CORE Metadata, citation and similar papers at core.ac.uk
Provided by Repository of the Academy's Library

ECONOMY AND FINANCE • VOL. 7. ISS. 2 • JUNE 2020 • DOI: 10.33908/EF.2020.2.6

AN OVERVIEW OF PEER-TO-PEER LENDING[1]

Tímea Ölvedi[2]

ABSTRACT

In recent years, various alternative funding methods have appeared on the financial market, available to a broad range of potential borrowers. One form of this new stream is peer-to-peer lending (P2P). Despite this business model being relatively new, a large number of platforms have appeared worldwide and the market has shown robust expansion. On the one hand, these platforms have a number of competitive advantages compared to the traditional banking sector, such as low administrative costs, efficient operations and cheap loans for borrowers, coupled with higher returns for investors. From another perspective, several risk factors have arisen due to the nature of this business model; for example, the limited consequences in case of default, the lack of institutional guarantees, and insufficient monitoring. Recent views suggest that the emerging trend of peer-to-peer platforms will be challenging for regulators, as well as for commercial banks, which might consider them as potential competitors in future. The purpose of this paper is to highlight the relevance of this growing sector through recent financial statistics, including lending volumes of the main players and the geographical expansion of the market. Furthermore, the study presents the main features of this alternative funding method, provides an overview of the growing literature on the subject, and presents the key findings.

JEL code: G230

Keywords: peer-to-peer lending, crowdfunding, microfinance, financial intermediaries

1 The present publication is the outcome of the "From Talent to Young Researcher" project aimed at activities supporting the research career model in higher education, identifier EFOP-3.6.3-VEKOP-16-2017-00007, co-supported by the European Union, Hungary and the European Social Fund.

2 *Tímea Ölvedi*, PhD student at Corvinus University of Budapest, Department of Finance. E-mail: timea.olvedi@gmail.com.

1 INTRODUCTION

The financial crisis that began in 2007 led to several changes in investment behaviour on both the demand and supply side. Risk aversion increased, while the effect of diversification proved limited (*Kovács* et al., 2011).

After the financial crisis, commercial banks became more conservative and stricter in their lending activity. Consequently, various alternative funding opportunities have appeared on the financial market in recent years. One of these alternatives is peer-to-peer lending (P2P), which derives from the concept of crowdfunding. Peer-to-peer platforms connect private individuals to help them provide loans to each other. The first platform, called Zopa, was established in the U.K. in 2005. In the last 14 years, the market has expanded as more players have entered worldwide, and the segment has shown steep growth. Despite this robust expansion, the peer-to-peer phenomenon remains relatively new and it is still too early to predict its impact on the financial market and traditional lending. However, regulators and market players should be aware of this emerging wave as it could bring challenges in the future for the conventional lending of commercial banks. The purpose of this study is to provide an overview of the main research discussions in this relatively new field. The first part introduces the main features of peer-to-peer lending and illustrates the expansion of the market through lending volume statistics and the distribution of platforms by region. The second part summarizes the main findings of the literature on peer-to-peer lending in recent years.

2 THE PEER-TO-PEER LENDING MARKET

A peer-to-peer platform connects borrowers and lenders, allowing private individuals to provide loans to each other without any intermediary institution such as a commercial bank. Such platforms are designed for the mutual benefit of both parties: borrowers are able to secure funding at a lower rate of interest compared to a commercial bank loan, while lenders realize a higher return on their investment in comparison with a bank deposit. Another advantage of the business model is that operational costs are quite low as there is no intermediary institution or the additional administrative costs associated with banks. In addition, the application process is fast and customer-friendly, using innovative technology and functioning in a more efficient way compared to traditional lending institutions. Some platforms specialize in business lending, where the purpose of the loan is more flexible compared to banking finance; however, from the investor side, this is coupled with a lack of control (*Walter*, 2019). The main role of a P2P

platform is to link the two participants, and it does not provide its own funding. The platform charges a predetermined fee to both borrowers and investors.

In general, potential borrowers apply for a loan and their request is listed on the platform's web page. During the application process, they provide personal and financial information, the requested loan amount and the maximum interest rate they are willing to pay. Normally, declared income has to be verified with an official statement. The platform assesses the credibility of the applicant based on the data provided, estimates a credit score and assigns a rating to the borrower. Potential investors can select from among borrowers based on their risk appetite and may finance only a portion of a particular loan. In general, investors can bid with a minimum interest rate they would like to realize. In the event that several investors bid for one loan request and the offered funding is higher than the requested loan, the online auction is closed at the lowest interest rates. Investors often diversify their portfolios and invest small amounts in several requests with different credit ratings. A minimum threshold is set for the bidding and the platform invites investors to distribute their money in small amounts among different borrowers in order to reduce risk. In contrast, for equity crowdfunding lenders, a higher threshold with voting rights is more attractive, especially for institutional investors (*Cumming* et al., 2019).

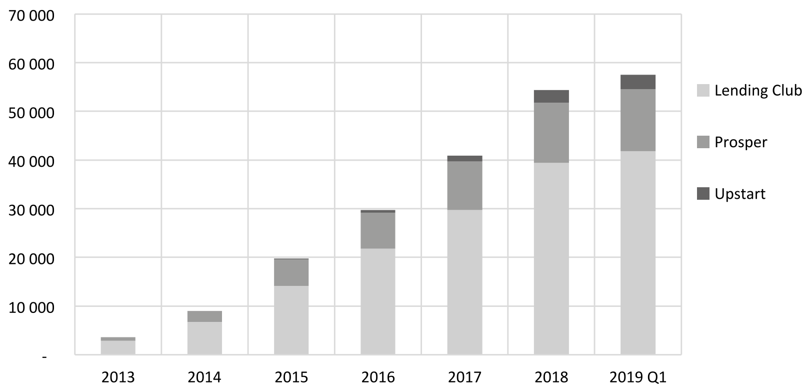
Due to the nature of P2P platforms and the fact that these are unsecured loans, several risk factors arise. Platforms attempt to reduce risk through diverse measures. They assess each applicant based on a credit risk assessment process, including data from national credit bureau systems. Some platforms offer a buyback guarantee for investors; however, this practice is more frequent in Europe. There is also a secondary market, usually for more extensive loans, where investors can sell their loans in order to improve liquidity. As mentioned, these are unsecured loans and if non-payment occurs, the consequences are limited. In the case of default, the platform attempts to collect the loan instalments; then, after a specified period, it hands over the loan to a collection agency.

2.1 The development of platforms

Although peer-to-peer lending is still in its early stages, robust growth has been observed in recent years. Each platform is somewhat different with respect to its business model and strategy. Some are only eligible to operate in a particular country, while others allow cross-border lending. On the investor side, usually private individuals participate; however, institutional investors have also appeared in recent years, further contributing to the rapid growth in lending volume. On the borrower side, individual borrowers tend to apply, although some platforms specialize in SME lending and business loans.

Despite the rapid expansion of P2P lending, its share of total lending volume is relatively small compared to the whole financial market. The following figures present the total loan issuance from inception in the case of the main U.S. market players.

Figure 1
P2P lending volume from origination in the United States market (in million euros)

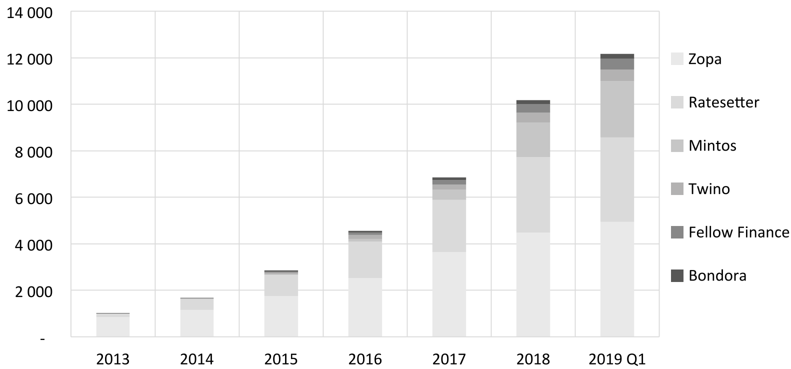


Source: own data collection and estimation from the platforms' websites

As can be seen, Lending Club is the market leader with a volume of 41.8 billion euros in facilitated loans. The platform was established in 2006 as one of the first P2P sites in the U.S., headquartered in San Francisco. Robust loan origination is further supported by the large proportion of institutional investors, e.g. hedge funds or asset managers, and the platform's presence on the New York Stock Exchange from 2014 (Lending Club, 2019). Another notable competitor is Prosper, which has facilitated 12.7 billion euros in consumer loans, followed by Upstart with a total volume of 2.9 billion euros, which uses machine learning techniques and artificial intelligence in the assessment process. The market share of peer-to-peer lending is still modest as the volume of the mentioned platforms represents only 1.62% of total consumer credit outstanding of 3,558 billion euros in the U.S. (FED, 2019); however, the growth rate is quite steep.

Another market that has shown rapid expansion and development in the area of peer-to-peer lending is Europe. The expansion started from the United Kingdom and has reached over the entire region in the past fourteen years. Although the level of lending volume is lower compared to the U.S., there are more players present on the market.

Figure 2
P2P lending volume from origination in the European market (in million euros)

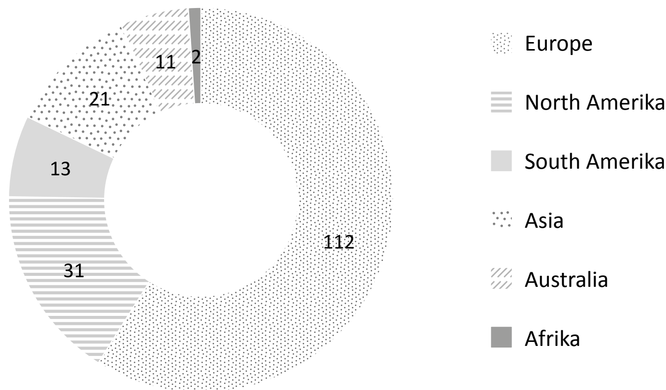


Source: own data collection and estimation from the platforms' websites

Zopa is recognised as the first peer-to-peer platform established in the United Kingdom in 2004, and currently the market leader with 4.9 billion euros in consumer lending. The next biggest platform is Ratesetter, also from the U.K., which has facilitated 3.6 billion euros in loans since it started its operations. Apart from the U.K., the Baltic region has strengthened in peer-to-peer lending, evidenced by the success of the Latvian platforms Mintos and Twino, which have facilitated 2.4 and 0.5 billion euros in loans, respectively. Fellow Finance is an emerging platform introduced in Finland, which has facilitated 0.4 billion euros in loans, while Bondora, launched in Estonia, has accounted for 0.2 billion euros. Except Zopa, all the mentioned platforms are eligible to conduct cross-country lending in the region, not only for the citizens of the particular country. Similarly to the U.S., the lending volume of the mentioned platforms is still not significant compared to total consumer credit outstanding of 921 billion euros in the EU (EBA, 2019), representing only 1.32%, but the trend shows obvious and robust growth.

In general, the U.S. and Europe have the most developed peer-to-peer markets. However, it is relevant to examine the distribution of platforms from a broader perspective. The number of platforms broken down by continent is presented in the figure below, as of June 2019.

Figure 3
Number of platforms by continent



Source: www.p2pmarketdata.com

As can be seen, Europe has the highest number of P2P platforms. Half of these are concentrated in the northern part of the continent, due to the dominance of the U.K. and the emerging trend in the Baltic countries. This is followed by Western Europe, owing to the fourteen platforms operating in Switzerland, seven in France, and six in Germany. The Southern region is strengthened by eight platforms in Spain and five in Italy. Eastern Europe is the least developed, with only six platforms in total. In general, North America has a lower number of platforms, but coupled with higher lending volume compared to Europe. Specifically, the U.S. leads with sixteen platforms, followed by thirteen in Mexico. Asia is less often mentioned, although it is the third largest peer-to-peer lending continent. Half of the Asian players are concentrated in South Korea. The market is less developed in South America and Australia, with thirteen and eleven platforms in total, respectively, while only two are operating in Africa (P2PMarketData, 2019).

Overall, it can be concluded that the market of peer-to-peer lending has shown rapid expansion in recent years. It is quite early to predict the future of this emerging wave, as it is dependent on several factors. Further expansion is supported by innovative technology (e.g. artificial intelligence), providing a high-quality customer experience. In addition, these platforms serve a mostly underbanked segment of consumers who are forced to find alternative funding solutions, providing stable demand at a time when commercial banks have become more conservative in their lending activity. The target group might be expanded further to an upper class of customers with financial knowledge and awareness who are looking for better conditions and service quality. On the other hand, development may be

limited by regulatory requirements, the maturity of platforms' risk management methods and a lack of transparency. In the event they are able to overcome these issues and adjust their business models, P2P platforms may prove to be lasting players on the financial market.

3 LITERATURE REVIEW

Peer-to-peer lending is a relatively new field, as the first platform was implemented in 2005 in the United Kingdom. Despite the relatively early stage of these platforms, various aspects have already been studied. Most papers related to the topic can be classified into one of three main categories:

- emergence and business model,
- credit risk and loan performance,
- determinants of funding success.

The first stream focuses on the essential issues with respect to the relevance, maintenance and role of peer-to-peer lending in the consumer credit market. The second category considers the credit risk assessment aspect, supporting the question of maintenance. The last field is quite frequently researched due to the fact that some platforms make their datasets publicly available in order to improve their transparency, which serves as a basis for exciting empirical analysis, often leading to novel results. The following sections provide an overview of the recent studies and their main findings with regard to each aspect.

3.1 Emergence and business model

This stream investigates the fundamental issues, such as the reasons behind the implementation and rapid expansion of P2P lending. It also covers the various business models, further development, and the legal aspect of operations. One of the main issues raised by studies in this area is the interaction between peer-to-peer platforms and commercial banks. Several outcomes are possible, as banks might consider P2P lending as a potential competitor and start to improve their technology, modify their pricing strategy, etc. In contrast, a cooperative attitude is also likely, in order to evolve strategic partnerships. It is also worth considering if the extension and stable growth of P2P lending will have any disruptive impact on the banking sector. Another essential aspect is the identification of the platform's target group. Potential borrowers are commonly classified into two main groups: the first includes those with financial knowledge and awareness, who ap-

ply in order to get cheaper loans; the second includes those ineligible for bank funding, who have no other choice available for financing.

Milne and *Parboteeah* (2016) investigated the business model, covering the main advantages, risks and associations with conventional banks. In their view, relationships between banks and P2P platforms are more likely to evolve into partnerships rather than competition. Their argument is supported by the idea that banks are flexible due to their ability to provide liquidity services, e.g. allowing early repayment or deposit withdrawal. In addition, they have the ability to cover a temporary deficit through money market funds. Platforms cannot overcome this advantage and substitute for banks, thus their role is likely to be complementary. In order to function simultaneously with commercial banks, however, further development is needed from the platforms' side, including improved credit risk assessment and alignment of their operations with regulatory requirements. The study also highlights that one of the main challenges for the platforms is to attract a sufficient number of investors in the long term, as the risks to which they are exposed are much more significant compared to a bank deposit investment.

The cooperative approach is strengthened by the study of *de Roure*, *Pelizzon* and *Tasca* (2016). Their empirical research focused on the German credit market and found that the extension of peer-to-peer lending is coupled with a decline in bank lending. However, it is mostly high-risk borrowers who apply for peer-to-peer loans, which results in a profitability improvement for banks. The customer groups of the two examined players seem different: borrowers served by platforms have a higher probability of default, and are probably not served by commercial banks. From this perspective, the role of the P2P platform is complementary in the high-risk segment. This conclusion is in line with the view of Milne and Parboteeah; however, the driver of collaboration here is different consumer targeting. According to a report by PricewaterhouseCoopers (2015), there is significant growth potential in the field, mostly supported by millennials who are open to online solutions. The authors also identified two strategic directions for commercial banks as a response to the rapid expansion of P2P platforms: they can form a partnership and cooperate, e.g. by conducting product development together; or they can choose to compete, e.g. through providing further innovative solutions.

Based on recent studies, it seems that the rapid expansion of P2P platforms is not necessarily threatening traditional bank lending, but instead a collaborative approach is considered likely. This concept is supported by several arguments. For example, it is obvious that commercial banks possess competitive advantages compared to P2P platforms, which basically provide intermediary services. It is also reasonable for banks to reject bad debtors, especially since they have become more conservative after the financial crisis and are attempting to cut back their NPL portfolios. The target groups of the two players are therefore different.

Despite the already mentioned reasons, there is still space for another scenario. Zopa, the first P2P platform, announced at the end of 2018 that it will launch a bank and has just received a banking licence from the U.K. authority (Zopa, 2018). However, the licence has limitations and the platform has to meet predefined conditions in order to gain full permission. According to the announcement, the company is planning to offer new products in addition to existing ones, using innovative solutions in order to provide better customer services in digital banking. Overall, it is quite early to predict the outcome; however, this development is likely to extend to the platform's target group and redefine its interaction with commercial banks.

3.2 Credit risk and loan performance

Another significant part of the growing peer-to-peer lending literature focuses on loans that are already funded. These studies analyse the performance of loan portfolios and the main factors that predict the probability of default. Due to the fact that P2P platforms are not strictly regulated (and even not regulated at all in some countries), the lack of regular monitoring activity and the mild consequences in case of default result in higher credit risks compared to traditional commercial bank lending. Some platforms have started to introduce a number of measures in order to mitigate credit risk, including making the loan amount that can be requested relatively low; offering buyback guarantees; involving a debt collector in the case of default; preliminarily filtering out applicants with low FICO scores (as in the case of some U.S. platforms); and making loan books publicly available to serve as a basis for historical data analysis and investment strategy creation.

Most recent studies have found that financial stability-related variables and information regarding previous loan history carries significant explanatory power. *Emekter* et al. (2015) examined the determinants of default in the case of the first U.S. platform, Lending Club. According to their results, a FICO score that contains historical payment behaviour and previous loan information has a significant impact on the default probability of a particular borrower. A lower score results in a higher likelihood of non-payment. The utilisation of revolving credit also plays an important role in borrowers' future solvency. The debt-to-income ratio seems a good predictor of default. The study also compares the financial features of P2P borrowers with average U.S. borrowers. On average, the debt-to-income ratio is lower, while income and FICO scores are higher for the latter group.

Klafft (2008) examined loan profitability and credit loss from the investor perspective, using Prosper data. According to the study, when evaluating loan per-

formance, investors should take into consideration roll rates and the possibility of early repayment in each borrower risk category. Roll rates are estimated for non-performing loans that are classified into different buckets based on the number of days past due date, and reflect the probability of a loan moving into the next delinquency bucket. The empirical analysis of the paper shows that a higher return can be expected from the best rating categories, while the average returns on high-risk borrowers are negative.

The literature concurs that ratings reflect performance and serve as a good indicator for repayment so far. From the credit risk perspective, peer-to-peer borrowers are considered more risky compared to an average commercial bank borrower. In the case of banks, it is essential for them to continuously monitor portfolio performance as they bear the risk for bad debtors. The probability of default and loss given default estimation is also noteworthy for impairment calculations and is part of regulatory requirements. In contrast, in the peer-to-peer model the credit risk is mostly on the investor side. Although it is in the interests of a P2P platform to maintain good performance, investors have to investigate historical data before they invest. It has to be mentioned that most studies, focusing on the credit risk aspect, examine the same few players. The reason behind is that only a few platforms provide publicly available portfolios. Due to this limitation, the conclusions cannot be generalised for the whole P2P market, while geographical differences can lead to additional deviations.

3.3 Determinants of funding success

This extensive field of research focuses on the investor decision-making process. As investors and borrowers both remain anonymous during the whole process, trust plays a key role in the outcome. Studies in this field evaluate the main factors that impact investor decisions in order to improve trust, and also examine which borrower characteristics contribute to funding success. As already mentioned, investors do not have sufficient information about a particular borrower in order to evaluate their credibility. This information asymmetry between the two sides might lead to adverse selection (*Akerlof*, 1970). This phenomenon is frequently researched in the traditional loan market, where asymmetric information may result in credit rationing, meaning that some borrowers face credit constraints even if they are willing to pay a higher interest rate (*Stiglitz* and *Weiss*, 1981). The phenomenon of adverse selection is a commonly discussed issue in other alternative financial markets similar to peer-to-peer lending, e.g. in the case of venture capital investments, where it serves as a barrier for innovative value-added projects (*Lovas*, 2015).

In general, the available data regarding borrowers can be classified into two groups: hard and soft information. Hard information is mandatory, e.g. the amount of regular income, while soft information is optional and unverified, e.g. employment status. Due to a lack of information, investors might consider alternative and soft data which may have a signal effect regarding the credibility of the potential borrower.

Most research focuses on the U.S. market, using data from the two market leading platforms, Prosper and Lending Club. Based on the results, some general conclusions can be drawn regarding investor behaviour. The outcomes are not clearly portfolio-specific, but are rather general rules behind peer-to-peer funding decisions that are valid for different countries and cultures. Various studies focus on several aspects of the particular borrower, e.g. quantitative and qualitative data, appearance and first impression, and also social features.

Herzenstein et al. (2008) proved the importance of financial stability measures of applicants and loan characteristics in investors' decisions in the case of the popular U.S. platform Prosper. Successful funding was higher among applicants with better credit grades, who were also able to get loans at lower interest rates. Another variable worth mentioning is the debt-to-income ratio, which has a significant and negative impact on funding. Furthermore, the requested loan amount also negatively impacts the investor's decision. This means that investors prefer to finance lower loan requests as they consider higher ones more risky.

Gavurova et al. (2018) verified the general conclusions from recent studies; however, their analysis was carried out on the portfolio table of Bondora, which is a European platform, originating in Estonia. Bondora allows lending across borders, thus the results mostly reflected the behaviour of European investors from the region. According to their research, the debt-to-income ratio proved the most significant variable affecting funding success.

Regarding research on soft data, the analysis of narratives is one of the main information sources. Some platforms allow potential borrowers to provide a short description in order to explain their loan purpose or provide any other content to convince investors. Herzenstein, *Sonenshein* and *Dholakia* (2011) analysed the narratives content-wise and their impact on lending decisions. They found that detailed descriptions with more identities result in higher funding success and also lower interest rates. The relevance of narratives was confirmed by *Larrimore* et al. (2011), who focused their study on word usage. They demonstrated that the length of the description and quantitative words related to financial background have a significantly positive impact on investor decisions. In contrast, sharing social and personal details influenced funding negatively.

In general, appearance has a significant impact on labour market processes and partially on financial transactions. In the case of some peer-to-peer platforms, it is possible to attach a picture to an application, which thus serves as a basis for this type of research. *Duarte*, *Siegel* and *Young* (2012) analysed whether the trustworthy appearance of a potential borrower has any impact on funding success and the final interest rate. According to their results, in the event that the potential borrower is considered credible based on an independent judgement, the probability of funding is significantly higher. Furthermore, they concluded that more trustworthy-looking borrowers pay lower interest rates. Their research covered the actual review of credibility based on funded clients. It turned out that borrowers who seem more trustworthy have better credit ratings and the probability of default is lower for them compared to less credible-looking clients. Overall, it can be concluded that the first impression regarding credibility is a good predictor of the future performance of the examined portfolio.

The signal effect of direct and indirect social features represents another field of analysis in recent years. *Pope* and *Sydnor* (2011) investigated whether investor decisions are impacted by the race of a particular borrower. Based on their findings, white applicants are more likely to get funded compared to black borrowers. Furthermore, white borrowers pay lower interest rates in general, in contrast to black borrowers with the same credit characteristics. *Barasinska* and *Schäfer* (2014) examined funding success from the gender point of view, using data from Smava, a notable German platform. They found that women and men with similar financial backgrounds and characteristics have equal chances to get funded, and thus there is no discrimination in this respect. *Lin*, *Prabhala* and *Viswanathan* (2013) analysed the social relations of potential borrowers as an indirect feature. In the case of the major platforms, friendship networks can be created, and borrowers who – for example – are alumni of the same university or share the same employer can join a particular social group in order to provide an additional signal regarding their credibility. According to their empirical study, borrowers who have lender friends, or friends with good credit quality, a verified financial background and successful lending history, have better chances of getting funded.

In comparison with the commercial bank assessment process, most factors impacting successful approval in P2P lending are quite similar and price is risk-based. Financial stability and regular income are crucial in both decisions, and previous rating history is also used from national credit bureau systems. One main difference is that P2P investors can complete assessments using a wider range of alternative data, e.g. a picture or the social network of the applicant. While this approach allows for a more comprehensive assessment, there is space for discrimination based on gender or race, which should not happen in a bank process. Another difference is that the P2P assessment is carried out on two levels.

First, the platform assesses the applicant according to its underwriting methodology and assigns a rating. The applied method is not publicly available; however; it is likely that scorecards are based on similar variables as in a bank. Investors then use this rating as an input and make a decision based on their subjective judgement or empirical analysis. Even if the platform's assessment is based on sophisticated historical data analysis methods, the final decision is on the investor side. In this way, the evaluation is carried out by two different participants and the decision is not dependent on a strict cut-off value; moreover, it can be impacted by subjective intuition.

4 CONCLUSION

Although peer-to-peer lending is a relatively new field, lending volume has shown steep growth in the last couple of years. The main platforms are concentrated in the United States and the United Kingdom, although other regions, such as Western Europe or Asia, are strengthening as well. The total lending volume is still insignificant compared to the total volume of the consumer financial market. The relevance of the topic is further supported by the growing literature on the main directions of research. The role of this alternative form of funding in the financial market is still an open question, especially its interaction with conventional banks: collaboration or competition is dependent on both players. Portfolio performance is lagging behind banks, while the determinants of funding success are quite similar; however, a wide range of alternative data is available to support investor decisions. Overall, it can be concluded that peer-to-peer lending is a rapidly growing field and there is space for further research in terms of risk, business and legal aspects.

REFERENCES

Akerlof, G. (1970). The market for lemons: quality uncertainty and the market mechanism. *Quarterly Journal of Economics* 84, 488–500. DOI: https://doi.org/10.2307/1879431.

Barasinska, N., & Schäfer, D. (2014). Is crowdfunding different? Evidence on the relation between gender and funding success from a German peer-to-peer lending platform. *German Economic Review* 15(4), 436–452. DOI: https://doi.org/10.1111/geer.12052.

Bondora Portfolio Profitability. Available at: https://www.bondora.com/en/public-statistics (downloaded: 24.05.2019).

Cumming, D. – Meoli, M. – Vismara, S. (2019). Investors' choices between cash and voting rights: Evidence from dual-class equity crowdfunding. *Research Policy*. DOI: https://doi.org/10.1016/j.respol.2019.01.014.

De Roure, C. – Pelizzon, L. – Tasca, P. (2016). How does P2P lending fit into the consumer credit market? DOI: https://doi.org/10.2139/ssrn.2756191.

Duarte, J. – Siegel, S. – Young, L. (2012). Trust and credit: The role of appearance in peer-to-peer lending. *The Review of Financial Studies* 25(8), 2455–2484. DOI: https://doi.org/10.1093/rfs/hhs071.

EBA consumer trends report 2018/19. Available at: https://eba.europa.eu/documents/10180/2551996/Consumer+Trends+Report+2018-19.pdf (downloaded: 06.03.2019).

Emekter, R. – Tu, Y. – Jirasakuldech, B. – Lu, M. (2015). Evaluating credit risk and loan performance in online Peer-to-Peer (P2P) lending. *Applied Economics* 47(1), 54–70. DOI: https://doi.org/10.1080/00036846.2014.962222.

Federal Reserve (2019): Consumer Credit – G. 19. Available at: https://www.federalreserve.gov/releases/g19/current/ (downloaded: 04.06.2019).

Fellow Finance Cumulative Loan Volume. Available at: https://www.fellowfinance.com/for-investor/statistics (downloaded: 2019.05.24.).

Gavurova, B. – Dujcak, M. – Kovac, V. – Kotásková, A. (2018). Determinants of successful loan application at peer-to-peer lending market. *Economics & Sociology* 11(1), 85–99. DOI: https://doi.org/10.14254/2071-789x.2018/11-1/6.

Herzenstein, M. – Andrews, R. L. – Dholakia, U. M. – Lyandres, E. (2008). The democratization of personal consumer loans? Determinants of success in online peer-to-peer lending communities. *Boston University School of Management Research Paper* 14(6), 1–36.

Herzenstein, M. – Sonenshein, S. – Dholakia, U. M. (2011). Tell me a good story and I may lend you money: The role of narratives in peer-to-peer lending decisions. *Journal of Marketing Research* 48 (SPL), S138–S149. DOI: https://doi.org/10.2139/ssrn.1840668.

Klafft, M. (2008). Online peer-to-peer lending: a lenders' perspective. In Proceedings of the international conference on E-learning, E-business, enterprise information systems, and E-government, EEE (371–375). DOI: https://doi.org/10.2139/ssrn.1352352.

Kovács, E. – Dömötör, B. – Naffa, H. (2011). Investment decisions in crises – A study of private pension fund investments. *Acta Oeconomica* 61(4), 389–412.

Larrimore, L. – Jiang, L. – Larrimore, J. – Markowitz, D. – Gorski, S. (2011). Peer to peer lending: The relationship between language features, trustworthiness, and persuasion success. *Journal of Applied Communication Research* 39(1), 19–37. DOI: https://doi.org/10.1080/00909882.2010.536844.

Lending Club Statistics 2019. Available at: https://www.lendingclub.com/info/statistics.action (downloaded: 15.05.2019).

Lin, M. – Prabhala, N. R. – Viswanathan, S. (2013). Judging borrowers by the company they keep: Friendship networks and information asymmetry in online peer-to-peer lending. *Management Science* 59(1), 17-35. DOI: https://doi.org/10.1287/mnsc.1120.1560.

Lovas, A. (2015). The risk of adverse selection and its management in the process of venture capital investment (The experience of Hungarian investors). *Economy and Finance* 2(2), 186–202.

Milne, A. – Parboteeah, P. (2016). The business models and economics of peer-to-peer lending. European Credit Research Institute. DOI: https://doi.org/10.2139/ssrn.2763682.

Mintos Statistics. Available at: https://www.mintos.com/en/statistics/ (downloaded: 21.05.2019).

P2PMarketData 2019. P2P Lending Platforms of the World. Available at: https://p2pmarketdata.com/p2p-lending-platforms-of-the-world (downloaded: 20.06.2019).

Pope, D. G. – Sydnor, J. R. (2011). What's in a Picture? Evidence of Discrimination from Prosper.com. *Journal of Human resources* 46(1), 53–92. DOI: https://doi.org/10.3368/jhr.46.1.53.

Prosper (2019): Prosper Prospectus. Available at: https://www.prosper.com/Downloads/Legal/Prosper_Prospectus_2019-04-30.pdf (downloaded: 04.05.2019).

PricewaterhouseCoopers (2015): Peer Pressure: How Peer to Peer Lending Platforms are Transforming Consumer Finance. Available at: http://www.pwc.com/us/en/consumerfinance/publications/peer-to-peer-lending.html (downloaded: 11.05.2019).

RateSetter statistics. Available at: https://www.ratesetter.com/invest/statistics (downloaded: 22.05.2019).

Stiglitz, J. E. – Weiss, A. (1981): Credit rationing in markets with imperfect information. The *American Economic Review* 71(3), 393–410.

Twino (2015–2016): Annual report for the period from August 5, 2015 to December 31, 2016. Available at: https://www.twino.eu/files/Twino_FS_2015_2016-signed-en.pdf (downloaded: 21.05.2019).

Twino (2017): Consolidated annual report for 2017. Available at: https://www.twino.eu/files/Twino_CONS_2017-en.pdf (downloaded: 21.05.2019).

Twino (2018): Annual report for 2018. Available at: https://www.twino.eu/files/TWINO_FS_2018_APS-en.pdf (downloaded: 21.05.2019).

Upstart Invest. Available at: https://www.upstart.com/invest (downloaded: 20.05.2019).

Walter, György (2019). Közösségi finanszírozás [Community Financing]. In: *Vállalatfinanszírozás a gyakorlatban – Lehetőségek és döntések a magyar piacon* [Corporate Financing in Practice]. Budapest: Alinea, 185–190.

Zopa Historical performance. Available at: https://www.zopa.com/invest/risk/h istorical-performance (downloaded: 20.05.2019).

Zopa's launching a bank. Available at: https://blog.zopa.com/2018/12/04/zopas-launching-bank/. (downloaded: 05.09.2019).