half for the emergence of repayment difficulties - did not give their assessment of these points (Table A4). It is therefore reasonable to assume that these participants did not experience these stages of the loan process.

Although ratings in these areas were generally above the midpoint of the scale, there were sporadic signs of marked dissatisfaction. In addition, scores for these specific stages tended to be lower than the initial summary score. In particular, the setting of loan terms received less positive responses, with comments highlighting a lack of room for negotiation and transparency in relation to ratings and associated interest rates.

Similarly, there was a slight decline in satisfaction with the drafting and signing of the contract, with some respondents expressing a desire for a quicker process and less red tape. Some respondents also reported low satisfaction with online interaction with the platform during the information-gathering phase.

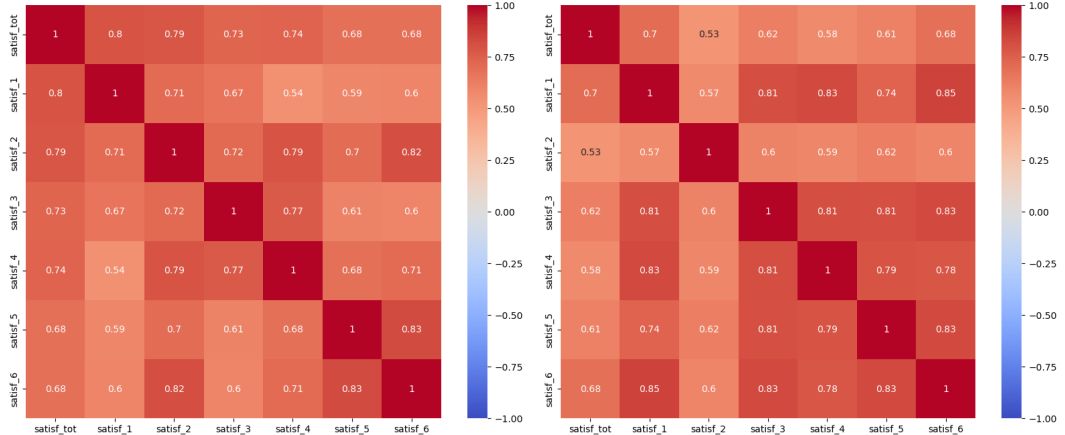
These observations are consistent with previously highlighted motivations for seeking this form of finance - namely the expectation of securing credit quickly, reliably and on flexible terms.

Differences across countries in the assessment of different stages of the process are not significantly pronounced. However, it is important to note the differences in the proportions of those who either did not go through the stages of renegotiating terms (or did not answer about them) or who had difficulties repaying. Renegotiation seems to be less common in the Netherlands and repayment difficulties seem to occur (that is, being rated) less frequently.

Minor discrepancies between countries can be seen when comparing the average scores assigned to the different stages (Table A4). From these average scores, it can be concluded that the stages where firms are less satisfied with their P2P lending experience are those that require more interaction and negotiation.

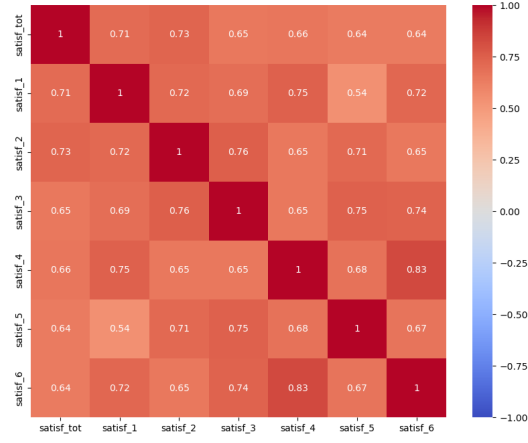
To better investigate if the overall satisfaction is driven by any specific aspects of the

procedure or of the platform, we compute Spearman’s correlation coefficients of the different satisfaction levels and sub-components by country (Figure 2). The first row of each heatmap shows the total level of satisfaction (*satisf_tot*) that goes from 1 (low satisfaction) to 5 (high satisfaction). The Figure reports a darker red colour for very high correlations (positive correlation), while a deep blue colour for correlations close to -1 (perfect negative correlation). In the response provided, we see a general agreement - that is, positive correlation - between overall satisfaction and satisfaction levels along the sub-components of satisfaction, namely competence (*satisf_1*), definition of loan terms (*satisf_2*), drafting and signing the contract (*satisf_3*), assistance in preparing the presentation (*satisf_4*), assistance in renegotiating the terms with lenders (*satisf_5*) and the support when reimbursement difficulties occur (*satisf_6*). Nevertheless, for some countries the level of total satisfaction is positive, but low in absolute terms. For instance, while France, the Netherlands and Spain show a level of correlation between *satisf_tot* and *satisf_2* higher than 0.6, this value for Italy and UK is around or below 0.5. This means that although Italian and UK companies are overall satisfied with their experience with P2P platforms (also according to overall satisfaction levels reported in Table 3), they appear much less satisfied with the definition of loan terms (*satisf_2*). This disagreement of scores is also found for Spain and UK regarding total satisfaction and *satisf_3*, that is, the experience related to drafting and signing of the contract. The lowest levels of correlation are found in the UK, with disagreement across almost all responses, but overall satisfaction (*satisf_total*) with *satisf_5* (correlation coefficient of 0.81) and *satisf_6* (correlation coefficient of 0.87). To some extent also *satisf_4* and the other mentioned items are highly correlated. While in the UK, satisfied borrowers are found to be dissatisfied especially with the definition of loan terms (*satisf_2*) and the drafting and signing of the contract (*satisf_3*) procedures. This testifies to the need for improvements in the relationship with the platforms that could help in improving the reliance of small borrowers on this type of financing channel.

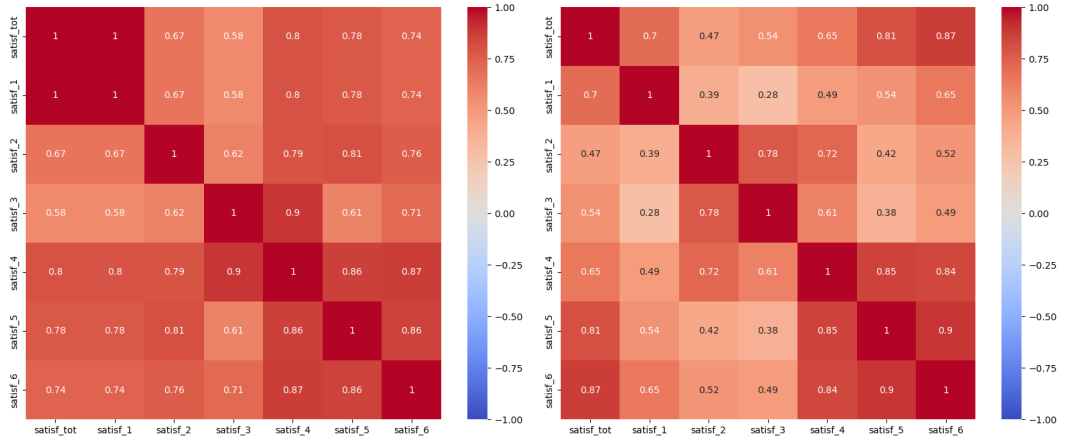


(a) France

(b) Italy



(c) Netherlands



(d) Spain

(e) UK

Figure 2: Heat maps for Spearman's correlation coefficients of satisfaction variables for countries: France, Italy, Netherlands, Spain, UK.

4.2.4 Perception of Feasibility Assessment and Creditworthiness Process

As already mentioned, P2P lending brings innovation not only in the form of relationships but also in the evaluation process. It is therefore interesting to examine these aspects from the user's perspective.

Among the perceived information used to assess the feasibility of a transaction and to determine the loan terms, the most recurring factor is financial accounting data and budgets, recurring in around 88 percent of cases. This is followed by commercial data (around 77 percent), while elements of credit history such as late payments and potential defaults are more distant (66.4 percent) (Fig. 3).

The profile on social networks, which serves as a business card for the company, the entrepreneur and their managers, is considered less important (35.5 percent). Standing in relation to utility bills is of marginal importance (13.0 percent). However, in the comments, many respondents pointed out that social identity information is public or stored in databases accessible to platforms. Therefore, platforms can refer to this information even without requesting it from the company during the preliminary investigation phase.

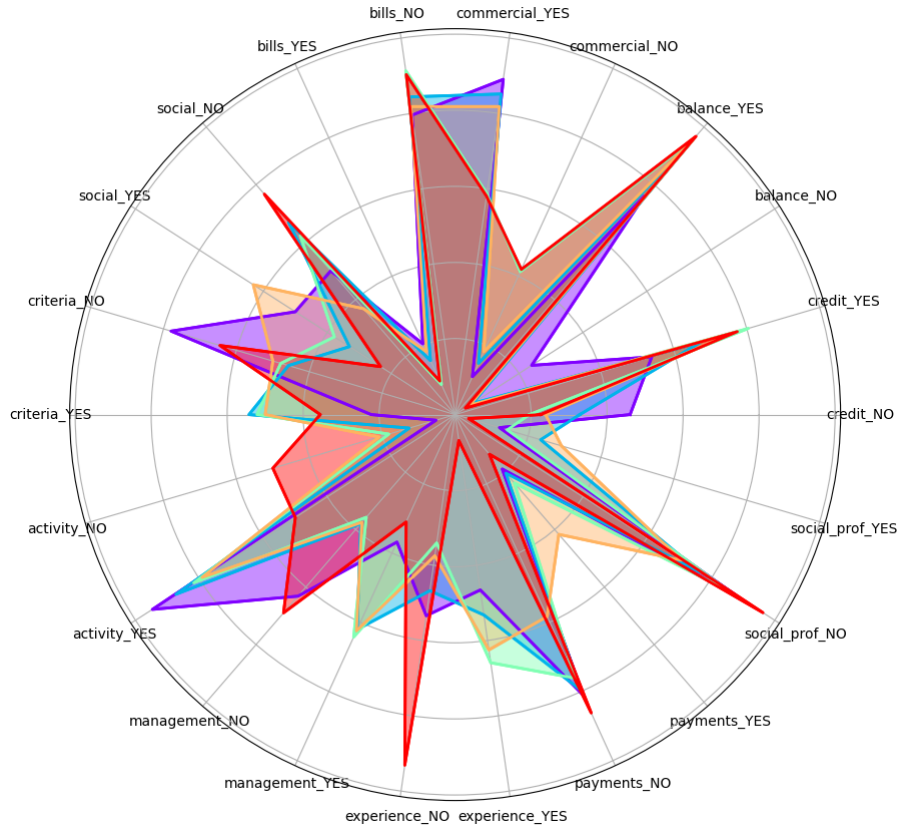


Figure 3: Information importance in the decision process when using P2P lending platforms. In the Radar we report percentages for France, Italy, Netherlands, Spain, UK.

When comparing different countries (Fig. 3), we observe that France places less emphasis on the information collected during the pre-screening stage. This may be due to the prevalence of recent, small-value transactions facilitated by public guarantees, which may lead the applicant to underestimate the importance of the preliminary stage.

In addition, future studies with larger samples could provide revealing analyses. It would be interesting to investigate whether there are differences in the nature of start-ups - which by definition have a limited historical track record and place more emphasis on entrepreneurial potential and soft skills - compared to established firms.

Similarly, a larger sample size could facilitate analysis of whether there are systematic differences between different platforms.

The use of algorithms and big data approaches is often emphasised for its ability to speed up processes, reduce evaluation costs and innovate the evaluation process (Giudici et al., 2020; Wang, Han, Liu and Luo, 2018; Wang and Ni, 2020; Klimowicz and Spirzewski, 2021). However, little is known about how the financed companies perceive these processes.

Regarding the awareness of credit applicants about the criteria used to assess creditworthiness and the application of credit conditions, it appears that awareness is essentially divided, with 43.6 percent having a general understanding and 56.4 percent remaining relatively uninformed. This distribution is particularly evident in France, where some 80 percent of respondents were unaware (Fig. 3). This trend is in line with previous observations and is attributed to the influence of public guarantees and the small size of loans. Furthermore, in the United Kingdom, the interest in understanding the components used in the valuation drops to 35.5 percent.

Turning to a more detailed analysis, we have examined the perceived additional elements used to assess eligibility, funding amount, maturity, economic conditions and ratings from the users' perspective. The most important factor seems to be the economic activity of the enterprise (82.4 percent), followed by the management curricula, which includes the technical or vocational training of managers or entrepreneurs - 50.8 percent (Fig. 3).

Elements such as life and personal experience are much less important (47.6 percent), while the track record of online payments (20.2 percent) and social profiles (16.0 percent) receive little attention. There are differences between countries, but the non-responses mirror the findings on awareness of evaluation criteria (Fig. 3).

4.3 The influence of firm characteristics

An interesting further analysis would entail individuating a link between firm characteristics, motivations, outcomes and satisfactions in the use of P2P platforms. This analysis would require access to firm characteristics, such as industry, size, number of employees, and a set of financial and economic key ratios. Due to the choice of respondents to stay anonymous, we are not able to retrieve this set of information for all the companies in the sample. Nevertheless, to provide preliminary insights on the firm features that might affect motivation and satisfaction, we have manually searched the companies that agreed to give up on the anonymity of responses in the Orbis dataset (Bureau van Dijk). Companies have been searched and matched to our sample according to their name, legal form, physical address and webpage. In case of ambiguous results, the company has been dropped to preserve the accuracy of the data employed in the following analyses.

Thanks to this procedure, we are able to match 173 companies and obtain the key information from their balance sheet and profit and loss accounts for the financial years 2017-2023. We initially aimed at retrieving the information on total assets, ROE, Earnings before taxes (EBT), the Value of production and the number of employees, as well as the industry code (NACE). Unfortunately, due to the limited size of the companies, the availability of financial data is scant even for those companies included in Orbis. The only variables that appear sufficiently populated are industry and total assets, reducing our sample to around 80 firms.

This brought us to explore different possible analyses to draw a link between firm characteristics and motivations, satisfaction and outcome of P2P lending decisions. Nevertheless, the results need to be interpreted with care, as the number of observations is extremely limited and results are relatively unstable when introducing other control variables, due to the limited number of companies and variables.

Before presenting regression results, we briefly describe the descriptive statistics on size and industry distribution (Table 4). The average size of the companies (across the period 2002-2017) is 1.41 million euros (median 1.81). Hence, the average company can be considered a micro-enterprise according to the European Commission definitions.

Most of the companies operate in the manufacturing industry, while the others are almost equally distributed among four different industries (F - Construction, G - Wholesale and retail trade; repair of motor vehicles and motorcycles, J - Information and communication, M - Professional, scientific and technical activities). Only three pertain to the Electricity or water industry and 10 belong to other industries).

Industry (NACE)	Nr. of companies	percentage
C - Manufacturing	35	11.22
D - E (Electricity, gas, steam and air conditioning supply - Water supply; sewerage; waste management and remediation activities)	3	0.96
F - Construction	9	2.88
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	7	2.24
J - Information and communication	8	2.56
M - Professional, scientific and technical activities	7	2.24
Z - Other industries	10	3.21

Table 4: Firm distribution by industry

We summarise some of the regression results obtained for motivation, outcome and satisfaction levels, when controlling for company characteristics. In detail, we test a multinomial logit regression for motivation and outcome and a tobit for satisfaction level. The equation tested is described in Eq. 1.

$$y_i = \alpha + X'_i \beta_1 + \epsilon \quad (1)$$

where y stands for the dependent variable of interest for firm i (motivation, outcome and satisfaction level), α is the constant and ϵ is the error term. X collects the firm characteristics (size and industry).

Reason of use: We evaluate if the reason of use is influenced by the size of the company, controlling for industry and find preliminary evidence that size does not influence the motivation for companies to use P2P platforms⁴. When controlling for country and omitting industry, the only significant coefficient is the one associated to the desire to reduce dependence from the banking channel (*reason_use_2*). As said, these results should be considered preliminary, and the number of observations is low; nevertheless, it provides a hint on the possibility that larger firms (among SMEs) try to obtain lending from alternative sources, that better understand their needs and that are not subject to the same driving forces (e.g., banking regulation and banking crises).

Outcome: We now turn to the outcome with respect to the development or utility of P2P platforms by analysing the responses to the funding contribution to the project. We group answers on contribution according to the responses: total (*contrib_1* and *contrib_2*),

⁴Results are omitted for space constraints and are available upon reasonable requests to the corresponding author.

partial (*contrib_3* and *contrib_4*) and other (*contrib_5*). When regressing size and industry on outcome, untabulated results show no significant results. Hence, again size does not seem to influence the outcome of the P2P lending requests.

Satisfaction: Finally, we test whether satisfaction is statistically affected by size and industry. We first evaluate the potential relationship graphically. We split the sub-sample into four quartiles according to size and display the boxplot graph of overall satisfaction. Fig. 4 suggests a potential positive relationship between overall satisfaction and size. The box plot for the 4th quartile appears located in the upper part of the scores for satisfaction. With reference to industry, most of the industry groups exhibit a similar distribution, with the exception of group C and group D&E that represent, respectively, manufacturing and electricity and water treatment (Fig. 5). The latter group, however, only comprises 3 companies.

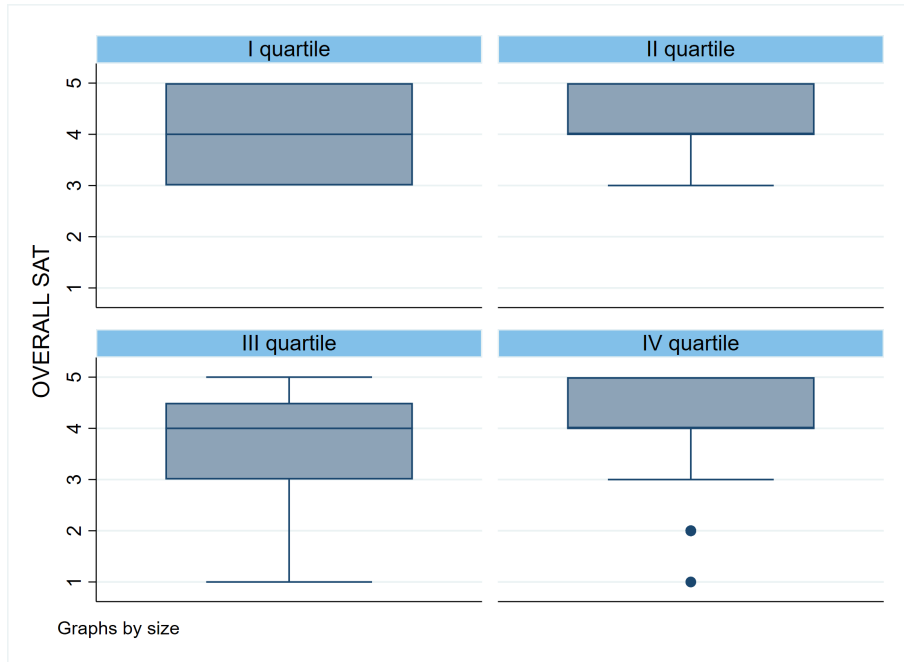


Figure 4: Boxplot of overall satisfaction by size quartiles

We then perform a regression to have some statistical confirmation of the preliminary evidence. However, the results provide no significant response. Size and industry, our proxies for firm features, do not influence satisfaction results. Results remain insignificant when controlling for other covariates, e.g., country and motivations.

As already anticipated, our empirical analysis should not be interpreted as the final answer to the question of whether firm features influence the motivation, outcome and satisfaction in employing P2P lending platforms. It serves as an initial hint for future investigations. Indeed, future research should uncover these very important aspects, making use of more

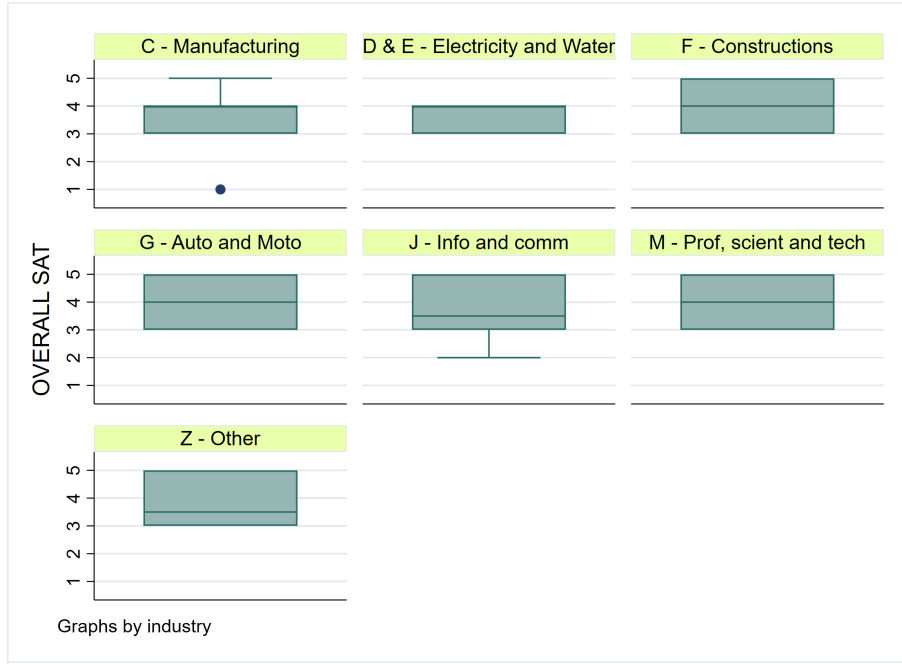


Figure 5: Boxplot of overall satisfaction by industry

extensive data, if and when borrowing companies will be willing to share their financial data and firm features, by giving up on the anonymity of responses. This would have managerial and policy implications.

5 Conclusions

The literature (and policy makers) generally agree that P2P lending represents easier and faster access to financing and it can help SMEs obtaining loans that would be otherwise hard to obtain from traditional banks. Additionally, P2P solutions offer flexible loan terms tailored to the unique needs of each SME, thereby increasing their chances of obtaining the necessary financing [Purwanto et al. \(2023\)](#). Despite this, only few studies, to the best of our knowledge, investigate the motivations underlying the decision to use Fintech channels, namely P2P platforms, when borrowing funds, the expectations and the satisfaction of borrowers.

Our survey has successfully provided initial insights into the motivations, satisfaction and perceptions of peer-to-peer lending processes. Overall, respondents seem to value the instrument and see peer-to-peer lending not as a 'last resort' but as a viable financing option. The overall level of satisfaction appears to be commendable, despite some dissatisfaction stemming from its entirely online administration.

Some of the most revealing findings came indirectly from respondents' attitudes during the interviews. It was often noted that there was a lack of awareness of the specific nature

of this direct funding instrument among 'peers', and in particular the recollection of those who had used it.

A subset of companies for which we were able to retrieve some basic financial information and industry has been employed to perform a preliminary evaluation of the influence of firms' characteristics on motivations, outcome and satisfaction. Unfortunately, although informative, this analysis has not provided significant results, mainly due to the lack of further financial data and to the limited number of observations available.

In the future, it might be instructive to continue this line of research and collect more financial data. Additionally, due to the lack of awareness of the P2P environment, it is worth exploring the level of financial literacy and awareness, especially among those who subsequently experienced difficulties in meeting their interest and repayment obligations. New technologies can unlock the growth potential of SMEs, but their knowledge of these new applications is essential ([Akpan et al., 2022](#)).

From a behavioral point of view, it could be interesting to explore how liquidity tensions or crises are dealt with and the ability to manage the renegotiation of terms and/or conditions. However, this subset of respondents may be difficult to engage and motivate to participate in a survey conducted by independent researchers outside the platforms, their trade associations or regulators.

Indeed, future research on a larger scale, e.g., administered by policymakers, involving participants who are willing to waive anonymity, could allow for the identification of correlations between types of companies (size, ownership structures, lifecycle stages and economic sectors) and the behavior and assessments made when using this innovative form of financing.

Another emerging topic of great academic interest is the application of AI and privacy in P2P lending. However, this topic could not be included in our exploratory project, and our target group would probably not be suitable, as it consisted of micro-enterprises, start-ups and some SMEs.

Appendix

The use of a crowdfunding platform was dictated by:											
		Italy		France		Netherlands		Spain		UK	
		N.	percent	N.	percent	N.	percent	N.	percent	N.	percent
reason_use_1	The desire to expand the form of financing	35	27.1	20	26.0	13	28.3	7	29.2	12	38.7
reason_use_2	The desire to reduce dependence on banks	29	22.5	9	11.7	14	30.4	8	33.3	4	12.9
reason_use_3	The desire to experience an innovative form of a relationship more connected to the market	14	10.9	9	11.7	3	6.5	1	4.2	4	12.9
reason_use_4	The expectation of reducing the costs of financing	3	2.3	4	5.2	1	2.2	0	0.0	2	6.5
reason_use_5	The expectation of finding more immediate and flexible answers to financing needs	38	29.5	27	35.1	13	28.3	8	33.3	9	29.0
reason_use_6	The expectation of a positive image returned from presenting yourself in a such transparent way on the market	4	3.1	2	2.6	0	0.0	0	0.0	0	0.0
reason_use_7	Other	6	4.7	6	7.8	2	4.3	0	0.0	0	0.0
Total		129	100.0	77	100.0	46	100.0	24	100.0	31	100.0

Table A1: The motivations behind the use of crowdfunding platforms by country.

The importance of the total cost of financing to support business activity		Italy		France		Netherlands		Spain		UK	
		N.	percent	N.	percent	N.	percent	N.	percent	N.	percent
cost_import_1	Extremely important	22	17.1	27	35.1	7	15.2	4	16.7	7	22.6
cost_import_2	It is important in relation to the combination of interest rate, service fees and commissions for options or penalties	31	24.0	22	28.6	11	23.9	8	33.3	3	9.7
cost_import_3	It is secondary to the timelines of the disbursement and the certainty of the availability of funds of the implementation of investment projects	72	55.8	27	35.1	27	58.7	12	50.0	20	64.5
cost_import_4	Other (costs are important such as timeliness and bureaucratic flexibility)	1	0.8	1	1.3	1	2.2	0	0.0	1	3.2
cost_import_5	Omitted	3	2.3	0	0.0	0	0.0	0	0.0	0	0.0
Total		129	100.0	77	100.0	46	100.0	24	100.0	31	100.0

Table A2: The importance of the total cost of financing in business activity by country.

Funding through crowdfunding compared to the investment project was		Italy		France		Netherlands		Spain		UK	
		N.	percent	N.	percent	N.	percent	N.	percent	N.	percent
contrib_1	Total, in the sense that it was financed entirely through the platform in a single solution	34	26.4	20	26.0	13	28.3	7	29.2	7	22.6
contrib_2	Total, in the sense that it has been fully financed through the platform in several solutions	13	10.1	7	9.1	7	15.2	3	12.5	3	9.7
contrib_3	Partial, in the sense that the financing has been partially covered by traditional banking channels	60	46.5	44	57.1	11	23.9	12	50.0	16	51.6
contrib_4	Partial, meaning that the funding has been covered by the joint or subsequent intervention of several crowdfunding platforms	9	7.0	2	2.6	1	2.2	0	0.0	3	9.7
contrib_5	Other (self-financing, equity financing and multi-form operations)	13	10.1	4	5.2	12	26.1	2	8.3	1	3.2
contrib_6	Omitted	0	0.0	0	0.0	2	4.3	0	0.0	1	3.2
Total		129	100.0	77	100.0	46	100.0	24	100.0	31	100.0

Table A3: Comparison of crowdfunding funding relative to investment projects by country.

Satisfaction with reference to each aspect		1		2		3		4		5		N/A or N/R		Total	
		N.	percent	N.	percent	N.	percent	N.	percent	N.	percent	N.	percent	N.	percent
satisf_1	Competence and assistance in feasibility study	3	1.0	8	2.6	44	14.3	135	44.0	116	37.8	1	0.3	307	100.0
satisf_2	Definition of loan terms	4	1.3	20	6.5	79	25.7	114	37.1	87	28.3	3	1.0	307	100.0
satisf_3	Drafting and signing of the contract	3	1.0	10	3.3	48	15.6	109	35.5	131	42.7	6	2.0	307	100.0
satisf_4	Assistance in presentation preparation	3	1.0	14	4.6	66	21.5	105	34.2	109	35.5	10	3.3	307	100.0
satisf_5	Assistance in renegotiation of conditions	13	4.2	37	12.1	56	18.2	52	16.9	56	18.2	93	30.3	307	100.0
satisf_6	Support in reimbursement difficulties	5	1.6	13	4.2	38	12.4	42	13.7	46	15.0	163	53.1	307	100.0

Table A4: Satisfaction with various aspects of crowdfunding platforms.

According to your experience the use of crowdfunding		Italy		France		Netherlands		Spain		UK	
		N.	percent	N.	percent	N.	percent	N.	percent	N.	percent
future_1	It is a useful complement to bank financing	36	27.9	34	44.2	15	32.6	7	29.2	10	32.3
future_2	It is a good alternative to bank financing	27	20.9	18	23.4	18	39.1	9	37.5	10	32.3
future_3	It opens new spaces for financing also with innovative tools	60	46.5	23	29.9	12	26.1	8	33.3	8	25.8
	in a world that is increasingly moving towards the use of the network and direct management of relationships, reducing the role of intermediaries										
future_4	Other	4	3.1	2	2.6	0	0.0	0	0.0	3	9.7
future_5	Omitted	2	1.6	0	0.0	1	2.2	0	0.0	0	0.0
Total		129	100.0	77	100.0	46	100.0	24	100.0	31	100.0

Table A5: Perceptions of crowdfunding's role in financing by country.

References

- Akerlof, G. A. (1978). The market for “lemons”: Quality uncertainty and the market mechanism, *Uncertainty in economics*, Elsevier, pp. 235–251.
- Akpan, I. J., Udoh, E. A. P. and Adebisi, B. (2022). Small business awareness and adoption of state-of-the-art technologies in emerging and developing markets, and lessons from the COVID-19 pandemic, *Journal of Small Business & Entrepreneurship* **34**(2): 123–140.
- Allen, F., Qian, M. and Xie, J. (2019). Understanding informal financing, *Journal of Financial Intermediation* **39**: 19–33.
- Allen, F., Qian, M. and Xie, J. (2022). Implicit benefits and financing, *Journal of Financial Intermediation* **52**: 101000.
- Ariza-Garzón, M. J., Arroyo, J., Caparrini, A. and Segovia-Vargas, M.-J. (2020). Explainability of a machine learning granting scoring model in peer-to-peer lending, *Ieee Access* **8**: 64873–64890.
- Ariza-Garzon, M.-J., Segovia-Vargas, M.-J., Arroyo, J. et al. (2021). Risk-return modelling in the P2P lending market: Trends, gaps, recommendations and future directions, *Electronic Commerce Research and Applications* **49**: 101079.
- Arner, D. W., Buckley, R. P., Zetsche, D. A. and Veidt, R. (2020). Sustainability, fintech and financial inclusion, *European Business Organization Law Review* **21**: 7–35.
- Bachmann, A., Becker, A., Buerckner, D., Hilker, M., Kock, F., Lehmann, M., Tiburtius, P. and Funk, B. (2011). Online peer-to-peer lending-a literature review, *Journal of Internet Banking and Commerce* **16**(2): 1.
- Balyuk, T. (2023). Fintech lending and bank credit access for consumers, *Management Science* **69**(1): 555–575.
- Behl, A., Dutta, P., Luo, Z. and Sheorey, P. (2021). Enabling artificial intelligence on a donation-based crowdfunding platform: a theoretical approach, *Annals of Operations Research* pp. 1–29.
- Berg, T., Burg, V., Gombović, A. and Puri, M. (2020). On the rise of fintechs: Credit scoring using digital footprints, *The Review of Financial Studies* **33**(7): 2845–2897.
- Berger, A. N. and Udell, G. F. (1995). Relationship lending and lines of credit in small firm finance, *Journal of business* pp. 351–381.

- Bertrand, J., De Brebisson, H. and Burietz, A. (2021). Why choosing ifrs? benefits of voluntary adoption by european private companies, *International review of law and economics* **65**: 105968.
- Bertrand, J. and Mazza, P. (2022). Borrowers' discouragement and creditor information, *International Review of Law and Economics* **72**: 106098.
- Bester, H. (1985). Screening vs. rationing in credit markets with imperfect information, *The American economic review* **75**(4): 850–855.
- Bitetto, A., Cerchiello, P., Filomeni, S., Tanda, A. and Tarantino, B. (2023). Machine learning and credit risk: Empirical evidence from small-and mid-sized businesses, *Socio-Economic Planning Sciences* **90**: 101746.
- Bitetto, A., Cerchiello, P., Filomeni, S., Tanda, A. and Tarantino, B. (2024). Can we trust machine learning to predict the credit risk of small businesses?, *Review of Quantitative Finance and Accounting* pp. 1–30.
- Brass, D. J. (2015). Friendships in online peer-to-peer lending: Pipes, prisms, and relational herding., *MIS Quarterly* **39**(3).
- Bruton, G., Khavul, S., Siegel, D. and Wright, M. (2015). New financial alternatives in seeding entrepreneurship: Microfinance, crowdfunding, and peer-to-peer innovations.
- Cambridge Centre for Alternative Finance (CCAF) (2021). The 2nd Global Alternative Finance Market Benchmarking Report, *Technical report*.
- Cenni, S., Monferrà, S., Salotti, V., Sangiorgi, M. and Torluccio, G. (2015). Credit rationing and relationship lending. does firm size matter?, *Journal of Banking & Finance* **53**: 249–265.
- Cicchiello, A. F. (2020). Harmonizing the crowdfunding regulation in europe: need, challenges, and risks, *Journal of Small Business & Entrepreneurship* **32**(6): 585–606.
- Citterio, A., Marques, B. P. and Tanda, A. (2024). The early days of neobanks in europe: Identification, performance, and riskiness, *Journal of Financial Services Research* .
- Data, B. (1994). The benefits of lending relationships: Evidence from small, *The Journal of Finance* **49**(1).
- Duarte, J., Siegel, S. and Young, L. (2012). Trust and credit: The role of appearance in peer-to-peer lending, *The Review of Financial Studies* **25**(8): 2455–2484.

- Financial Stability Board (2022). FinTech and Market Structure in the COVID-19 Pandemic. Implications for financial stability, *Technical report*.
- Fuster, A., Goldsmith-Pinkham, P., Ramadorai, T. and Walther, A. (2022). Predictably unequal? the effects of machine learning on credit markets, *The Journal of Finance* **77**(1): 5–47.
- Galema, R. (2020). Credit rationing in p2p lending to smes: Do lender-borrower relationships matter?, *Journal of Corporate Finance* **65**: 101742.
- Giudici, P., Hadji-Misheva, B. and Spelta, A. (2020). Network based credit risk models, *Quality Engineering* **32**(2): 199–211.
- Gonzalez, L. and Loureiro, Y. K. (2014). When can a photo increase credit? The impact of lender and borrower profiles on online peer-to-peer loans, *Journal of Behavioral and Experimental Finance* **2**: 44–58.
- Guo, Y., Zhou, W., Luo, C., Liu, C. and Xiong, H. (2016). Instance-based credit risk assessment for investment decisions in p2p lending, *European Journal of Operational Research* **249**(2): 417–426.
- Gupta, P. and Tham, T. M. (2018). *Fintech: the new DNA of financial services*, Walter de Gruyter GmbH & Co KG.
- Hamundu, F. M., Solihat, I., Wahyu, M. et al. (2023). Determinants of behavior intention to adopt peer-to-peer lending services among Indonesia MSMEs, *International Journal of Business and Society* **24**(1): 543–558.
- Iyer, R., Khwaja, A. I., Luttmer, E. F. and Shue, K. (2009). Screening in new credit markets: Can individual lenders infer borrower creditworthiness in peer-to-peer lending?, *AFA 2011 Denver meetings paper*.
- Jaffee, D. M. and Russell, T. (1976). Imperfect information, uncertainty, and credit rationing, *The Quarterly Journal of Economics* **90**(4): 651–666.
- Jagtiani, J. and Lemieux, C. (2019). The roles of alternative data and machine learning in fintech lending: evidence from the LendingClub consumer platform, *Financial Management* **48**(4): 1009–1029.
- John, A. P., Devaraj, J., Gandhimaruthian, L. and Liakath, J. A. (2023). Swarm learning based credit scoring for p2p lending in block chain, *Peer-to-Peer Networking and Applications* pp. 1–18.

- Kirschenmann, K. (2016). Credit rationing in small firm-bank relationships, *Journal of financial Intermediation* **26**: 68–99.
- Klein, G., Shtudiner, Z. and Zwillling, M. (2023). Why do peer-to-peer (P2P) lending platforms fail? The gap between P2P lenders’ preferences and the platforms’ intentions, *Electronic Commerce Research* **23**(2): 709–738.
- Klimowicz, A. and Spirzewski, K. (2021). Concept of peer-to-peer lending and application of machine learning in credit scoring, *Journal of Banking and Financial Economics* (2 (16): 25–55.
- Kon, Y. and Storey, D. J. (2003). A theory of discouraged borrowers, *Small business economics* **21**: 37–49.
- Luo, B. and Lin, Z. (2013). A decision tree model for herd behavior and empirical evidence from the online p2p lending market, *Information Systems and e-Business Management* **11**: 141–160.
- Ma, J. (2023). How digital finance promotes renewable energy consumption in china?, *Environmental Science and Pollution Research* pp. 1–14.
- Madestam, A. (2014). Informal finance: A theory of moneylenders, *Journal of Development Economics* **107**: 157–174.
- Mansouri, S. and Momtaz, P. P. (2022). Financing sustainable entrepreneurship: ESG measurement, valuation, and performance, *Journal of Business Venturing* **37**(6): 106258.
- Martinez-Climent, C., Guijarro-Garcia, M. and Carrilero-Castillo, A. (2021). The motivations of crowdlending investors in spain, *International Journal of Entrepreneurial Behavior & Research* **27**(2): 452–469.
- OECD (2022). Marketplace and fintech lending for SMEs in the COVID-19 crisis, *Technical report*, OECD.
- Palladino, L. M. (2021). The impacts of fintech on small business borrowing, *Journal of Small Business & Entrepreneurship* **33**(6): 639–661.
- Pierrakis, Y. (2019). Peer-to-peer lending to businesses: Investors’ characteristics, investment criteria and motivation, *The International Journal of Entrepreneurship and Innovation* **20**(4): 239–251.

- Purwanto, I., Isnanto, R. R. and Widodo, A. P. (2023). Investigation of the impact of the peer-to-peer lending market on the membership motivation of the msme, *E3S Web of Conferences*, Vol. 448, EDP Sciences, p. 02037.
- Rabbani, M. R., Bashar, A., Hawaldar, I. T., Shaik, M. and Selim, M. (2022). What do we know about crowdfunding and p2p lending research? a bibliometric review and meta-analysis, *Journal of Risk and Financial Management* **15**(10): 451.
- Sanga, B. and Aziakpono, M. (2023). Fintech and smes financing: A systematic literature review and bibliometric analysis, *Digital Business* p. 100067.
- Sommer, C. (2024). The role of capital markets for small and medium-sized enterprise (sme) finance, *The Journal of Development Studies* pp. 1–20.
- Stiglitz, J. E. (1990). Peer monitoring and credit markets, *The world bank economic review* **4**(3): 351–366.
- Stiglitz, J. E. and Weiss, A. (1981). Credit rationing in markets with imperfect information, *The American economic review* **71**(3): 393–410.
- Syamil, A., Heriyati, P., Devi, A. and Hermawan, M. S. (2020). Understanding peer-to-peer lending mechanism in indonesia: a study of drivers and motivation, *ICIC Exp. Lett. Part B: Applications* **11**(3): 267–277.
- Tao, Q., Dong, Y. and Lin, Z. (2017). Who can get money? evidence from the chinese peer-to-peer lending platform, *Information Systems Frontiers* **19**: 425–441.
- Tiberius, V. and Hauptmeijer, R. (2021). Equity crowdfunding: Forecasting market development, platform evolution, and regulation, *Journal of Small Business Management* **59**(2): 337–369.
- United Nations environment programme (2016). Fintech and sustainable development: Assessing the implications, *Technical report*, United Nations environment programme.
- Vallee, B. and Zeng, Y. (2019). Marketplace lending: A new banking paradigm?, *The Review of Financial Studies* **32**(5): 1939–1982.
- Wang, C., Han, D., Liu, Q. and Luo, S. (2018). A deep learning approach for credit scoring of peer-to-peer lending using attention mechanism lstm, *IEEE Access* **7**: 2161–2168.
- Wang, C., Wang, J., Wu, C. and Zhang, Y. (2023). Voluntary disclosure in P2P lending: Information or hyperbole?, *Pacific-Basin Finance Journal* **79**: 102024.

- Wang, H., Kou, G. and Peng, Y. (2021). Multi-class misclassification cost matrix for credit ratings in peer-to-peer lending, *Journal of the Operational Research Society* **72**(4): 923–934.
- Wang, Y. and Ni, X. S. (2020). Risk prediction of peer-to-peer lending market by a lstm model with macroeconomic factor, *Proceedings of the 2020 ACM Southeast Conference*, pp. 181–187.
- Wang, Z., Jiang, C., Ding, Y., Lyu, X. and Liu, Y. (2018). A novel behavioral scoring model for estimating probability of default over time in peer-to-peer lending, *Electronic Commerce Research and Applications* **27**: 74–82.
- World Bank and CCAF (2022). The 3rd Global Fintech Regulator Survey, *Technical report*, Cambridge Centre for Alternative Finance.
- Xiang, D., Zhang, Y. and Worthington, A. C. (2018). Determinants of the use of fintech finance among Chinese small and medium-sized enterprises, *2018 IEEE international symposium on innovation and entrepreneurship (TEMS-ISIE)*, IEEE, pp. 1–10.
- Yum, H., Lee, B. and Chae, M. (2012). From the wisdom of crowds to my own judgment in microfinance through online peer-to-peer lending platforms, *Electronic Commerce Research and Applications* **11**(5): 469–483.
- Zhang, C., Campana, P. E., Liu, C., Wang, K. and Yan, J. (2019). Crowdfunding preferences for a sustainable milk product with integrated photovoltaic water pumping system in China, *Applied Energy* **255**: 113694.
- Zhu, L., Qiu, D., Ergu, D., Ying, C. and Liu, K. (2019). A study on predicting loan default based on the random forest algorithm, *Procedia Computer Science* **162**: 503–513.
- Zhu, Z. (2018). Safety promise, moral hazard and financial supervision: Evidence from peer-to-peer lending, *Finance Research Letters* **27**: 1–5.
- Ziegler, T., Carvajal, A., Propson, D., Kekre, N., Natarajan, H., Suresh, K., Salman, D., Ferri de Camargo Paes, F., Mutinda, S., Wanga, C. et al. (2022). The Global COVID-19 Fintech Market Impact and Industry Resilience Study.