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Marketplace lending and its chances and risks for key stakeholders

Submitted by:	Supervised by:
Rahel Berliat	Dr. Martin Schnauss
W.MA.BF.17HS.PiEa	Department of Wealth &
14-668-966	Asset Management

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I. Management summary

The P2P lending market has significantly increased during the last few years. In Switzerland, the credit volume has more than doubled in just one year. However, in an international comparison China and the United Kingdom take on the leading position in the booming market. Analysts predict that the P2P loan market reaches one trillion U.S dollars by the year 2050. Apart from that, the introduction of alternative credit provision challenges the traditional financing models. Hence, there must be several benefits for preferring a P2P loan instead of applying and investing via the traditional way. Despite the benefits, the recent developments have revealed risks which potentially have far-reaching consequences. The global credit market cannot afford to ignore the influence of the P2P lending and therefore a deep understanding of the underlying processes and potentials are required. Therefore, this thesis investigates the attributes of marketplace lending and whether the risks outweigh the chances for key stakeholders.

In order to answer the research question, the thesis follows a qualitative approach. Existing literature is reviewed, compared and extended through a back and forth theory search. Furthermore, an interview with the Swiss platform Cashare was conducted. Due to the increased popularity and pressure of crowdlending platforms, it was not possible to conduct further interviews. Nevertheless, based on the literature review scenarios and assumptions are elaborated in order to carefully evaluate opportunities and risks for the three key stakeholders.

The findings demonstrate high profitable returns on a low-cost basis as main benefits for investors. However, high returns simultaneously imply higher risks such as credit and platform risks, which are valued to be the most significant. Borrowers, which represents the counterpart, are profiting from an inexpensive and convenient financing alternative. Debtors are not directly involved in risks but rather affected by uncertainties occurring from the market or the platform. The decentralization of credit risks, low-cost structure and automated processes are valued to be competitive advantages for a P2P platform. However, the big data approach used for the credit assessment as well as the cost structure first need to prove their potential during a full economic cycle. Besides that, a marketplace lender primarily has to deal with reputational and operational risks. Nevertheless, market risks are of major concern due to the fact that a recession could

affect a platform more than expected. Additionally, trust was identified to be the cornerstone in the P2P market and is enhanced through regulatory regimes.

To mitigate the risks, investors are advised to diversify and to assess a risk-return profile of their investments whereas platforms should introduce contingency plans. Due to the novelty of the P2P market the thesis highlights several future research directions. Overall, the future will reveal whether marketplace lending disrupts the credit market or if it is just a current trend. The preconditions, however, are in favor of the former scenario.

II. Table of content

III. List of figures

IV. List of tables

1. Introduction

The introduction of this thesis gives a short overview of 1.1 motivation and aim of the thesis, 1.2 research question, 1.3 an overview of the structure, 1.4 problem definition and 1.5 the limitation of the thesis.

1.1 Motivation and aim of the thesis

Peer-to-Peer lending is currently a hot topic when it comes to investments and lending. The motivation to investigate in such a topic is derived from the author's interest in the credit market and its mechanism. Where traditional financial institutions dominate the market, it is interesting to analyze if there is potential to disrupt traditional business models. The aim of the thesis is to find the main opportunity and risk factors for key stakeholders in order to find possible comparative advantages and weaknesses. In doing so, the thesis examines if the risks outweigh the benefits.

1.2 Research question

The research question is formulated as follows: What is the mechanism behind marketplace lending and what kind of chances and risks does it involve for key stakeholders?

1.3 Overview of structure

After this introduction, the thesis comprises five major chapters. Firstly, chapter 2 theoretical framework, delves into the peer-to-peer lending literature where the terms stakeholders and various P2P lending types are defined. Additionally, a comparison to the traditional banking model, lending model and the regulatory framework is explained. As the main part of the literature review opportunities and risks for investors, borrowers and the platform are examined. This provides the basis for further analysis in chapter 4. Prior to that, chapter 3 methodology, gives valuable clues about the different approaches used as well as a justification. The practical framework (chapter 4) foremost evaluates different stakeholders according to their interests, influence, position and impact in order to find key groups. Afterward, the opportunities and risks for each key party is rated according to its importance, respectively impact or competitive advantage. It is therefore possible to give reasoning if the risks outweigh the rewards in

marketplace lending. A critical discussion is made in chapter 5 and conclusions are drawn in chapter 6.

1.4 Methodology

This thesis is based on a qualitative approach for answering the research question. Specifically, existing literature is used and compared. Furthermore, a short interview with the Swiss platform Cashare was conducted. Due to the increased popularity and pressure of crowdlending platforms, it was difficult to conduct interviews with other platforms. In addition, due to the novelty of the market quantitative data was hardly accessible. Nevertheless, based on a back and forth theory search and the elaboration of scenarios and assumptions a careful and detailed qualitative analysis has been composed.

1.5 Problem definition

Peer-to-peer (P2P) lending has significantly increased on a global scale during the last few years (Claessens, Frost, Turner, & Zhu, 2018, p. 1). According to the 2018 Crowdlending Survey (Dietrich, Amrein, von der Heyde, Heuermann, & Rüdisühli, p. 8), the Swiss crowdlending market has more than doubled in 2017 compared to the previous year (CHF 55.1 Million to CHF 186.7 Million). The majority of the financing is attributed to small and medium enterprises (SME) followed by consumers and real estate. However, in an international comparison, Switzerland has by far not the leading position. With a year-on-year growth of 112% (2016) China is the market leader when it comes to P2P lending, followed by the United States (US) and United Kingdom (UK) (Dietrich et al., 2018, p. 12; Xu, Zheng, Xu, & Wang, 2016, p. 1). In addition, the overall crowdlending market volume is forecasted to reach one trillion U.S dollars by the year 2050, which indicates a booming market (Nunatak, n.d.). FinTech credits offer alternative financing to clients which have limited access to financing sources (Claessens et al., 2018, p. 1). Unlike commercial banks, the platforms decentralize the risks by transferring it to the investors (Lenz, 2018, p. 1). Therefore, FinTech companies challenge the traditional banking model and attract investors and creditors with profitable rates and a fast procedure through automatization (Lend, n.d.-a). However, this untried fast-growing market can also bear some risks, which could have substantial impacts on the economy since capital raising seems to shift from traditional banks to P2P lenders. The questions emerging from these developments demand a

deeper insight into the P2P lending process and awareness about the chances and risks involved. Additionally, questions whether the traditional banking model will be disrupted in the future or whether it will still be reliable emerges.

1.6 Limitation

The main limitations are mentioned in this chapter, however, within the thesis, there are further limitations noted. Due to its novelty of the peer-to-peer lending market, it was decided to focus on general aspects of the market and therefore country- or cultural-specific characteristics are neglected. In addition, knowledge or experience differences of various investors and borrowers are not considered. Concerning platforms, eight different platforms are included with a main focus of Swiss providers. A common attribute of those platforms is the decentralization of the credit risk respectively, credit risks as off-balance sheet positions in their books.

2. Theoretical framework

This chapter 2 theoretical framework addresses the description and understanding of the peer-to-peer lending process in general. In the course of this, the different expressions are defined (2.1) in a first step, followed by 2.2 stakeholder map and 2.3 a comparison to the traditional bank lending characteristics. In 2.4 different types of P2P lending such as private, business, real estate and public sector loans are covered. After a basic understanding is provided an introduction into the 2.5 lending process is enclosed and with 2.6 regulatory issues are discussed. 2.7 and 2.8 provide valuable clues about the opportunities and uncertainties for the main parties involved in the P2P lending business.

2.1 Definition

"Crowdlending describes the process of brokering debt capital between lenders and borrowers of capital online" (Dietrich et al., 2018, p. 6). "Marketplace lending relies on large-scale loan screening by investors, a major deviation from the traditional banking paradigm" (Vallee & Zeng, 2018). According to Lin (2009) peer-to-peer lending is "where individual investors provide unsecured loans directly to individual borrowers without the intermediation of a bank" (p. 1). All the above statements describe the online lending process, however, different terms are used. In order to gain a better understanding of the various definition figure 1 aims at providing an overview.

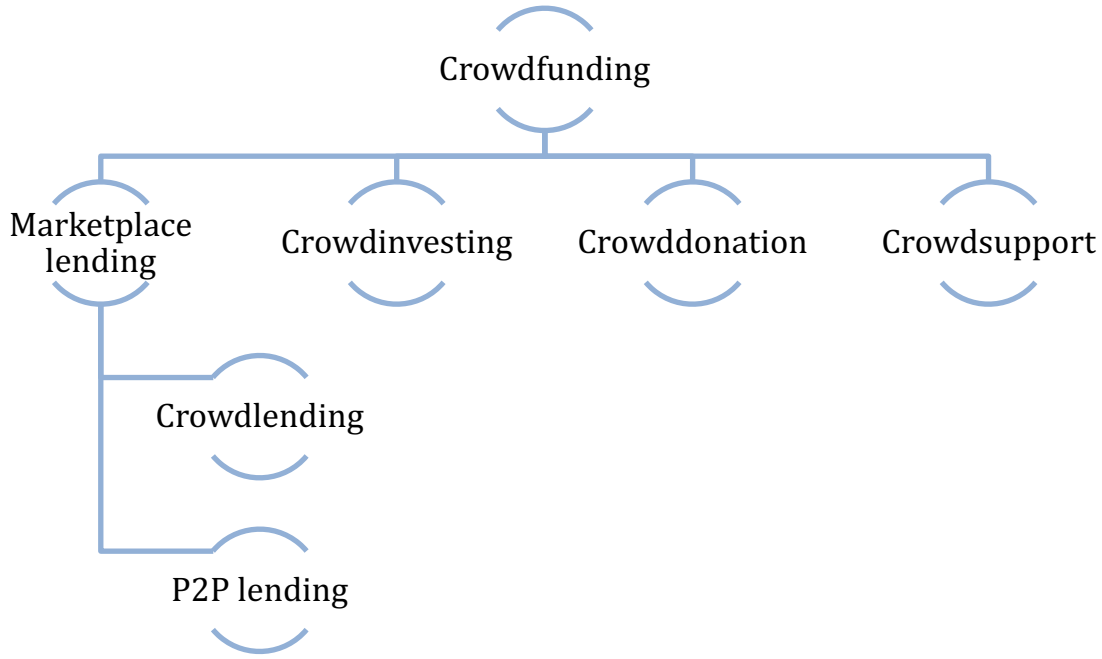

Figure 1: Crowdfunding overview in dependence on (Swisspeers AG, n.d.-a)

The term peer-to-peer (P2P) was originally introduced in the IT sector where it describes the information exchange of different equated end users, regardless of size, within one network (Swisspeers AG, n.d.-b; Prime Meridian Capital Management, 2015). However, considering the financial perspective the term crowdfunding or crowdlending is well established. Crowdfunding, which is the umbrella term, is a method where a crowd is supporting a single project based on the principle "the mass can procure more than a single person". Concerning crowdlending the crowd, which consists of several individuals, are providing a specific amount of money to another person or institution. In return, the crowd receives a pre-agreed exchange value in the form of interest payments. In reality, there is not a huge difference between crowdlending and P2P lending and therefore it is often seen as synonyms (Swisspeers AG, n.d.-a; Swisspeers AG, n.d.-c).

Shortly after the increasing popularity of crowdfunding, the term marketplace lending was established. Due to the fact that not only private individuals act as investors anymore but also small to medium size enterprises or large institutional corporations, the term peer-to-peer lending was no longer appropriate. Nevertheless, instead of defining it as business-to-peer lending or the other way around, the term marketplace lending covers all the possibilities (Dietrich et al., 2018, p. 6; Swisspeers AG, n.d.-c). The thesis, however, puts the three terms on an equal footing with each other and applies it as synonyms.

2.2 Stakeholder map

The following map (figure 2) helps to identify relevant stakeholder for P2P lending platforms based on Freeman's approach (2004). Freeman defines stakeholders as any group or individual, who has influence or can influence a company's objectives. Thereby, in determining significant groups a company can develop and implement strategies to deal with these units in order to keep track of the company's purposes (Freeman, 2004, p. 229). Figure 2 gives an overview of internal and external stakeholders of a P2P lending platform. Later on, in the practical framework, chapter 4, main groups are valued according to their interests, power, position and impacts (table 2) as well as arranged in a priority table (figure 12) in order to find key stakeholders.

Figure 2: Stakeholder map (Created by the author)

Following Freeman's definition, the following internal stakeholders are identified: owner, management and employees (Bachmann et al., 2011, p. 5). However, there is not much literature referring to internal factors of a P2P platform and therefore general considerations are taken into account. The owner is interested in maximizing the profit on a stable growth rate, an excellent top-down and bottom-up information flow as well as defining the direction of the company. The employees and management want to stay employed while they get honored for their work, e.g. financial or non-financial recognition as well as development possibilities. The management additionally focuses on sustainable growth of the business and a well-working communication flow (O'Shannassy, 2003, pp. 60–62; Schell, n.d.).

Considering the external view, competitors, regulators, partners, and customers (borrowers and investors) are external stakeholders. Competitors are important stakeholders, especially in a young market. In the event of a competitor's malpractice relating to the violation of regulation or poor assessment of borrower's credit standing, it could have significant impacts on the company's reputation. Also, the media has a great impact on the company's esteem (Dietrich et al., 2018, p. 16). In addition, the regulator is an important driver in shaping the crowdlending environment. In Switzerland, this group may include the Financial Market Authority (FINMA) or the

Swiss National Bank. More about specific regulatory issues are to be continued in chapter 2.6 regulatory issues. Furthermore, the government is interested in the business for paying taxes and truthful disclosure of its books (Schell, n.d.). Partnerships with banks, other P2P platforms or service providers are crucial strategic decisions in marketplace lending. According to a 2018 crowdlending survey 75% of the platforms are in favor to collaborate with banks, followed by 50% with start-ups and 33% with other crowdlending platforms (Dietrich et al., 2018, pp. 17–18). However, relational (inadequate inter-firm cooperation) or performance risks (fail to meet strategic goals) when aligning with a strategic partner can have significant negative effects (Zhou, 2005, p. 14). Borrowers are defined as private individuals, companies or public corporations, who are seeking additional financing. On the other hand, investors include private and institutional investors, e.g. private persons, trusts, funds, banks, insurances or family offices (Dietrich et al., 2018, p. 6; Loanboox, 2019). Investors also called lenders, and borrowers are the key counterparties for all platforms. The marketplace lender brings borrowers, who have different credit standing and are in need of capital, together with investors, who are seeking profitable investment opportunities. Both counterparties are to a certain extent powerful due to the fact that they are the essential elements in the business model. They might thereby form communities to push through their interests. Such influence on the business needs to be taken into consideration (Greiner & Wang, 2009, p. 2; Herrero-Lopez, 2009, p. 1). Nevertheless, the thesis is not interested in developing business strategies to keep stakeholders on track but rather identifies them to analyze the business concepts' strengths and weaknesses.

2.3 Comparison to a traditional bank

A comparison to the loan provided by a bank helps to better understand the business model of a peer-to-peer lending platform. This chapter identifies and explains three major differences, namely representation, risk position and fee model.

A key difference between Fintech credit platforms and traditional banks is the representation of the company. Where banks have branches all over a country, the platforms are reaching out to their clients via online channels. Furthermore, client and credit application processes are fully automated, which allows dealing with big data. According to Claessens, Frost, Turner, and Zhu (2018) an Indian P2P platform indicates to screen more than 1'000 data points for assessing the credit rating (p. 5). Nonetheless,

banks do have access to other information sources such as saving or credit accounts as well as personal conversations. However, banks also started integrating high-end technologies but still not on the same level as Fintech companies do, due to multiple systems, data quality and consolidation problems (van Liebergen, 2017, p. 65).

A fundamental attribute of Fintech companies is that the intermediation between debtor and investor occurs as an off-balance-sheet operation. Therefore, the platform does not take any position in their books and thus the credit risks such as term transformation, defaults or risk buffers are passed over to the investor. Nevertheless, there are some P2P platforms which are holding the credit positions in their books and therefore are acting as credit agents in the non-banking sector (Claessens et al., 2018, p. 4; Swisspeers AG, n.d.-c). However, the thesis focuses on Fintech companies with off-balance-sheet operations.

As a consequence of using low-cost automated processes and not being affected by credit risks, P2P platforms are not forged to generate net interest margins. Instead, platforms are collecting fees and charges on the basis of an agent model. Therefore, marketplace lenders offer remunerative profits for investors and low interest rates for credit receivers, which in return makes an online investment more favorable compared to banks (Swisspeers AG, n.d.-c)

2.4 Types of P2P lending

There are four different types of crowdlending to be distinguished which refer to the investor's investment preference. According to figure 3 marketplace lending is split into consumer, business, real estate, public sectors and large corporations crowdlending.

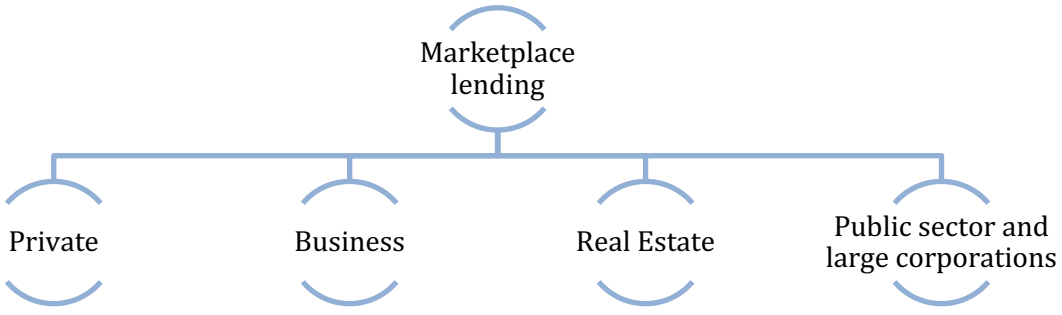

Figure 3: Marketplace lending overview (Created by the author)

2.4.1 Private

The most common loans provided by a marketplace lender are probably private loans. Private loans target investments in personal finance such as home renovations, buying a new car, paying off credit card balances, health costs or debt consolidation. Flexibility and the struggle with high-interest rates are major reasons for private individuals to take on a loan via a P2P platform. A Swiss (CH) supplier of private loans is for example, Lend while in an international context, Lending Club in the United States (US) or Zopa in the United Kingdom (UK) are big players when it comes to private lending (Rose, 2016; Lend, n.d.-d; Zopa, n.d.-b).

2.4.2 Business

Attributing a business loan to small- and medium-size enterprises emerged to be very difficult and limited via the traditional banking way. Through the market entrance of P2P, access to cheaper and flexible capital enables SME's to finance their business projects. Therefore, companies can nowadays easily finance expansion, assets, liquidity or credits. Platforms providing SME loans are for example Swisspeers (CH), Lend (CH) and Prosper (US) (Claessens et al., 2018, p. 12; Cashare, n.d.; Rose, 2016).

2.4.3 Real Estate

For both of the above-mentioned segments as well as for real estate financing Cashare (CH) provides a suitable solution. It is supporting private individuals, SME or professional real estate companies when it comes to buying or rebuilding a property via mortgages, real estate loans or mezzanine financing. However, Cashare takes on the intermediation position between borrower and banks, where the mortgage application is verified by the platform itself before the client is transferred to a suitable bank. The minimum amount is hereby fixed to CHF 250'000.00. Nevertheless, the basic mortgage specifications are the ones set by the banking regulation (loan value maximum of 80% of the market value and financial encumbrance at most 40% of the gross income for an ordinary one-family house). The process for real estate loans or mezzanine financing, however, is fully accomplished by the platform (Cashare, n.d.b).

2.4.4 Public sector and large corporations

Loanboox (CH), a capital intermediator for municipalities, cities, cantons and public corporations, entered a niche market in 2016. Where heavy financing like building a school, a public outdoor swimming pool or other public infrastructures are required, a municipality can request capital between CHF 500'000.00 and CHF 500 million via Loanboox. Approved institutional investors like banks, insurances or pension funds are then proposing their specific amount of capital. In return, the borrower can choose the most favorable one and agrees to transfer the compensation payments (Dietrich et al., 2018, p. 10; Loanboox, n.d.).

2.5 Lending platforms' business model

The chapter 2.5 facilitates a deeper comprehension of the communication and money flow when financing or investing in a P2P project. The lending process happens, unlike traditional bank loans, fully online. Therefore, all platforms are using cutting-edge technologies and innovations to interact and work with their clients. However, the model an online provider uses can vary for each platform (Claessens et al., 2018, p. 3). The illustration, figure 4, from Rainer Lenz (2018) gives the graphical basis to understand the mediation.

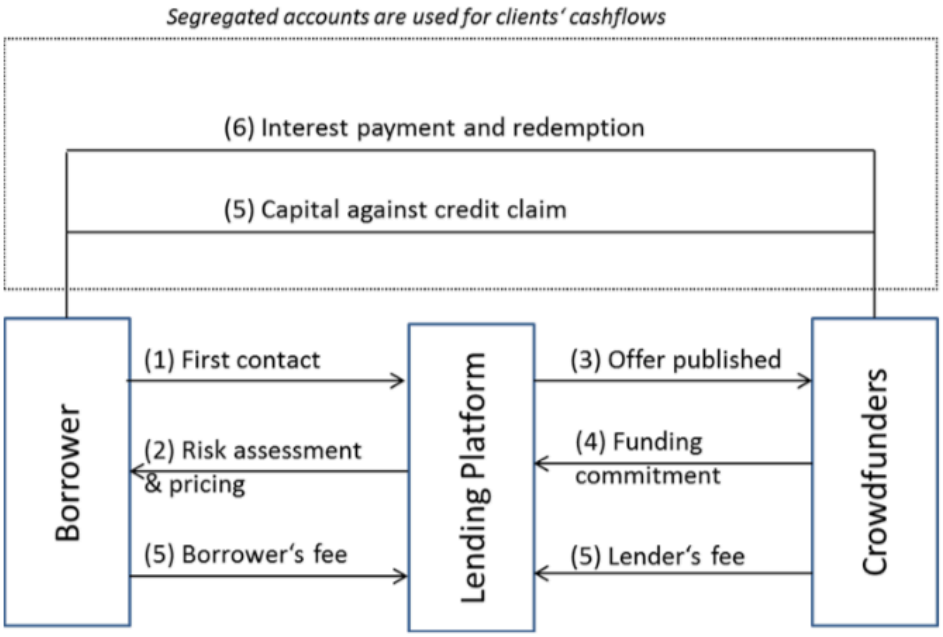

Figure 4: Process of P2P lending (Lenz, 2018, p. 8)

In a simple P2P model, the borrower applies for a specific loan and must therefore, submit various mandatory information for evaluating the creditworthiness and the borrowing capacity. This happens through a standardized and cost-efficient credit application process (Claessens et al., 2018, p. 3). Besides the loan information such as amount, duration and purpose, it is necessary to provide details about the financial situation and credit standing, e.g. income, employment, debt situation, which may need to be documented for verification (Morse, 2015, p. 465). When the borrower is verified by the platform, the request is published to potential investors. If there is one or multiple investors, who are willing to finance the required amount requested by the borrower, the parties are brought together, and a loan agreement is established. This process takes place as a kind of an auction procedure. Depending on the platform's services, it is also possible that the agreement is concluded between the platform and the parties. After paying the fees, the platform transfers the money from the investor's account to the borrowers. In return, the lender receives a credit claim, which states the borrower's commitment to pay periodical interest, amortizations and to repay the principal at maturity (Lenz, 2018). Any activity that happens after this process is handled by the P2P platform itself with no need to intervene by the investor. Precisely, the platform interacts as an agent and therefore is responsible for the payment flow like interest or fund as well as for delays or financial difficulties by the borrower (Claessens et al., 2018, p. 3; Dietrich et al., 2018, p. 7; Swisspeers AG, n.d.-a, p. 10).

Marketplace lenders create a win-win situation for all the parties involved. Investors find attractive investment opportunities while companies or privates can finance growth via an additional financing source, which in some cases can be the only financing source available. Both together, however, establish an environment of growth and strengthen the economy (Swisspeers AG, n.d.-a, p. 6).

2.5.1 Information provision

This subchapter gives an exploration of the information provision in a P2P lending model. It is also a comparison of new and traditional credit risk assessment models. It further enables the reader to gain insight into challenging and sophisticated procedures. Nevertheless, the topic is discussed in a holistic view, since a detailed analysis would go beyond the scope of this thesis.

1. Pre-screening and signaling

Vallee and Zeng (2018, p. 10) indicate that lending platforms collect information on debtors only through self-reporting and credit pulls. Yan, Yu, and Zhao (2015, p. 6) argue that P2P lending platforms retrieve information from a wide range of dynamic data, precisely, public websites, agencies and public records. This may include:

> Purchases using credit cards, accounting records, length of time the borrower has used the same email address, the number of connections on Twitter, Facebook or other social media sites, reviews and ratings from business directories such as Yelp, local and government public records. (Moldow, 2015, p. 20).

This new source of data cannot only help to complete the big picture of a borrower but also changed the way in assessing credit risk from "passive information retrieval into proactive big data analytics" (Yan et al., 2015, p. 6). By passive information retrieval, one depends very much on the borrower's willingness to disclose certain information while using the proactive way, the "online footprint" let the data speak about the borrower. The German platform Kreditech considers data behavior such as the approach the application is accomplished, usage of capital letters or the speed of the computer mouse. Zopa (US) tracks the rejected applicants in order to identify good credit risk. As a last one, Ali Finance (China) collects data about a borrower by accessing transaction details provided through its subsidiaries Alibaba.com, Tmall.com, Taobao.om and Alipay.com together with third-party information. For an accurate real-time analysis of the gathered data, machine learning algorithm and data weightings are used to assess the credit risk. This process follows up most of the P2P lending platforms, where the input is derived from all the available data (big data, application/identification information or FICO score) and through an algorithm model transformed in an output like credit scores. With that, interest rates can be determined and thus signals the level of loan quality to investors (Yan et al., 2015, pp. 5-7).

Marketplace lending platforms, which act as an agent between lenders and borrowers are known for researching and signaling in a very time and cost-efficient way. Asymmetric information and its consequences, moral hazard (lack of information and control) and adverse selection (not able to distinguish between good and bad loans), are therefore diminished (Yan et al., 2015, pp. 3, 7; Akerlof, 1970). Yan et al. (2015) and Moldow (2015) are in line with their findings in concluding that big data enables a more

precise and reliable distinction of good and bad borrowers compared to the traditional credit evaluation. Yan et al. (2015, p. 7) argue that higher accuracy and reliability is due to the impossibility of manipulation and objectivity. However, increased volumes and variety of data only benefit if the quality and analysis is relatively high. Furthermore, Yang, Zhang and Jia (2017, p. 11) analyzed influencing factors of P2P lending success rates in China and found that soft information such as bidding records has an impact on success rates and therefore reduces information asymmetries and costs. Moreover, a US case where Weiss, Pelger and Horsch (2010, p. 1) conducted more than 5'000 credit transactions, proofed that the P2P lending platform Prosper limits adverse selection. Moldow (2015) additionally compared a FICO score model with new scoring models, which is visualized in figure 5. The FICO score model, created by Fair Isaac Corporation, is mainly used by traditional lenders for assessing credit risk. It considers five components: the payment history, credit utilization, types of credits, length of credit history and new credits accounts (myFICO, n.d.; Kaufman, 2016).

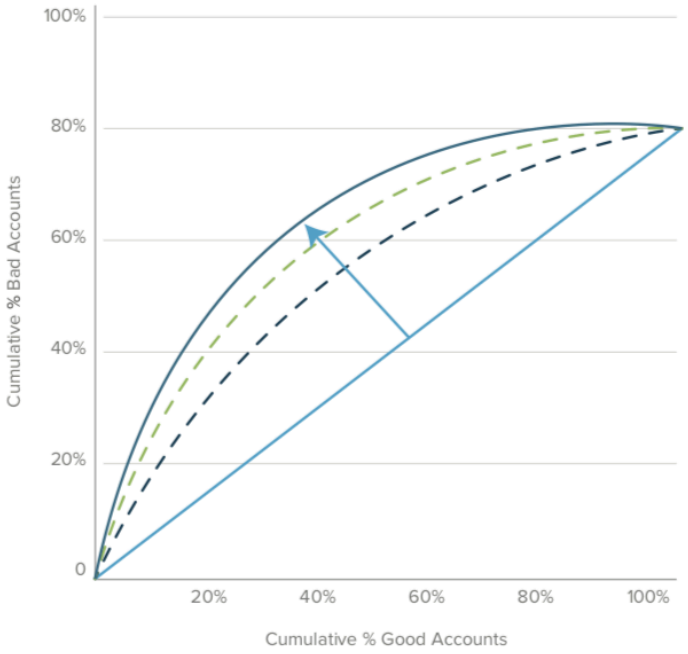

Figure 5: Big data and FICO model comparison (Moldow, 2015, p. 22)

The 45-degree line determines the standalone FICO model expected loan performance where risk and default rates are positively related. The bowed lines illustrate new scoring models including big data and FICO components. These lines show the models, which have positively identified borrowers, who are differently categorized by the FICO model. The space in between the straight and bowed line represents the potential of an improved model. It further shows that new models more accurately distinguish

between good and bad borrowers while the traditional model misses out on opportunities (Moldow, 2015, p. 22).

2. Investor's screening

The platforms provide a standardized narrowed set of information about the borrowers to the investors. In turn, they are forced to screen and invest individually according to their risk appetite. Thus, the information a platform provides to those lenders has two main functions: quality check and screening. The first function allows the investors to judge the loan quality, which she/he is intended to invest while the latter one allows to further screen loans. Therefore, investor screening is an important role as it decides whether a loan gets funded or not and in turn impacts the platforms pre-screening and pricing. This form of information provision/quest is a remarkable difference to the traditional banking (Vallee & Zeng, 2018, pp. 8–9)

2.5.2 P2P lending services

The subchapter P2P lending services gives information about the service provision within different stages. Figure 6 illustrates an overview of those services a marketplace lender provides to its customers. The services are divided into three groups, namely, pre-agreement, on-going agreement and end of agreement, which is differentiated by the author. However, depending on the platform, not all services might be contributed internally but might be outsourced (Dietrich et al., 2018, p. 7).

Figure 6: Additional platform services (Created by author)

Looking at pre-agreement services, the chapter 2.5.1 already covered credit ratings and pricing, which no need to be further explained. A (partly) insurance for credit defaults is another service that can be agreed in advance. Therefore, the platform builds up a security back-up and in the event of a debtor default, the granted money is transferred to

the investor (Claessens et al., 2018, p. 4). Moreover, a borrower has the chance to protect oneself against unemployment, death and inability to work with a partner insurance of the platform (Lend, n.d.-b). Further, investors can diversify their risk through investments in different loan projects, either invest in fractional loans, which is typically for retail investors or purchase various whole loans which is typically for institutional investors (Vallee & Zeng, 2018, p. 13). There is also the option to place the money in a credit portfolio, which is adjusted to the investor's risk preference and conditions. According to the Cambridge Center for Alternative Finance, more than 95% American and 75% European P2P providers facilitate such a selection method (Ziegler et al., 2017; Ziegler et al., 2018).

When everything is settled and the promised loan is transferred, the platform attends the loans by collecting charges. In addition, the platform is responsible for collecting and distributing amortizations and interest rates. Most Fintech platforms also provide monitoring and advisory services to its clients in a similar fashion as conducted by traditional banks. Investments and credits have matching maturities and normally it is not possible to liquidate those investments. However, within the term, there is occasionally the possibility to find another investor by oneself or if provided via the secondary market (Claessens et al., 2018, p. 3).

At the end of the agreement, the platform transfers the principle including the interest rate back to the investor. In case of payment delays or default most Swiss P2P platforms have an in-house debt collection agency (45%) while 27% has outsourced or partly outsourced (27%) it (Claessens et al., 2018, p. 3; Dietrich et al., 2018, p. 19). However, this thesis does not further discuss the debt collection process.

2.5.3 How the platform earns money

It is quite difficult to determine the exact profits of different marketplace lenders, however, this chapter defines some income sources. The main originator of earnings is fees. When a project is successfully funded both borrowers and investors are paying small fees. Furthermore, additional services are also generating fees. The next paragraphs compare the fee structure of a Swiss and an American P2P lending provider.

The Swiss platform Lend does not charge any fees on the application process. However, after a successful publication, the borrower pays a score-based fee of 0.2-1% of the whole loan amount, which is calculated for the whole maturity. It is a one-time fee at the beginning of the contract. Other services than registration, account management and publishing a project, are in charge of a fee, which is directly deducted from the loan payout. On the contrary, investors just pay an annual fee of 1% of their total amount invested, which is subtracted from the monthly investment income (Lend, n.d.-b).

Having invested in a loan at Prosper an investor pays an annual 1% service fee. The borrower, however, a closing fee is directly applied and is based on its rating. For example, an AA one year loan is charged by 0.5% while a B rated one year loan is charged 2.95% of the loan amount (Prosper, n.d.-b; Prosper, n.d.-a).

2.6 Regulatory framework

Chapter 2.6 delivers insight into the regulatory framework of the P2P lending industry. It shows the importance of the regulator in such a young living business. The chapter gives a short overview of different regulations in Switzerland, the United Kingdom and India, as demonstrated in figure 7. An example of Chinas' specifications is made in the subchapter 2.8.3 platform uncertainties and risks.

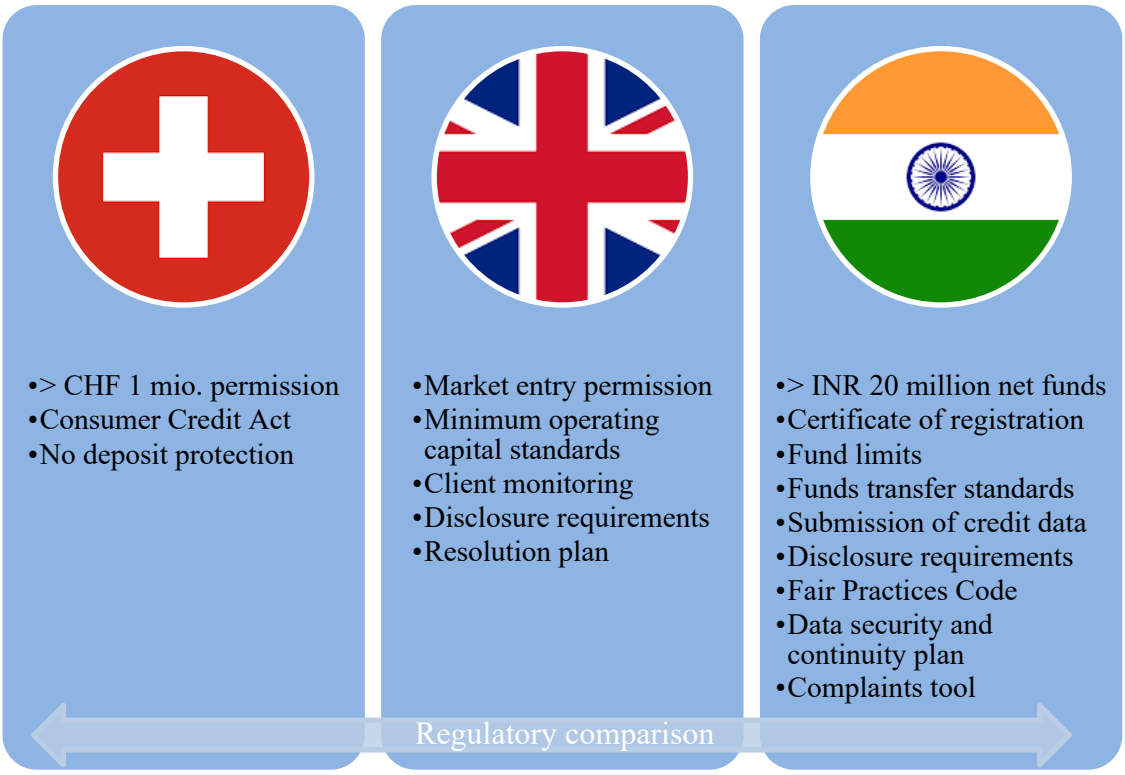

Figure 7: Country-specific regulatory comparison (Created by the author)

In 2017, the Swiss Federal Council released new regulations for Fintech companies, which simplifies the market entry and strengthen the competitive position of the Swiss financial center. Consequential, loans for companies up to CHF 1 million can now be funded by more than 20 public funds without any permission as well as an extension of the settlement time limit of 60 days instead of seven. This applies also to other financial institutions, which are based on the Banking Ordinance. One year later, however, the rule has been further extended for the segment private consumption. This was possible due to the fact that crowdlending is subject to the Consumer Credit Act (CCA) as of April 2019. CCA aims to prevent debtors from excessive indebtedness through consumer loans. Key elements are: mandatory credit standing check, the obligation of the finance provider to notify granted consumer credit, observance of legal rate, right of withdrawal and the prohibition of pushing promotion (Swiss Federal Council, 2017; Swiss Federal Council, 2018; Schweizerische Bankiervereinigung, 2016, p. 2). Despite that, investments on a P2P platform are not under deposit protection (withdrawal of privileged deposits of maximum CHF 100'000.00 per client in case of bankruptcy) as it is the case for banks and securities broker (FINMA, n.d.). Nonetheless, the Swiss Federal Council provides a good ground for innovation and development with more freedom and thus fosters competition.

The United Kingdom has a single regulator, the Financial Conduct Authority (FCA), which is currently in favor of marketplace lending. Since April 2014 firms, which plan to participate in the crowdlending market first need to apply for permission at FCA. In order to obtain the license, platforms are forced to maintain minimum operating capital standards, monitor clients' money, and meet disclosure requirements. In addition, they are required to have a contingency plan, which secures the loan repayments to investors in the event of the platform's breakdown (Srethapramote et al., 2015, p. 40; Financial Conduct Authority, 2015, p. 2). Despite these existing requirements, the FCA constantly tries to improve and develop the marketplace environment. Based on the consultation paper the FCA (2018) aims at several improvements for investors, borrowers and platforms. Firstly, to integrate a better information provision for investors concerning the platform's services and charges as well as detailed information about the investment risk with an accurate interest rate for the risk taken. Secondly, home financed borrowers should get protection similar as provided by authorized providers. Thirdly, platforms should be well-governed, including an appropriate business structure that goes along

with customer fairness, clear and accurate pricing and risk assessment. Additionally, a resolution plan in case the platform stops operating is required.

India entered the P2P lending market without any regulations and was affected by mistrust and doubtfulness on both sides, borrowers and investors. However, the demand of rejected borrowers by banks, and investors seeking profitable investments was high. India's P2P lending boom, however, occurred a few years ago in 2017 where the Reserve Bank of India (RBI) classified marketplace lender as Non-Banking Financial Companies. With that registration, an operation framework was introduced. The RBI transformed the online lending market to a more trustworthy and more secure business for the stakeholders. In order to apply for the certificate of registration, a platform needs to have at least net funds of INR 20 million (approximately CHF 0.29 million at time of writing). The introduction of a minimum fund prevents the market from unserious companies. When registered, a clear set of operations is defined where the platform needs to focus on the core activity, the intermediation, and no form of diversification (accept deposits or provide credits) is allowed. Furthermore, RBI defined some maximum standards: an investor can lend a maximum of INR 1 million (approximately CHF 14'000.00 at the time of writing) to borrowers and a borrower can get a maximum loan of INR 1 million. In addition, an investor can lend no more than INR 50'000.00 to the same borrower. These limits apply across all Indian P2P lending providers and ensure that investors, as well as borrowers, do not take too much risk. Besides that, platforms are obligated to navigate the money flow through escrow accounts operated by a trustee. Additionally, to guarantee purposeful disposition, no cash transactions are allowed. Another requirement is the submission of monthly updated credit data of borrowers to credit information companies. It assures that delays and defaults are reported, while borrowers are more careful due to a possible refusal for future loans. In order to ensure that investors can make an informed investment decision, marketplace lenders need to disclose a monthly portfolio performance including a proportion of non-performing assets. Further, the platform is required to publish a fair practice code to ensure that stakeholders understand the risk involved, no guarantee of return and the probability of a total loss. Moreover, the provider ensures that recoveries of loans are adequately and professionally handled and displays that the RBI is not in charge of any responsibility. As a last, the platform shall put in place a tool for complaints as well as

data security and a business continuity plan (Singh, 2019; Reserve Bank of India, 2017, p. 1-8; Finanzen.ch, n.d.).

2.7 Opportunities

Chapter 2.7 is one of the two main literature chapters where opportunities for all the three parties, investor (2.7.1), borrower (2.7.2) and platform (2.7.3), are researched and explained. It is important because chapter 4 practical framework, further analyzes these remarks. An overview of the different benefits is shown in figure 8.

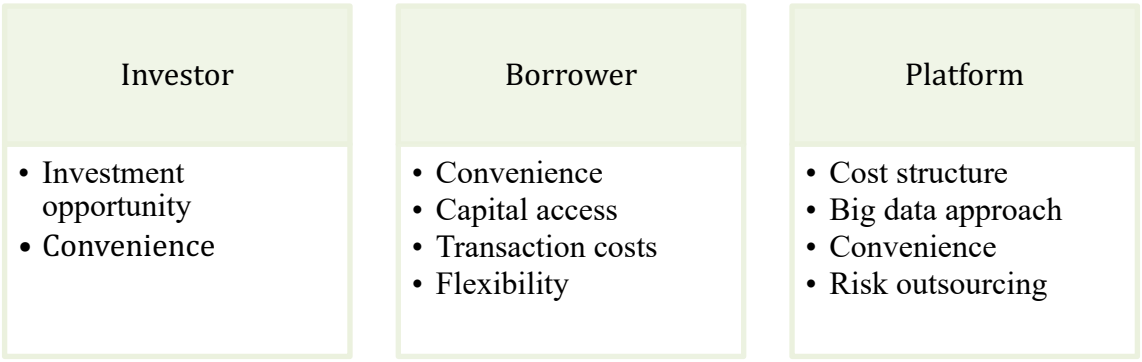

Figure 8: Overview opportunities (Created by the author)

2.7.1 Investor

The return of a P2P investment has to compensate for the additional risk taken and needs to be higher than other investments with the same risk. This statement must be true when taking recent growth rates of the overall crowdlending into considerations. In other words, investors put money in P2P investments due to the fact of receiving higher returns than common investments, which is because of the higher risk of a P2P loan. Funding Circle, the leading P2P lending platform in the United Kingdom, projects annualized returns after fees and bad debt of 4.5%-5.5% in 2018 and 5%-7% for the first quarter of 2019 (Funding Circle, 2019-a). Nevertheless, such returns are dependent on the platform, quality and maturity of the loan as well as on diversification of the risk (Lenz, 2018, pp. 10–11). Investing CHF 100’000.00 in an A+ (best possible rating) loan for one year, the Swiss P2P lender Lend (n.d.-c) offers an average net return of 2.29%. Investing the same amount in a C rated loan would result in an average net return of 4.67%. The expected cumulative loss rate for an A+ is stated to be between 0.19% and 1.11% whereas the C rated loan bears an expected cumulative loss of 0.94%-7.75%. Comparing it to the returns of saving accounts or the Swiss bond market, P2P returns incentivizes investors and represents a huge comparative advantage (Lend, n.d.-c).

Another opportunity is observed in the convenience a marketplace lending brings with it. Investors can access the platform very comfortable 24 hours / 7 days (24/7) through every internet capable device. In addition, the processing happens in a very time efficient way and on a low-cost basis. To overcome cluster risk investors do not necessarily need to diversify their investment by themselves but can make use of the platform's solution of an automated order placement where the maximum amount of money, maturity and risk appetite is defined (Lenz, 2018, p. 11; Perkins, 2018, p. 8). In addition, the investor does not need to supervise cashflows as it is one of the platform's responsibility. Further, in the event of a default the investor can make use of the platforms own or external provided debt collection service, however, this service is associated with additional costs.

2.7.2 Borrower

Analogous to the lender, the borrowers profit from the convenient P2P platform service in the same manner. Additionally, according to Fuster, Plosser, Schnabl and Vickery (2018) the credit applications are processed on average 15%-30% faster than other credit grantors' processing. In case of a sudden liquidity shortage, this time savings can be essential.

Moreover, especially for SME's or less wealthy individuals, access to a less costly P2P financing source is attractive. Big banks might not finance these segments due to unprofitable credits (low credit amount) or low credit standings. Therefore, a credit via a marketplace lender is sometimes the only source to finance a project for a borrower (Claessens et al., 2018, p. 12).

Borrowers benefit from low transaction costs when applying for a web-based loan. Lower transaction costs result from the underlying technology, which fosters a fast and easily accessible application process, less paperwork and documentation, and transparency. Less bureaucracy not only means based on the application process but also that no collateral is needed when providing funding for a borrower (Lenz, 2018, p. 15). Such low-cost technologies and the fee-based structure makes obviously an impact on low interest rates.

In reference to Lenz (2018), flexibility is another important factor for borrowers. While the provision of additional financing is one flexibility component, borrowers profit from the opportunity to disperse an ongoing contract. Accordingly, amortizations can be made in case of a contractual agreement. Most marketplace lenders additionally allow borrowers full flexibility through reducing the financing in case of additional capital is saved or gained over time. Thus, borrowers profit from paying lower interest payments due to a smaller loan amount.

2.7.3 Platform

The main advantage of marketplace lenders compared to traditional lenders is seen in their cost structure. The operating costs can be held relatively low due to online-only services like application process, automated credit assessment and negligence of subsidiaries (Perkins, 2018, p. 7). A Deloitte analysis of Tomlinson, Foottit and Doyle (2016, pp. 13;21) shows that loan acquisition costs of a platform lender are almost double the expenses of a bank whereas the loan processing and servicing costs are more than 60% lower. Although marketplace lenders have currently an operating cost advantage, banks profit from an advantage in structural costs (economies of scales) and lower sensitivity to interest rate changes. It is expected that if the credit environment recovers and interest rates start to rise again, online lenders expenses start to increase as well. Perkins (2018, pp. 7-8), however, argues that the technology-driven costs of a marketplace does not significantly increase as the loan volume do and therefore the operating-cost advantage can be extended within a growing industry.

In chapter 2.5.1 Information provision the credit scoring model of a marketplace lender is explained. The analyzed literature agreed on the consensus that the big data approach identifies and calculates risk better than traditional models. This seems to be a major advantage of P2P finance. However, according to the Deloitte analysis (2016) there is limited belief that online lenders “systematically price the risk better in areas where banks have an appetite to play” (p. 20). Although this approach first needs to prove itself in a whole credit cycle, the innovative approach evolves a new risk-scoring algorithm to reduce default rates. In case of a positive effect it is not necessary a comparative advantage anymore but rather a new form of assessment to which traditional lenders could start to adapt to (Tomlinson et al., 2016, pp. 20–21).

Another opportunity is observed in the convenience a marketplace lending brings with it. Precisely, the model delivers investors and borrowers a better experience due to lower time costs and more comfort. Using the internet application 24/7 from every internet capable device and the fast processing speed are main advantages. Unlike traditional banks, which have to restructure and adjust their infrastructure and systems, online platforms may meet the clients need in a more efficient way (Perkins, 2018, p. 8; Ghose et al., 2016, p. 8).

The business model's risk decentralization mechanism is a big risk reduction opportunity. Due to the fact that platforms act as off-balance-sheet operators, the credit risk is fully transferred to the investor. Nevertheless, there are some marketplace lenders, which are holding the credit positions in their books and therefore bear the risk but also might profit from a better investment opportunity (Claessens et al., 2018, p. 3).

2.8 Uncertainties and risk

The chapter 2.8 uncertainties and risks, gives an overview of possible risks for all parties involved. It provides valuable clues from past research, which then can be compared with the results gained in the practical framework (chapter 4). An overview is given in figure 9.

Figure 9: Overview uncertainties / risks (Created by author)

Jiazhuo G. Wang and Hongwei Xu Jun Ma (2015) identified nine risk types in online lending: "insufficient credit checking, inadequate intermediation, untimely repayment, lack of liquidity, lack of transparency, operational and technical failure, legal risk, excessive leverage, and lack of ethics" (Yan et al., 2015, p. 3). Moenninghoff and Wieandt (2013, p. 478) added interest rate and market risk. Some of the risks solely

come along with the new form of financing (Yan et al., 2015, p. 3). The different risks are allocated to the affected party and explained in the following paragraphs.

2.8.1 Investor

The biggest risk is seen in the credit risk, which is the potential loss due to the borrower's default or a change in credit standing (Schweizer, 2018, p. 10). The Annual Global Corporate Default Study and Rating Transitions from Standard and Poors (S&P) global ratings shows that default rates are in strong correlation with economic movements. In other words, default rates significantly increase in times of recession with a stronger peculiarity for high-risk categories (Vazza et al., 2017, pp. 3–4). In addition, those high-risk categories also bear a rather high standard deviation of default rates compared to low-risk categories. Nevertheless, a big factor for credit risk lies in the choice of loan maturity. The longer the investor provides capital to the borrower the higher is the credit risk and the chance interest rates might change. It means an investor might miss out opportunities for a better investment in the event of a deterioration of the borrower's credit standing or an interest rate rise. The effect of repricing/re-evaluation of an investment or borrower due to market movements or change in the borrower's credit assessment like it is done in the bond market, is faded in a marketplace lending word. Only if there is a secondary market where the loan changes financer there might be a repricing (Lenz, 2018, pp. 11–12). Nevertheless, some platforms offer fee-based investor protection in the form of an insurance to cover costs caused by credit risk, which is explained in 2.5.2 P2P lending services.

Serrano-Cinca, Gutiérrez-Nieto and López-Palacios (2015, p. 18) analyzed the determinants of default rates of the marketplace lender Lending Club. The results showed that first of all the assigned borrower rating has obviously a strong correlation to the default rate. Thus, A-graded loans were repaid by 94.4% whereas a G-graded loan has a ratio of 61.8%. In comparison, the Swiss marketplace Lend (2016) projects default rates of 0.29%-0.54% for an A-graded loan and 0.94%-1.72% for a D-graded loan (lowest rating where offers are published). The allotted interest rate reflects these default probabilities and thus demonstrates a strong positive relationship. Secondly, the paper identified the loan purpose as another default determinant where a loan for a wedding is less risky compared to a loan to a small business. In fact, loans to small business were identified as the riskiest loan purpose. Other important factors are observed for the borrower's characteristics such as salary, housing situation, credit

history and level of debt. On the contrary, loan amount or the duration of employment were found to be less relevant variables. From this study, one can conclude that all comes down to the provision of an accurate and clear credit assessment in order to signal default rates properly.

Providing a deeper insight into P2P lending default rates figure 10 shows the historical default performance of Zopa UK. Zopa was founded in 2005 and is known as the first P2P lending company which provides simple electronic access to loans and investments. In light of its pioneer position, Zopa is a good example to compare its performance.

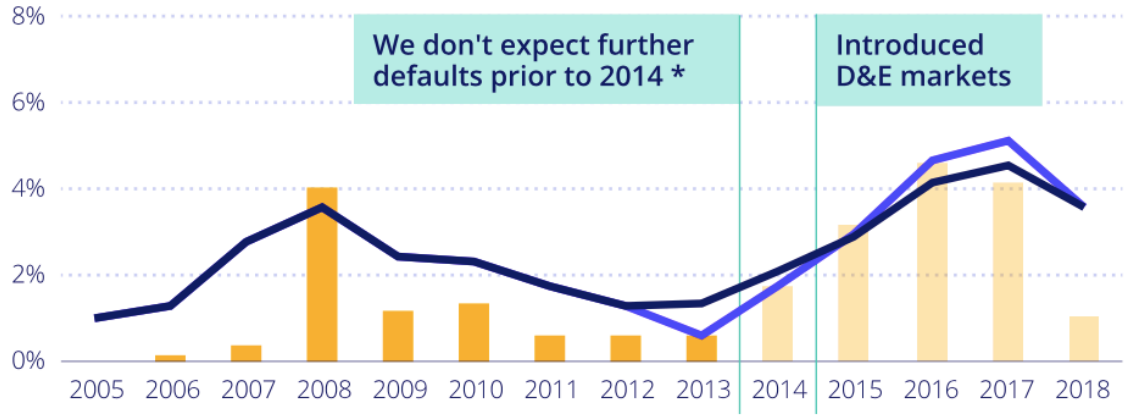

Figure 10: Zopa historical default performance (Zopa, n.d.-a)

The dark blue trend line visualizes the default expectations at loan origination whereas the light blue line represents the updated loan performance. In addition, the yellow pillars until 2013 show actual loan defaults as a percentage of the total amount lent in each calendar year. The actual default rates from 2014 onwards are still outstanding and indicate the current state (Zopa, n.d.-a). In 2008 there was a first peak of about 4% loan defaults which were probably caused by the financial crisis. A second peak becomes apparent in 2016, which may have been created by the introduction of developing and emerging markets.

In comparison, figure 11 reveals the UK's non-performing loans to total gross loans data, which is retrieved from CEICData and yearly reported by the World Bank. Significant is that the highest percentage of non-performing loans occurred in 2010 and 2011 whereas Zopa experiences a one time high in 2008. Further, non-performing bank loans recovered less fast from the crisis but remained falling until 2017.

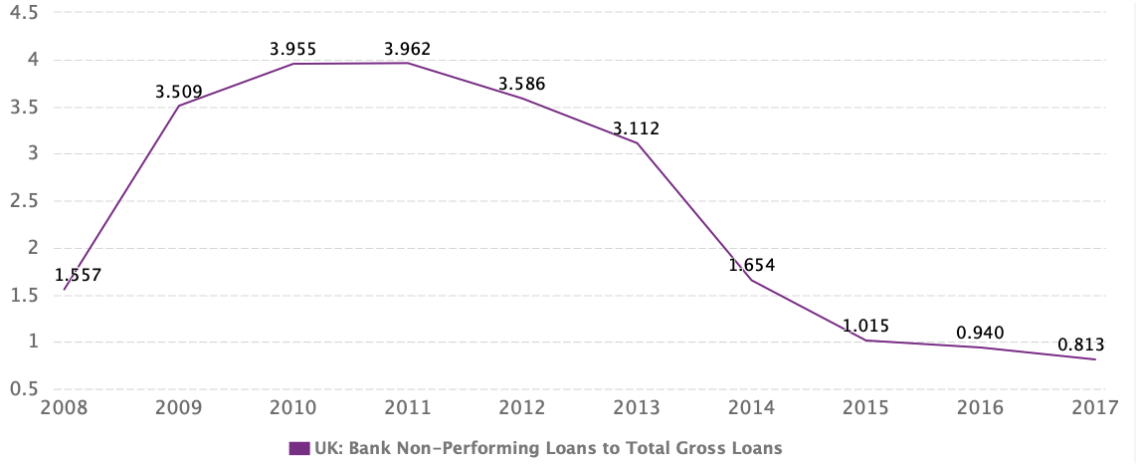

Figure 11: United Kingdom's non-performing loans (CEIC & World Bank, n.d.)

Nevertheless, this comparison targeted a visualization but may not be very representative since Zopa only provides consumer loans and banks a wide variety of loans. This paper does not go further into details about this topic.

Investment risk, respectively liquidity and cluster risk, are other potential sources of losses for investors. Capital on a bank account, invested in stocks, metals or other liquid assets can be easily withdrawn on a daily basis or within a couple of months. In contrast, the amount of money lent to the P2P borrower is mostly unsecured and fixed to maturity. Therefore, an investor needs to free up capital for several months or years, in some cases without any exit option. The liquidity risk, however, is reduced if loans can be traded in a secondary market (Lenz, 2018; Moenninghoff & Wieandt, 2013, p. 479).

In order to profit from high returns, investors need to consider various aspects like quality and maturity of the loan as well as diversification of the investment. Due to the lack of the middleman as a risk buffer, respectively diversifier, the investor is automatically affected by cluster risk. In other words, there is a high risk involved when investing in only one loan, which might default. In order to reduce individual risk and to profit from diversification effects, small investments in various different loans become crucial. In the case of backing the wrong horse, through diversification the bad debt can be absorbed by other good loans (Lenz, 2018, pp. 10–11; Funding Circle, 2019-a).

Lenz (2018) sees a problem with the platform's disclosure standards according to the risk lenders might be involved. In fact, there is no disclosure policy by right, which forces platforms to identify investor's risk understanding. A lender might therefore

underestimate the risks when using a P2P platform. Nevertheless, under the EU consumer protection law, the investor gets signaled for a potential total loss of the investment but is not forced to analyze the risk-return profile and thus does not decide rationally on the investment. Further, it is very difficult to compare the various platforms according to their figures and statistics published. In this regard, no common approach is defined by law for measuring performance indicators such as the risk-adjusted net return (composed of gross interest rates, bad debt rates, default rates, etc.) as well as the method used when assessing the borrowers' credit rating. Because of these comparability difficulties, it makes it very problematic for investors to choose the right marketplace and not be misled.

Another aspect a lender might worry about is the platform's shut down or insolvency. Lenz (2018, p. 12) is judging the European platforms with a high probability for insolvencies due to accumulating losses year by year as well as the fact that some platforms are still not reaching positive numbers. In addition, P2P investors are not included in the EU Directive on Deposit Guarantee Schemes, which guarantees EUR 100'000.00 deposits on a bank account per person. Therefore, the investors should give a great deal of attention to this risk category as well. Nevertheless, in the UK, the FCA requires marketplace lenders to have a resolution plan that in case of platform insolvency, the loan repayment is guaranteed. However, these requirements are a rarity for operating crowdlending platforms (Financial Conduct Authority, 2015; Lenz, 2018, p. 16).

The business model's fee-based approach enhances the origination of bad loans. In practice, the platform does not bear the risk of default and therefore may accept more bad borrowers in order to collect the fees. This fraud can also incentivize traditional lending models, like banks, however, they are subject to risk-retention rules and regulations to mitigate this risk (Perkins, 2018, p. 11).

One common risk for lenders and borrowers is market risk. This sort of risk defines a potential loss due to unexpected changes in market prices, e.g. fluctuations in interest rates, currencies, equity or commodity prices (Posth, n.d., pp. 25-27). Investors and borrowers might miss out opportunities in the event of an interest rate change. For example, an investor does not profit from the rising interest rates due to the investment in a long-term P2P loan with no exit opportunity. On the contrary, a borrower might pay

considerably higher interest rates when there is a market turn with lower interest rates (Lenz, 2018, p. 15). There is a similar process in the event of inflation or deflation, however, in such a case money is worth less or more.

2.8.2 Borrower

Considering the borrowers perspective there are three major risk types they could face: market risk, rejection and transparency. Market risk is already covered in the previous paragraph and therefore neglected in this chapter. The two platform risks are explained in the following paragraphs.

Applying for a loan via a marketplace platform and be dependent on the investor's decision whether to fund a project or not marks a big uncertainty. There is no guarantee that the specific amount of loan requested at a defined interest rate, maturity and involved risk will be fully funded. Nevertheless, most rejected offers are revised and republished with a higher interest rate until it meets investors' expectations (Lenz, 2018, p. 16).

Another uncertainty is seen in transparency when borrowers' credit standing is assessed. Neither the lenders nor the borrowers have detailed information about the data or the approach used, to calculate the credit rating. This lack of disclosure increases the speculation potential about whether discrimination aspects like age, residence or migration background play a role in the credit rating determination (Lenz, 2018, p. 16). To conclude this paragraph, for borrowers it is almost impossible to retrace the reasons for being either completely rejected by the platform or the calculated credit rating, which is linked with the specific interest rate payable.

2.8.3 Platform

According to Dietrich et al.'s (2018) P2P lending survey in Switzerland, major risk factors are identified as follows: reputation risk, loan default rates of other platforms and internal, operational risks, macroeconomic development and interest rates. This list is complemented with Perkins (2018) fraud risk and cybercrime listed by the U.S. Department of the Treasury (2016).

Starting with reputation risk, platforms fear the misbehavior of other market participants and thus negative press for the whole crowdlending market, which could cause reputational damage. Misbehavior could refer to violations of regulations, fraud or improper credit assessment which is associated with higher default rates. Internal loan default rates and the ones from other platforms could not only cause industry-wide reputational damage but also may let a platform run into bankruptcy (Dietrich et al., 2018, pp. 16–19). Reputational damage is therefore fully based on the lack of trust and once it is lost, it is difficult to regain it. An example for investors' mistrust is the US platform Lending Club. The P2P provider was externally affected by low returns, suspect business practices of others as well as platform shutdowns. However, the platform itself hints at discrepancies as well. Ultimately, Lending Club had to buy back credits due to insufficient loan requirements and conflicting interests of the management were revealed. These external and internal circumstances led to a drop in investor's trust and demand (Claessens et al., 2018, p. 12).

Operational risk defines the potential loss caused by "inadequate or failed internal processes, people and systems or from external events" (Posth, n.d.-a, p. 20). This definition also includes legal risks. The utilized computer systems, the applied control procedures or employees are all decisions taken by the company and therefore internal risks. External risks are those over which the company has no control such as natural disasters, political and regulatory issues (Hull, 2015, p. 481). China, for example, which takes on a leading position in P2P lending, started to clean up the sector with identifying over 150 problematic aspects such as high interest rates, misuse of funds or exaggerated return figures. By introducing regulations, numerous P2P lending platforms need to be shut down due to insufficient knowledge in that business. In this aspect, in July 2018 there were 118 failed platforms, which makes up the most since 2016 (Bloomberg, 2018). According to estimates, there were no new entrants since August 2018 but rather a drop of more than 50% to 1'021 providers in 2018. Moreover, it is predicted that there is a further drop by 70% to a remaining number of 300 companies by the end of the year 2019 (Bloomberg, 2019).

Cybercrime is another operational risk, which refers to inadequate processes or systems. Nevertheless, this is a concern which not only affects P2P platforms but is rather all types of firms. The U.S. Department of the Treasury (2016) therefore suggests accurate

protections, best practices and recovery plans in order to reduce cybercrime and to protect customers (U.S. Department of the Treasury, 2016, p. 36).

Considering the market development the U.S. Department of the Treasury (2016, p. 1) refers to a concentration of underwriting risk due to the favorable market condition in which the P2P lending industry has grown. Since the majority of P2P platforms have been introduced there was not any economic downturn where the development of default rates and delinquency could be tested. Furthermore, platforms' main target is to attract both parties, capital supplier and capital demander. In times of a low interest environment and economic expansion, there are enough investors seeking profitable investment opportunities and additionally, the credit demand is high. On the contrary, when the market turns and falls into recession, marketplace lending may not remain the same (Perkins, 2018, p. 10). The literature of the U.S. Department of the Treasury (2016), Perkins (2018) and the report of Standard and Poors (2017), which observed a strong correlation between recession and default rate (chapter 2.8.1. investor), are in strong agreement.

3. Methodology

The third chapter, methodology, covers all the applied methods for the theoretical and practical part. Firstly, the paper selection process for the literature review is explained. Thereafter, the different approaches used for the stakeholder analysis and evaluation of opportunities and risks in the practical framework, are defined.

For the theoretical framework, a keyword-search was conducted when looking for appropriate research papers. In this respect, databases like Google Scholar, Science direct, Academia, Research gate and Nebis were scanned. Keywords such as "P2P lending", "peer-to-peer lending", "marketplace lending" and "crowdlending" were used and further journals were found through a back- and forward search. 37 representative journals and reports were found from the year 2009 until 2019. Additionally, eight major P2P lending platforms were covered within this thesis (Bachmann et al., 2011, p. 4). The majority of the platforms are Swiss, however, perspectives of other leading countries like the UK and the US were added. Further, the thesis also covered some notes about P2P lending in China and India. An overview can be seen in table 1.

Year	Amount	Reference
Before	5	Bachmann et al., 2011; Greiner & Wang, 2009; Lin, 2009; Weiss, Pelger & Horsch, 2010; Moenninghoff & Wieandt, 2013
2015	6	Morse, 2015; Prime Meridian Capital Management, 2015; Serrano-Cinca, Gutierrez-Nieto & Lopez-Palacios, 2015; Srethapramote et al., 2015; Wang & Jun Ma, 2015; Yan, Yu & Zhao, 2015
2016	6	Ghose et al., 2016; Rose, 2016; Tomplinson, Foottit & Doyle, 2016; Yu, Zheng, Xu & Wang, 2016; U.S. Department of the Treasury, 2016; Lend, 2016
2017	4	Reserve Bank of India, 2017; Van Liebergen, 2017; Yang, Zhang, Jia, 2017; Ziegler et al, 2017
2018	9	Adriana & Dhewantoa, 2018; Bloomber, 2018; Claessens et al., 2018; Dietrich et al., 2018; Financial Conduct Authority, 2018; Lenz, 2018; Perkins, 2018; Valle & Zeng, 2018; Ziegler et al., 2018
2019	7	Bloomberg, 2019; Singh, 2019; Funding circle, 2019; Loanboox, 2019; Funding Circle, 2019 (a-b); Cashare, 2019
Platforms	8	Cashare, Funding Circle, Lend, Lending Club, Loanboox, Prosper, Swisspeers, Zopa

Table 1: Covered research papers in dependence on (Bachmann et al., 2011, p. 4)

Because the topic is rather new and not much proven literature or statistics are available, not all papers used are peer-reviewed. However, the journals were reviewed with an objective and neutral perspective without any behavioral bias or a certain position. Representative journals that point into a specific research direction or differ from other findings were included in the theoretical framework. Further, the focus was set on general information about the P2P lending business as well as specific benefits and threats for the main players. Thereby, the literature was chosen according to those target topics. In addition, only off-balance sheet platforms were considered due to the belief that agents that are holding credit positions in their books act differently in the market. The literature was managed by the research assistant Zotero software, which organized and cited the literature based on the American Psychology Association (APA) style rules.

On the basis of the literature, external stakeholders were further qualitatively appraised in the chapter 4. Since the P2P market is rather new, there is only limited literature where online lending stakeholders were identified and prioritized. Interviewing all involved stakeholders was found to be inadequate due to a lack of required time and resources. Alternatively, the typology of Varvasovszky and Brugha (2000) was found to be suited for the analysis. Additionally, Adriana and Dhewantoa (2018) analyzed stakeholders of Indonesian marketplace lenders based on the same approach, which was taken as reference. Supported by the characteristics elaborated from the literature each stakeholder was assessed according to four dimensions: interest in the issue, influence/power, position and impact. Applying those two techniques an exact stakeholder analysis emerged whereby conflicts of interests and influential parties were identified. The subsequent stakeholder prioritization model adapted from Knecht (2018, p. 15) visualized high impact groups and facilitated to focusing on main target groups.

After filtering important stakeholders, opportunities and risks for investors, borrowers and platforms, were evaluated. Firstly, the analysis of the opportunities follows a customer value approach. Specifically, it consists of the statements and conclusions of Meffert, Burmann, and Kirchgeorg (2012, p. 387). Additionally, the valuation design in the form of a hexagon, respectively, pentagon, and the analogies are subject to Designpilot (n.d.). Nevertheless, the analysis is only partially based on those two references and was mostly further developed by the author. It is an approximation of

customer prioritization and banks' services, which has not been investigated before. Nevertheless, the individuality and different preferences of investors borrowers and banks resulted in the decision to define common attributes for these parties. Therefore, this thesis assumes an investor who is mainly seeking high yield investment opportunity with a basic understanding of finance. In contrast, a borrower is looking for a cheap and convenient financing option with no need for further services or products. Lastly, a bank is characterized by the attributes of a universal bank with a strong focus on credit transactions. While the literature discussed the P2P opportunities in detail, the thesis focused on prioritization of customers. Therefore, the opportunities for an investor and a borrower were prioritized according to their preferences, which is described above. It represents the need for such features. Additionally, a bank's characteristics were visualized as well in order to show the competitive advantages of a P2P provider. Therefore, the marketplace lender represents the optimum in the hexagon/pentagon due to the fact that all benefits are key advantages based on the state-of-the-art P2P model.
Since the analysis is limited to qualitative literature, there is a certain scope for interpretation. Nevertheless, the applied analysis provides a sound foundation in order to understand the importance of P2P lending opportunities.

Evaluating the risks for each party turned out to be a complex procedure. However, it seemed reasonable to argue that the risk analysis was more decisive than the benefit analysis. The author assumed that in general, the customers could be blinded by the attractive benefits. Consequently, the potential risk during a potential future recession or economic downturn is disregarded. The risk awareness of this newly introduced business model was therefore rather low. Similar to the identified opportunities there is not much research about an evaluation of P2P lending risks. Consequently, the author was confronted with the challenge to find an appropriate approach which suits such an evaluation. Due to the fact that marketplace lending provides web-based services and works with cutting-edge technology, it made the research more complex. Despite the fact that no quantitative data was available, applying the severity and frequency method was found to be most suited. The approach was introduced to the author during a risk management lecture at Zurich University of Applied Science when the operational risks of a bank were evaluated. The modified and adapted approach was felt to accurately assess the value and the risks in a P2P business. The terms and partly the description of the various severity and frequency classes were retrieved from the lecture materials,

which were compiled by Posth (n.d.-c, pp. 26-28). Further, the design and classification of the severity and frequency matrix was used from the same reference. However, the description of the different severity classes and adaption for a P2P lending business was derived from the elaborated literature of this thesis. Further, the required input data was originated from the literature review and was justified by its findings. However, where necessary, additional sources for justification reasons were added. As a result, this qualitative analysis featured a profound understanding of the risks in the P2P lending market.

4. Practical framework

Chapter 4, practical framework, builds on the findings of chapter 2. theoretical framework. First of all, the identified stakeholders in 2.2 Stakeholder map, are further analyzed and prioritized in 4.1 stakeholder analysis. With that the most influential parties, investors (4.2.1) and borrowers (4.2.2), are evaluated according to their opportunities and risks. Further in chapter 4.2 assessment of key stakeholders, an additional examination of the platform (4.2.3) is conducted.

4.1 Stakeholder analysis

Based on the identified external stakeholders in the literature review, this chapter evaluates the parties according to their interest, power, respectively influence, position and impact. Later on, figure 12 illustrates the stakeholder's prioritization in order to bring influential and most important parties to light. The first evaluation can be seen in table 2 below.

Stakeholder	Dimensions			
	Interest	Influence	Position	Impact
Investors	high	medium	supportive	medium
Borrowers	medium	low	supportive	high
Competitor	high	medium	supportive	high
Partners	medium	low	supportive	high
Regulator	high	high	supportive	high

Table 2: Stakeholder analysis in dependence on (Varvasovszky & Brugha, 2000, p. 342)

The dimension, interest, represents the degree of importance of the objectives for the particular stakeholder in case of a platform change. Dimension two, influence, implies the level of power a stakeholder has towards the transformation of the market, e.g. new requirements. Thirdly, the position can be supportive, non-mobilized or opposed, which indicates how a stakeholder takes on a stand on a certain issue. Lastly, the impact is translated as the degree of how a stakeholder gets affected in the event of a policy change (Adriana & Dhewantoa, 2018). According to those dimensions, five stakeholder groups are assessed and explained in the following paragraph. An evaluation for the owner respectively platform itself is found to be less representative since the stakeholders are tested based on the dimensions, which refer to the platform.

Investors investing their own money are the main targeted market of a platform's services which results in a high interest level. Additionally, it is believed that they are in support of the alignment of regulatory regimes and their objectives, e.g. investors protection, adequate interest rates or credit signaling. However, their influence on the continuation of changes in the market or requirements is limited. Though investors are very sensitive concerning trust and when it is used wrongly the continuation of the business can be affected. The position is judged to be supportive due to the fact that investors are seeking profitable investment opportunities, especially in the current low-interest environment. Investors get affected by policy changes but can then seek out for other investments. Borrower's interest in aligning their goals with new regulations is seen to be of medium importance since they want to get funded without a lot of restrictions. Their impact on the proceedings in the P2P market is valued to be less influential. Nevertheless, borrower's take on a supportive stance and get highly affected in the event of legal changes. Competitors have a rather high interest to align regulatory regimes and their goals. In support of this, the market behavior, e.g. misbehavior, of each marketplace lender has a huge impact on other players. Competitors play a supportive role and get strongly impacted by policymakers. Partners, however, have a medium interest in the alignment due to the possibility to replace the partner or to do such processes in-house. However, sometimes it is not that easy and reputational effects or market pressure need to be considered. The power for the market transformation is deemed to be less relevant. Partners are estimated to be in support of the platforms' services due to strategic benefits. Additionally, it is believed that the partnerships get affected in case of a regulatory change. Reasons for that may be increased paperwork or tighter monitoring or financing requirements. Last but not least, the regulator takes on a high interest in the alignment of objectives and policy regimes. On the one hand, it wants to have an open market and competition to target economic growth but on the other hand, there need to be certain regulations to guarantee fair market development. The influence and impact are correspondingly high. The regulator has to put in place minimum policies to provide a good ground for doing business and therefore take on a supportive position.

The identified stakeholders are further prioritized in order to identify conflicts of interests and to elaborate strategies. However, for this thesis it is of great interest to assure that the main stakeholders are identified. Figure 12 visualizes classified parties according to their importance for a marketplace lender. Thereby, the platform's impact on the party and the party's impact on the platform are considered.

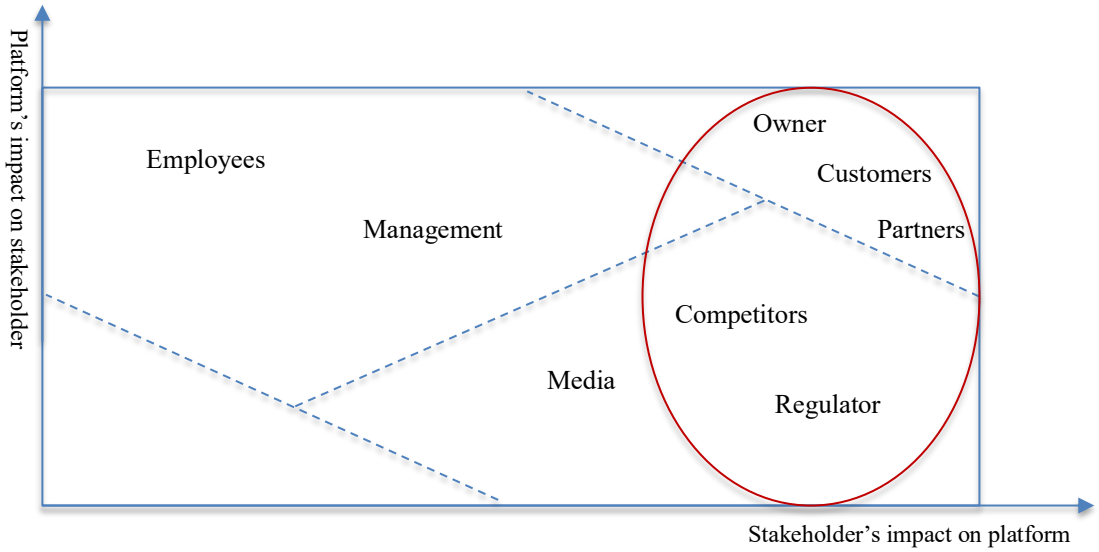

Figure 12: Prioritization of stakeholder in dependence on (Knecht, 2018, p. 15)

Hence, the cluster owner, customers (investors and borrowers) and partners such as banks or other Fintech companies are identified to be the main target groups. Additionally, competitors and the regulator are identified to be a supporting group. Other stakeholders are considered to be of less importance.

These findings do not only help to elaborate strategies but also provides the foundation for further analysis in chapter 4.2 evaluation of key stakeholders. Therefore, the owner is representing the whole platform whereas customers consist of investors and borrowers. These key groups are carefully examined according to their opportunities and risks in a P2P lending market which has been elaborated in chapter 2 theoretical framework. An in-depth analysis of partners is neglected due to its individuality. The supportive group, competitors and regulator, reflects the wider P2P market and supplements the main target group in its elaboration.

4.2 Assessment of key stakeholders

The target of chapter 4.2 is to elaborate marketplace lenders' opportunities and concerns on which they need to take a closer look at. Therefore, the arising question is whether

the risks outweigh the rewards in the P2P lending market. Further, the assessment of the key stakeholders provides a broader view on various issues and a deeper understanding of the platforms' challenges and chances. The three key market participants, investor, borrower and platform, are evaluated according to the literature-based components opportunities and risks. The structure of each subchapter, respectively, the key group follows the same framework. Firstly, the opportunities are valued according to a customer value analysis. The (4.2.1) investors' and (4.2.2) borrowers' opportunities evaluation relies on the specific preferences defined in 3. methodology. Therefore, both hexagons contain an approximation of the particular prioritization in order to find important P2P features. In addition, P2P lending advances are visualized by estimating the current state of a universal bank's services. In doing so, the benefits of P2P lending are defined as the optimum (outer line of the hexagon) due to the fact that only P2P advantages are considered. The (4.2.3) platforms' evaluation consists only of an illustration of the competitive advantage. In a second step, each risk is classified based on a severity and frequency table and visualized in a matrix. The following tables 3 and 4 show the assessment criteria for evaluating each risk event.

Severity class	Description
Irrelevant	No relevant damage or additional costs
Minor	-Failure results in minor system/process damage -Minor property damage -Potential adverse investor's reaction -Potential reputational damage -Small costs/losses
Major	-Failure results in major system/process damage -Partially property damage -Partially retreat of customers -Partially reputational damage -Additional costs/losses
Critical	-Critical operational disruptions -Critical property damage -Major customer's retreat -Reputational damage -High additional costs/losses
Catastrophic	-Possible shutdown of platform -Major property damage -Customer panic -Loss of confidence -Huge money losses

Table 3: Severity description in dependence on (Posth, n.d.-c, p. 26)

Since there is no similar risk analysis for the P2P lending market the difficulty was to clearly distinguish each severity class and to cover most of the possible impact for each stakeholder group. Moreover, there is no data found to clearly associate the real-life impacts of such risk events. Since it is a digitally-based business there are other concerns than for example property or environmental damage in case of a chemical explosion. However, trust is a major element in this young market and therefore is reflected in investor's reaction and reputational impact. In addition, a platform needs to deal also with system or process failures and in turn, may generate huge money losses. Investors and borrower major risk impacts are seen in mistrust and money losses.

Frequency class	Description
Frequent	Once per month or more often
Probable	Once per year
Occasional	Once per 10 years
Remote	Once per 100 years
Very unlikely	Once per 1'000 years or more seldom

Table 4: Frequency description in dependence on (Posth, n.d.-c, p. 27)

The distinction of frequency classes was not that difficult due to the fact that these probabilities are basic indicators of a risk analysis. Nevertheless, the challenge was to accurately identify the frequencies of the different risk events given that a database was not available. Thus, the differentiation is fully based on the existing literature.

4.2.1 Investors evaluation

Investors are a key stakeholder due to their money provision which is, in fact, a main element of the P2P lending business model. At current state P2P investments have become of major interest by reason of higher return possibilities, which is presently rare in a low interest environment. In addition, marketplace lenders ace through low costs and high comfort conditions. Nevertheless, investors are bearing credit and investment risk by themselves, which may cause tremendous losses. Furthermore, platform risks and market risks need to be kept in mind as well. The following paragraphs examine these conditions further.

Opportunities

For an investor cost and return are of main importance when it comes to an investment. It is the driver for customer value and therefore, main weights are given to these factors.

Considering figure 13 all advantages for a P2P investor, which has been identified from the literature, are distributed along a hexagon. The outer blue line represents a marketplace lender as the optimum since all advantages are based on its business model. It means that five is the maximum and therefore the best rating whereas one is the worst. The red line associates an approximation of investors prioritization out of the various benefits. Further, the yellow line constitutes another approximation of the banks' current provision. In the broader sense, the hexagon illustrates a competitive advantage on the part of a marketplace lender compared to a bank.

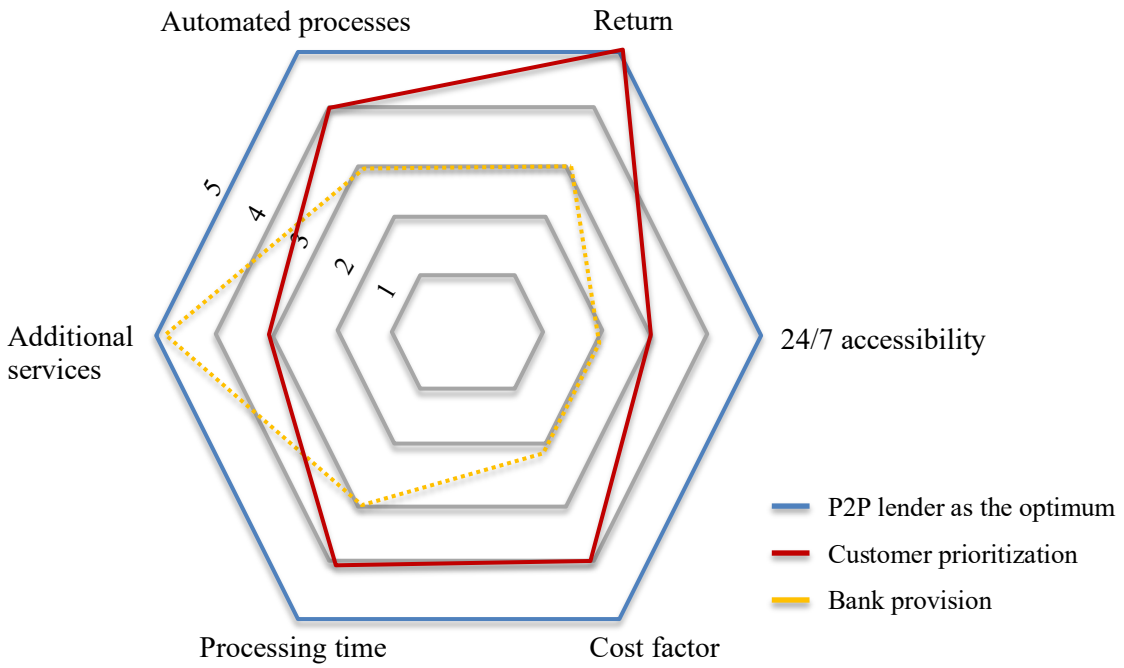

Figure 13: Investors' opportunities evaluation (Created by the author)

Starting with the customer prioritization for an investor, main opportunities are seen in the high return possibilities, low-cost structure and the fast processing time. Comparing it to a universal bank these benefits are a competitive advantage of a P2P lending platform. Nevertheless, the 24 hours 7 days opportunity is regarded as medium important due to the fact that P2P market conditions do not change that quickly and once an investment is done a lender does use the platform for checking purposes. Meaning, an investor might not need to use the full around-the-clock service because of less time pressure. A bank does not meet a 24 hours availability due to fixed office hours. However, with the provision of the internet or mobile banking independence is given to a certain degree. When considering the overall service experience a bank is a strong competitor. A bank does not only provide professional and personal advisory but also a full range of services for every financial situation. Further, it is legally obligated

to elucidate possible risks and to assess different risk appetites and capacities when investing. Moreover, bank clients in Europe are protected with a deposit guarantee by law. Nevertheless, some services might not be in an investor's interests in particular when considering cost factors. Lastly, automated processes are considered of higher importance due to the fact that investors are exposed to greater risk such as cluster risk, which can be mitigated through an automated placement order. Another example where automated processes benefit an investor is the standardized credit assessment approach. If the majority of the literature holds true, a more accurate prediction of credits defaults prevents investors from losses.

Risks

The literature-based investor risks are measured according to the criteria severity and frequency in table 4. In table 5 the results are visualized in a matrix where only the principal risk type is approximated. With the colorized categories low, medium and high risk an investor can detect high-risk events.

Investor risks		
Risk categories	**Criteria**	
	Severity	Frequency
Credit Risk (CR)		
Default	Major	Occasional
Delinquency	Minor	Probable
Investment risks (IR)		
Liquidity risk	Minor	Occasional
Cluster risk	Minor	Occasional
Platform risk (PR)		
Shutdown	Major	Frequent
Insolvency	Critical	Occasional
Fraud	Major	Frequent
Disclosure	Minor	Frequent
Market risk (MR)		
Interest rate/currency change	Major	Occasional

Table 5: Investor severity and frequency table (Created by the author)

Firstly, the credit risk which is seen as the main risk type for an investor is considered. The reader should consider that the default and delinquency risk in this thesis is based on the assumption that an investor invests in different projects of the same platform.

Otherwise, when putting money into P2P projects of different platforms, the probabilities are even more complex to asses. The estimation is based on the two marketplace lenders, Zopa (UK) and Funding Circle, which are rare examples for disclosing default rates. Zopa has an average default rate of approximately 4% per year whereas Funding Circle (2019-b) has an average of 6% for the last three years. The risk for an investor is therefore assumed to be rather low and thus estimated to happen once per ten years. However, depending on diversification the loss of a defaulted borrower can be of major or critical impact. Delinquency is estimated to be more frequent but with less impact because a borrower might just have a one-time payment shortage. In the case of a secondary market, liquidity and cluster risk can be mitigated afterward. Moreover, the usage of an automated placement order diminishes the cluster risk. For these reasons, the severity of investment risk is estimated to be minor. However, it can shortly turn into a critical risk in case an investor is not aware of it. Additionally, it is assumed to happen occasionally. Taking platform risk into account shut down and fraud risks are of major severity. According to Cashare (2019) in the event of a platform shutdown, the continuation is guaranteed through an external back-up partner. Based on Hill (2019) banks' IT failures have occurred at Barclays UK 41 times in a nine-month period while Yorkshire bank suffered from just one incident. A shutdown like a lot of investors are facing in China means great uncertainty about the invested money and whether it is paid back. A low level of regulations may exacerbate such concerns. Disregarding China and focusing more on the proceedings in the United States, Europe or India, the frequency is valued to be frequent to probable with minor to major impacts for investors. This opinion is based on the introduction of certain standards and market entry barriers in these countries. Fraud occurring on the part of the platform is estimated to be probable since the P2P lending business is rather young. Several incidents are discussed in this thesis such as shutdowns of unserious platforms in China or low-quality loans at Lending Club (US). Such events can be of major impact. Nevertheless, with strict regimes and requirements, there might be fewer fraud incidents in the future. A statistic about P2P lending platform insolvencies has not been covered in the literature yet. However, in the most instances, it is written about possible consequences during a crisis respectively recession. Therefore, the occurrence is estimated to be occasional whereas the severity can be critical depending if a resolution plan is implemented or not. Disclosure standards are at the time of writing not introduced and therefore a frequent risk source. However, due to various mitigation possibilities and

regulatory regimes disclosure is of minor impact. Last, heavy changes in the market occur occasionally whereas small changes appear more frequent. Unless it is not a financial crisis occasional changes impact an investor on a minor or major level.

The following table 6 visualizes the evaluated main risk categories and indicates the risk dimension. Medium- to high-risk events needs to be given great attention to.

Investor risks					
Frequency of risk categories	Severity of consequences				
	Irrelevant	Minor	Major	Critical	Catastrophic
Frequent					
Probable		CR			
Occasional		IR	MR		PR
Remote					
Very unlikely					

Low risk	Medium risk	High risk

Table 6: Investor severity and frequency matrix (Created by the author)

Conspicuously, credit and platform risk are the ones which need to be most regarded. Especially, when it comes to a platform shutdown or insolvency and no resolution plan is introduced, the consequences can be very critical to catastrophic. The development of regulations, like the case in China, is also a driver of vital importance. Market risk is presented to be of medium risk. However, market risk can suddenly transform into a critical or catastrophic severity depending on the degree and sort of the crisis. Investment risk is very dependent on the investor's risk understanding and the platform's condition. Due to the fact, that this risk can be easier mitigated or prevented it is of low-risk level.

4.2.2 Borrowers evaluation

The borrower is the indirect counterpart of the investor and therefore another key stakeholder of the platform. The platform offers capital access for minorities, which may have no other financing source. Besides this key advantage, borrowers profit from a convenient service, flexibility and low costs. Nevertheless, benefits often bring along drawbacks in other areas. Major impacts are anticipated from the market and the platform. The following paragraphs reveal an in-depth opportunities analysis (figure 14) and a detailed risk analysis (table 7 and 8).

Opportunities

The identified opportunities are on one hand the capital access, which is the main driver in the P2P lending business. It is seen as the basic benefit whereas, on the other hand, flexibility and low costs are additional benefits. The convenience consisting of fast processing time, 24 hours and 7 days access and standardized processes additionally supplements those advantages. In figure 14 all the benefits are arranged in a hexagon. The blue line is associated with the optimum a P2P lender provides. The red line represents the benefits a borrower attaches importance to. It is an approximation where one means low interest and five the highest interest. The yellow line visualizes an approximation of the current bank provisions and severs as a supportive comparison.

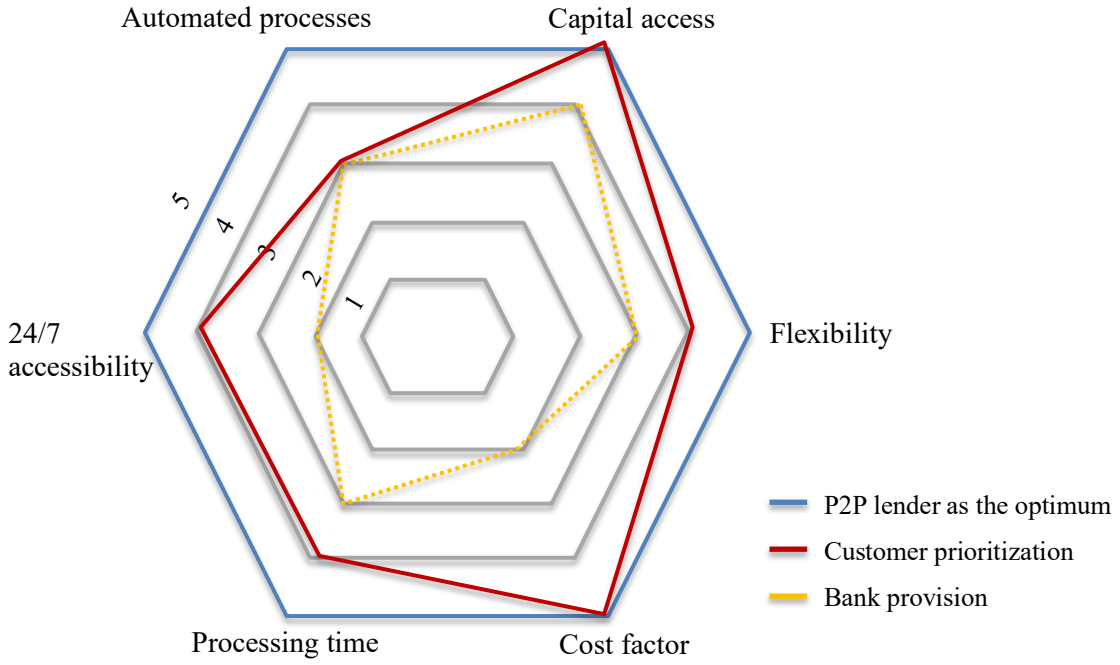

Figure 14: Borrowers' opportunities evaluation (Created by the author)

The key advantage, capital provision, is also valued as priority number one of P2P lending customers. A bank rejection may lead to the only possibility to apply for a P2P loan in order to finance a borrower's project. In addition, through a low-cost model, platform providers found a way to service a niche market. When available, borrowers have great flexibility through amortization and prematurely redemption options within a P2P loan. Therefore, borrowers can lower or save interest rate costs. Another big ranked opportunity is the web-based 24/7 availability and fast processing time where the debtor profits from receiving money in a speedy manner. It is useful in the event of a liquidity shortage but on a normal course of life not absolutely necessary. Automated processes also help for a fast and efficient process however, it is not the customer's first priority

due to questionable inputs, which may discriminate debtors. Comparing a bank's business model, it shows that a bank is a huge capital provider, but only to selected segments. When comparing it with P2P loans, without collaterals, banks or other financial institutions offer mostly higher-priced loans. With the provision of the internet or mobile banking, banks have established more flexibility and freedom for customers but not at the same level as marketplace lenders are doing. The same applies to automated and fast processes. Nevertheless, banks offer other qualities such as customer service and personal advisory in different aspects of life, which outweigh the P2P benefits. However, the borrowers' opportunities evaluation focuses only on credit provision.

Risks

Borrower risks are discovered in market changes and platform decisions. These impacts to borrowers are assessed in table 7 according to their frequency and severity and further summarized in table 8 the severity and frequency matrix. The matrix representation helps to determine low, medium and high-risk categories. According to the interviewee Cashare (2019) relevant risks for borrowers are not really existing in a P2P lending market. Nevertheless, some uncertainties need to be taken into account.

Borrower risks		
Risk categories	**Criteria**	
	Severity	Frequency
Market risk (MR)		
Interest rate/currency change	Major	Occasional
Platform risk (PR)		
Poor credit assessment	Catastrophic	Occasional/remote
Rejection	Major	Frequent
Transparency	Minor	Frequent

Table 7: Borrower severity and frequency table (Created by the author)

In table 7, the first risk category to evaluate is market risk, which happens occasionally and with minor severity. Borrowers are affected by similar market risk characteristics as investors are. In the event of a crisis, the impact can be critical or even catastrophic. However, small but frequent changes do not need to worry a borrower. However, the literature did not cover the risk involved nor the procedure when a loan cannot be repaid, and the maturity needs to be extended. If interest rates have not changed much,

it is believed that an extension or a second request for the initial loan can be easily conducted. However, if the interest rates have increased in such a way the borrower cannot afford or bear the initial credit amount anymore, a continuation of the loan might not be possible. Thus, the borrower might run into default. This issue is strongly connected with a poor credit assessment (platform risk). An accurate assessment of the borrowers' credit standing implies to calculate the credit costs with a considerably higher implicit interest rate to ensure the borrower can still bear the cost in the event of an interest rate rise. The consequence of an insufficient credit assessment is valued to be catastrophic for a borrower. However, due to the fact that no literature has covered this risk, it is assumed that it is a rather rare event. Other platform risks such as rejection or transparency needs to be considered as well. According to Lend (2016) up to 85% of total loan applications are spurned in order to provide high-quality assets. However, there is no disclosure of the specific criteria. Additionally, due to the popularity of P2P lending, a borrower's rejection is estimated to happen more than once per month. Further, such a decision is of major impact for a borrower due to costly or no other financing alternatives. The lack of disclosing detailed information is also the reason why transparency is valued to be frequent. Given that marketplace lending is a rather new market there might be some regulatory developments relating to this topic, which can foster disclosure standards and transparency. Consequently, is estimated of minor severity.

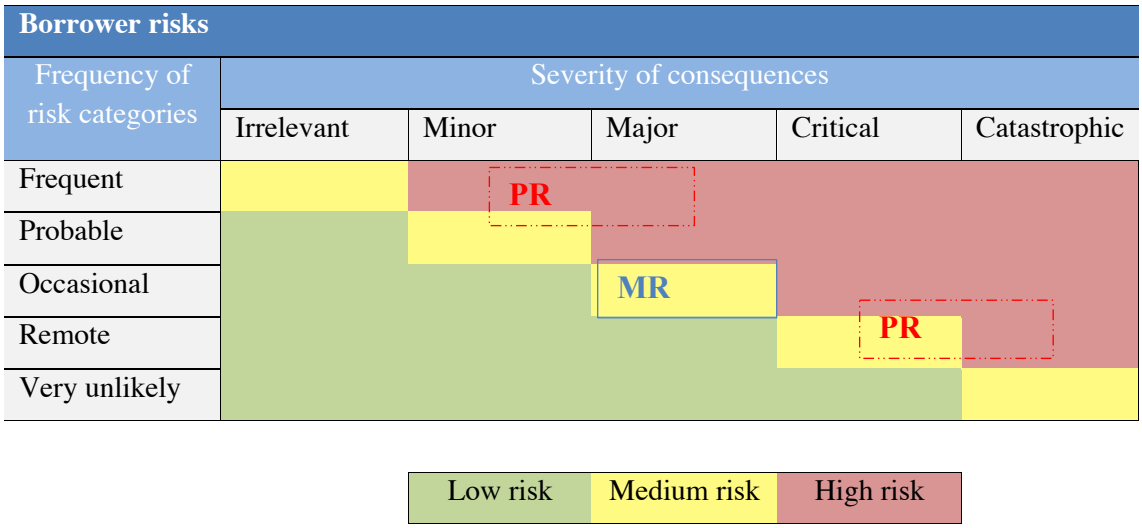

Table 8: Borrower severity and frequency matrix (Created by the author)

In table 8, the matrix points out that the platform bears a higher risk for a borrower. Regulatory changes might scale down the platform risks, rejection and transparency, to medium or low risk. However, an insufficient assessment of the borrower's credit

standing or capacity is a medium-to-high risk factor. Similar to investors, market risk for borrowers is of major impact. Dependent on the market development and the borrower's condition, it could potentially turn into a critical-to-catastrophic event. Summarizing this subchapter, it is important to mention that the evaluated borrowers' risks are rather uncertainties than sources of potential losses. However, it was found to be appropriate to assess those uncertainties in the same manner as the others.

4.2.3 Platform evaluation

Evaluating its own opportunities and uncertainties is important in order to derive an appropriate strategy and to mitigate risks. The literature describes four main opportunities: Risk decentralization, convenience, cost structure, big data approach and automated processes. With the introduction of a business model with such benefits, marketplace lending puts pressure on banks. Nevertheless, platforms run the risk of reputational damage, operations and macroeconomic changes. The following paragraphs cover the evaluations of opportunities and risks for the last key stakeholder.

Opportunities

A key benefit is certainly that the credit risk is an off-balance sheet position. Hence, the risk is transferred to the investor and losses do not need to be covered by a P2P lending provider. The convenience is comprehensively discussed in the previous two chapters, 4.2.1 investors evaluation and 4.2.2 borrowers' evaluation. The cost structure is seen as another big benefit. Additionally, the big data approach and automated processes are new ways of doing a credit assessment, which further innovates the industry. In figure 15, all the platforms opportunities are illustrated in a pentagon. The blue line is again the optimum and the yellow line an approximation of a bank's circumstances. It is rather a visualization of the competitive advantage a marketplace lender has.

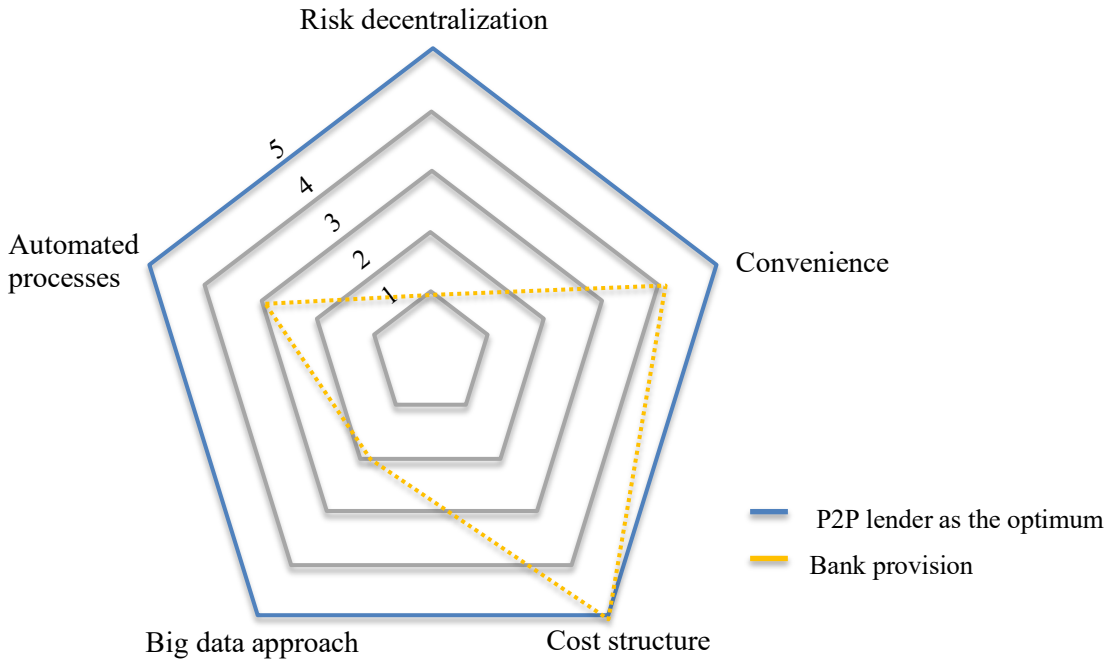

Figure 15: Platforms' opportunities evaluation (Created by the author)

In contrast to a P2P lender, a bank keeps the whole credit risk in its own books. It is therefore very important to undertake a clear and accurate credit assessment of the borrowers in order to mitigate credit risks. Most banks request collaterals that in the case of default the underlying asset can be exploited. However, it causes more paperwork. Considering convenience, there is just a small advance of the P2P lender due to its all-time availability and fast processing. Taking the cost structure into account the literature identified currently lower operating costs in the P2P business. However, banks can profit from economies of scale and scope, which leads to no differentiation of the two. The big data approach still needs to demonstrate its superiority compared to the conventional approach. However, the existing literature is consistent in the assumption that the approach offers a more precise deviation of good and bad borrowers. Automated processes help to deteriorate employee failures and subjectivity. This issue is valued to be more distinctive for marketplace lenders.

Risks

The flip side of the opportunities is further evaluated in table 9 severity and frequency table as well as table 10 the matrix. Reputational damage is one type of risk, which can be caused by external or internal events. Internal default rates and default rates from other market players as well as misbehavior creates an environment of mistrust for P2P customers. Trust was identified to be an essential driver in order to do business.

Moreover, operational risks are of great concern for a P2P operator as well. Those include inadequate processes, employee failures, legal risks or natural disaster. Additionally, a P2P business entry in times of expansion may get strongly affected in the event of a recession. Tables 9 and 10 are evaluating the impact of such risk events.

Platform risks		
Risk categories	**Criteria**	
	Severity	Frequency
Reputational damage (RD)		
Internal default rates	Major	Probable
Misbehavior of other players	Minor	Occasional
Mistrust of customers	Catastrophic	Occasional
Operational risk (OpR)		
Inadequate processes/systems	Catastrophic	Occasional
Employee fraud/failures	Minor	Probable
Legal risks	Critical	Probable
Natural disaster	Minor	Very unlikely
Macroeconomic changes (MC)		
Recession	Critical	Occasional

Table 9: Platform severity and frequency table (Created by the author)

Firstly, internal default rates are important indicators when dealing with credits. It signals how accurate and serious the credit assessment is executed and therefore greatly influences the reputation, respectively, the continuation of a platform. Based on a few default rate publications, the effect of internal default rates is probable with major impact. Nonetheless, when the market has settled and default rates on an acceptable low, the impact can be reduced to minor. However, in times of a crisis the negative effect might reinforce reputational damage. Since the lifecycle of the P2P lending business is rather young, default rates and misbehavior of other players impact all platforms. However, external effects are valued to be less frequent and less intense. Furthermore, trust is the cornerstone of every business activity. It is hard to regain lost trust due to the misuse of data. In a wort-case scenario, it could implicate the end of the company. Hence, the probability that such an event occurs is currently higher than in a stable market. In fact, the risk is expected to happen once every ten years and in a mature market once every 100 years. In any case, losing trust is a catastrophe. Going deeper into operational risks, inadequate processes or systems can also have a catastrophic impact due to the fact that a P2P lending platform heavily relies on the

implied technology. Frequency wise, smaller system or process failures are expected to happen once per year while heavy ones might happen once per 100 years. Small but frequent interruptions are already estimated in 4.2.1 investors evaluation. Due to the fact that probably most online providers possess back-up systems by third-parties, small impacts are expected. Employee failures and fraud happen in every company. However, the P2P processes are mostly standardized and automated with less human interventions. Therefore, there might happen fewer failures. That is why those risks are estimated to be probable with minor effects. Probable irrelevant failures do not need to be considered. Again, due to the early stage of the P2P business, there are currently higher legal risks involved than in a later stage. Taking China into account, regulatory changes can critically affect businesses and is currently very probable. In the future, such a risk event might slow down when the environment is stable. A natural disaster is of minor impact due to the web-based service provision and very unlikely to happen. However, the continuation needs to be guaranteed in case the main server is damaged. Macroeconomic changes are expected approximately every ten years and are critical for a platform due to a potential increase of default rates. For P2P lending companies, which have grown during expansion, an economic slowdown is of major concern.

Platform risks					
Frequency of risk categories	Severity of consequences				
	Irrelevant	Minor	Major	Critical	Catastrophic
Frequent					
Probable					
Occasional					
Remote					
Very unlikely					

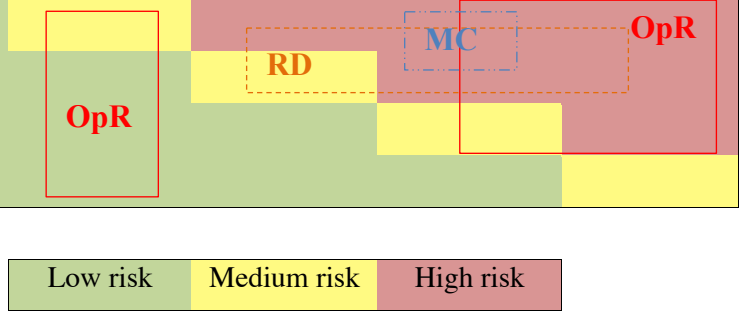

Table 10: Platform severity and frequency matrix (Created by the author)

Table 10 illustrates the risk intensity of the explained risks. It can be observed that reputation is a high-risk factor, which is mainly due to its late introduction on the market. Employee fraud and failures, as well as natural disaster, are a low-risk category whereas inadequate processes or systems and legal risks are high-risk categories. Macroeconomic changes are expected to heavily affect platforms and are among the high-risk categories as well.

5. Discussion

Chapter 5, discussion, summarizes the findings of chapter 4 and puts it in conversation. Accordingly, the aim is to get to the bottom of the results and challenge these. As a result, the discussion part consists of a critical assessment of this thesis' research question and may help for future research directions.

The practical framework started with the evaluation of key stakeholders. In the first step, investors, borrowers, competitors, partners and regulators were evaluated according to four dimensions. The utilized approach of Varvasovszky and Brugha (2000) is a rather new approach, which leads to a timely evaluation. Nevertheless, such a qualitative assessment leaves room for interpretation. As mentioned several times, due to the limited availability of data, a literature-based approach is found to be the most suited. However, the evaluation is a general view without any country-specific differences such as regulatory, ethical or cultural issues. Country-specific attributes might influence such an evaluation and can lead to a different result. Nevertheless, the general evaluation gives good ground for a deeper understanding of powerful stakeholders. The prioritization of key groups further justified the decision to continue the analysis with a focus on the three main groups.

The main part of this thesis, which consists of the assessment of investors, borrowers and platforms according to their opportunities and risks, serves as a sound foundation for the discussion part. The approaches used for evaluating opportunities and risks are based on a customer value and severity and frequency classification, retrieved from Meffert et al. (2012) and Posth (n.d.-c). Both approaches were used due to the fact that those were felt to be most representative and accurate. However, the main weights are given to the risk estimation because of a greater impact. Nevertheless, it was difficult to apply them to web-based services without any physical products or personal contact. However, both approaches used might be affected by a lack of robustness. While researching, the author has faced limited access to scientific literature for a specific topic. In other words, no papers about detailed P2P country specifications, investors prioritization when investing in P2P or different borrower characteristics/preferences when choosing a credit, has been found. Primarily, the evaluation of the opportunities was affected by the inexistence of such information. Nonetheless, the author has taken advantage of the model's implied scope for interpretation. Therefore, in order to fit the

model characteristics for a typical investor, borrower and a credit bank have been defined (3. methodology).

Going deeper into the investors' evaluation, the opportunities are chosen based on the literature and judged according to its statements. Investors main benefits are seen in profitable investment opportunities, which can be generated on a low-cost and convenient basis. Consequently, these customers are also engaged in high risks. The credit risk relies fully on investors and therefore they need to screen and pick their assets wisely. In real life, however, it is not as simple as it sounds because disclosure standards are not legally defined and inexperienced investors might not assess the risk-return profile of a project properly and could potentially take on too much risk. Comparing it to a traditional bank investment, client advisors are forced to assess the risk appetite and capacity and therefore suggest investments according to it. In a P2P environment, investors might just be driven by high returns without considering the risk of a total loss. Besides the credit risk, investors are facing other platform risks such as fraud, insolvency or shutdowns. Those risks, however, are predicted to be of minor severity in the future due to a potential introduction of a tighter regulatory framework. India is a good example of how regulations positively impacted the young P2P business. When unserious or uninformed businesses are cleaned up from the market, like it is conducted in China, trust can be built up. Trust has demonstrated to be of major importance when taking investors into account. Only a trustful and serious platform can attract investors. Furthermore, market risks affect the whole financial industry and are sometimes inevitable. Nonetheless, it is possible to minimize it through proper diversification. Those losses are not given to much attention to, due to the fact that it is a common risk and not a specific P2P lending risk. Though, liquidity risk is specific for a P2P investment due to the fact that exit options are limited. To conclude this section, investors profit from higher return opportunities but also bear higher risks compared to commercial investments. An investor needs to be aware of these aspects and carefully screen the market. Nevertheless, the evaluation neither considers any differences in investors experiences respectively skills nor the influence of cultural differences. Additionally, economic discrepancies of countries may influence the results as well.

The chances for borrowers are clearly seen in the additional or only capital access. Peer-to-peer lending providers offer inexpensive, comfortable and flexible financing to

privates and companies. Thus, an innovative business model entered a niche market. Besides that, a low-interest environment and the provision of possible securities as collaterals benefits a bank, which may offer more attractive loans. According to the interview with Cashare there are no risks involved for debtors. However, the thesis identified two risk categories. Firstly, market risk, which is a common risk for all kinds of borrowers. Apart from that, platform risk is another source of uncertainty. However, rejection and transparency do not really end up in a loss but rather affect mutual trust. The uncertainty about input factors in the credit assessment process and the lack of transparency may foster mistrust. However, it currently seems that the need for financing outweighs the ignorance of detailed information disclosure. Nevertheless, when the market is settled and the demand for disclosure increases, the pressure might be so high that the requirements need to be met. Otherwise, the loss of confidence could be the consequence which can affect the whole business operations. The risk of a poorly assessed credit standing and capacity of a borrower is another risk factor identified by the author, which leads to a huge borrower loss. However, the majority of the literature has not covered such risks, which can be explained by the topics' novelty or the rarity of such risks.

A platform's benefits and risks were also of great interest due to the fact that further challenges for the whole market could be identified. The most significant advantage in comparison to the traditional banking model is the risk transfer to investors. In contrast, it means that there need to be investors who are willing to accept these credit risks. At current state, this must be the case because of higher return opportunities for the risk taken or due to ignorance. Another much-discussed benefit is the big data approach. The majority of the literature argues that the P2P credit assessment is more accurate and comprehensive than the one provided by traditional banks. However, there are still some opposite opinions about this topic. Cashare states that their company, which was founded in 2008, already was confronted with a downturn. Additionally, since the establishment, they reported consistently positive net performance. According to interviewee, however, in times of recession higher default rates are expected. During such events diversification becomes crucial. Although this thesis investigated in comparing the innovative P2P and the traditional approach, further research needs to be done when an economic downturn is experienced. It is then possible to analyze a full business cycle for all the remaining platforms and to judge the big data approach. If the

P2P credit assessment approach proofs to more accurately deviate bad and good borrowers, it would mean a big advance in the credit market. It would not only benefit all financial institutions but also strengthen the whole credit market.
Another debatable topic is the operational cost structure where some authors report less operational costs for P2P platforms and others project higher or equal costs in times of recession. This topic may also be worth an investigation in the future. Although automated processes may lead to fewer employee failures, it makes the whole business to rely on a well-performing technology. In terms of shutdowns or cybercrime, the systems and continuation of the services must be guaranteed and thus a platform necessarily needs resolution plans and back-up provisions. Another important operational risk is evaluated for regulatory regimes. At current times, legal changes are very probable since it is a rather new business model. The influence on the business is therefore high as seen in China, where the majority of platforms had to be shut down. Nevertheless, such a radical approach restored trust among investors and borrowers, which creates a good foundation for future business. However, it is a high-risk category and risk management strategies are crucial and must be implemented. Lastly, a good reputation is seen as an essential element in a fast-growing environment where the actions of all players can have severe consequences on the reputation of the whole niche market. This point of view is further supported by Cashare, which states that they are mainly affected by operational risk but also reputational damage in the event of insufficient credit scoring.

To conclude the discussion part, figure 16 shortly summarizes the major aspects respectively the challenges in the current marketplace lending environment. It provides critical issues, which at the time of writing cannot be precisely analyzed or where further research needs to be done.

Figure 16: Challenges in marketplace lending (Created by the author)

Trust is found to be of major importance in such a young fast-growing business. The case of Lending Club showed how strongly a platform can get affected when trust is misused. On the contrary, India demonstrated how trust can be built up by introducing regulatory regimes. It is the basis to overcome challenges such as increasing positive awareness, expansion and equal growth of investors and borrowers. However, regulations are usually accompanied by a lot of changes and costs to meet the requirements. Nevertheless, norms and rules are also drivers that enhance trust. Furthermore, disclosing more details about credit quality and the involved risk, is necessary in order to provide investors with sufficient information to make informed investment decisions. Despite that, the introduction of common disclosure standards seems currently to be a challenging task for regulators and supervisors. This goes along with a detailed declaration of the input factors for the borrower's credit assessment. A full economic cycle is of great interest due to the fact that further investigations can be conducted, and more precise reasoning can be drawn. Lastly, keeping a positive reputation represents a major challenge not only for the provider itself but rather for the P2P market as a whole.

6. Conclusion

The conclusion provides a final short summary (6.1) about major concerns and implications of results (6.2). It suggests future research directions and where more in-depth analysis can be done. Furthermore, in 6.3 a short outlook is provided, which amplify a tendency in the future.

6.1 Summary

Marketplace lending is a rather new business model which gained worldwide significant popularity. It provides access to inexpensive capital to borrowers with limited financing possibilities. Moreover, P2P lending offers lucrative annualized returns for investors who are seeking profitable investment opportunities. The intermediation of investor and borrower happens in a very time and cost-efficient manner and is based on cutting-edge technology. Additionally, there are less strict regulations when comparing it to traditional financial institutions. However, there are newly introduced legal schemes like investment amount limitation, registration or disclosure standards. In comparison to commercial investments at a traditional bank, P2P lending offers higher profit opportunities. However, higher returns simultaneously imply higher risks for the investor. In particular, investors are involved in credit, platform, investment and market risk. Fundamental measures are therefore diversification (project and platform wise) and assessing a risk-return profile in order to be aware of the potential loss. Debtors are not really affected by significant losses, however, an inadequate and unprofessional credit assessment leads to borrower default and a huge loss. The P2P platform itself benefit from decentralized credit risk, low-cost structure and automated processes. Nonetheless, there exist uncertainties mainly occurring due to its pioneer status. Market, reputational and operational risks are crucial concerns for P2P lending providers and need to be managed. In order to mitigate some of the risks platforms are advised to introduce contingency plans. Altogether there are several benefits for all key parties but also high-risk factors, which all parties involved need to be aware of.

6.2 Implications of results

The thesis showed not only the benefits but also the major risk drivers in marketplace lending. Investors main benefits are high profits and low costs whereas they need to deal with P2P-specific losses like credit and platform risks. Borrowers' main advantage

is the access to financing alternatives in a cost- and time efficient manner. Additionally, major risk drivers are identified such as being rejected by a platform, transparency, poor credit assessment and market risk. The platforms competitive advantage is seen in the provision of standardized, cost and time efficient solutions. However, dealing with reputational and operational risks is of major concern. Nevertheless, the main implication of marketplace lending for key stakeholders is enhancing trust. Trust is found to be the cornerstone of the whole business activity not only for P2P lending but also for the whole financial industry. However, P2P lending is rather newly introduced whereas a bank relies on a long tradition. The introduction of necessary requirements by law successful financing outcomes would create a sound foundation for future business activities. The findings help to better understand the benefits and the drawbacks of the three key parties. Furthermore, the thesis informs P2P customers about obscure aspects, which needs to be solved. In other words, it illustrates the issues which need to be managed by P2P platforms and demonstrates the improvement potential. The stakeholder analysis shows the power and impact of various groups and where strategies need to be developed. Overall, it is believed that currently, the risks do not outweigh the rewards, which is also partly justified by the tremendous demand for P2P loans. Nevertheless, this young market will face a lot of changes in the future and therefore trust needs to be further enhanced in order to give good ground for doing business.

6.3 Outlook

Marketplace lending is expected to be very present in the future and to supplement the traditional banking model. It is imageable that more cooperation between banks and marketplace lenders takes place, which could strengthen the credit market or even the whole economy. Both, banks and P2P platforms can profit from each other through innovative technology on the one hand and on the other hand through long-term experiences. The results help to solve key issues for either one party or for the whole P2P market. Due to the novelty of marketplace lending a full credit cycle needs to be experienced in order to further investigate this topic. Specifically, it is interesting to examine and compare the development of the different cost structures within a full credit cycle. Further, finding qualitative proof for the accuracy of the P2P credit assessment could be another research target. Overall, the future will reveal whether marketplace lending disrupts the credit market or if it is just a current trend. The preconditions, however, are in favor of the former scenario.

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8. Interview

Email interview:

Aellen, Dalia, Cashare Support. Cashare AG, Hünenberg, Switzerland. Email from 20.05.2019

9. Appendix

9.1 Cashare email interview

Von: **Cashare Support (Cashare - Support)** support@cashare.ch
Betreff: [Cashare - Support] Betreff: Masterarbeit Interviewanfrage
Datum: 20. Mai 2019 um 17:42
An: Gmail

CS

##- Bitte geben Sie Ihre Antwort über dieser Zeile ein. -##

Ihre Anfrage (9500) wurde aktualisiert. Um zusätzliche Kommentare hinzuzufügen, antworten Sie auf diese E-Mail.

Cashare Support (Cashare - Support)
20. Mai, 17:42 CEST

Guten Frau Berliat

Gerne beantworten wir Ihre Fragen nachstehend:
1) Der traditionelle Zwischenhandel über die Banken entfällt und führt für die Kreditnehmer und Kreditgeber zu attraktiveren Zinskonditionen. Bereits heute kann beobachtet werden, dass die Zinsen für Konsumkredite seit dem Einstieg von Crowdlending stark gesunken sind zu Gunsten der Kreditnehmer. Natürlich hat dies auch mit dem Gesetz zum maximalen Zinssatz zu tun, aber nicht nur. Für Cashare als Fintech-Pionier ist es eine grosse Chance, diesen Markt weiter aufzubauen.

2) Für Kreditnehmer sehen wir keine Risiken. Kreditgeber haben ein höheres Risiko von einem Verlust auf Ihrer Anlage, als bei traditionellen Banken mit Einlagensicherung. Entsprechend wichtig ist, dass das Ertrags-/Risiko-Ratio gut ist und die Anlagen breit diversifiziert werden. Cashare selber hat hauptsächlich unternehmerische Risiken zu tragen und sowie das Reputationsrisiko, wenn das Scoring nicht gut sein sollte.

3) Ja, Es gibt börsenkotierte Unternehmen, die die Abwicklung des Kreditportfolios übernehmen würden.

4) Im Gegensatz zu möglichen Konkurrenten, wurde Cashare bereits 2008 gegründet und ist somit schon durch ganze Wirtschaftszyklen konfrontiert gewesen. Wir konnten mit unserem Modell auf dem gesamten Kreditbuch in jedem Jahr eine positive Nettoperformance ausweisen. Natürlich führen aber schlechtere Wirtschafszeiten zu tendenziell höheren Ausfallsquoten, weshalb ein ausgeglichenes und breit diversifiziertes Portfolio an Kredite gemäss der persönlichen Risikoneigung elementar ist.

5) Der Fokus liegt sicherlich auf der Steigerung des Bekanntheitsgrades von Cashare und dem Modell. Ebenso wichtig ist für eine Plattform, ein

möglichst ausgeglichenes Wachstum auf beiden Zielgruppen (Anleger und Kreditnehmern) zu erreichen. Abschliessend ist eine grössere Challenge sicherlich auch die Expansion in weitere Länder.

Wir hoffen Ihnen mit diesen Antworten gedient zu haben und wünschen Ihnen viel Erfolg bei der Arbeit.

Viele Grüsse
Ihr Cashare Team

Gmail
13. Mai, 17:17 CEST

Guten Tag Frau Aellen

Vielen Dank für Ihre Antwort. Ich nehme das Angebot sehr gerne an und sende Ihnen darum die untenstehenden Fragen:

1. Wo sehen Sie die grössten Chancen für Kreditnehmer / Investoren / Cashare?

2. Wo sehen Sie die grössten Risiken für Kreditnehmer / Investoren / Cashare?

3. Operationelle Risiken: Ist Cashare im Falle eines Plattformausfalls vorbereitet? Wie?

4. Was denken Sie wie Cashare in Zeiten eines Konjunkturwechsels/Rezession (höhere Zinsen, sinkende Ausgaben, höhere Arbeitslosenrate etc.) performen wird? Gibt es dazu Massnahmen?

5. Wo sehen Sie die grössten Challenges für Cashare?

Ich danke Ihnen für Ihre Hilfe und Bemühungen.

Freundliche Grüsse

Rahel Berliat

> Am 13.05.2019 um 13:06 schrieb Cashare Support (Cashare - Support) <support@cashare.ch>:

Cashare Support (Cashare – Support)
13. Mai, 13:06 CEST

Sehr geehrte Frau Berliat

Besten Dank für Ihr Interesse an unserer Plattform. Leider müssen wir Ihnen mitteilen, dass wir seit einiger Zeit von Anfragen bezüglich Hilfe bei Diplom-, Bachelor- und Masterarbeiten förmlich "überschwemmt" werden. Unsere Ressourcen lassen leider eine längere Mithilfe nicht zu. Deshalb haben wir uns dazu entschlossen, bei interessanten Themen zumindest 3-5 Fragen schriftlich zu beantworten, sofern es uns möglich ist. Gerne bieten wir dies auch Ihnen an. Sie können die Fragen direkt hier über das Support-Formular stellen.

Freundliche Grüsse
Ihr Cashare Team
Delia Aellen

Gmail
10. Mai, 12:54 CEST

Sehr geehrte Damen und Herren

Ich bin eine Banking and Finance Masterstudentin an der Zürcher Fachhochschule (ZHAW) in Winterthur. Ich schreibe meine Masterarbeit über P2P lending und bin durch meine Recherchearbeit immer wieder auf Ihre Plattform gestossen. Da ich mich sehr für das Model von Cashare interessiere möchte ich Sie gerne anfragen, ob Sie bereit wären mit mir ein Interview durchzuführen.

Das Interview handelt sich hauptsächlich um die Chancen und Risiken des P2P lendings für die involvierten Parteien wie Kreditnehmer, Investoren und die Plattform selber. Zudem ist ein kurzer Teil über die Informationsbereitstellung, d.h. Kreditnehmerauswahlverfahren, Festlegung des Ratings und Zins sowie das Signaling an die Investoren.

Es würde mich sehr freuen das Interview mit Cashare durchführen zu dürfen.

9.2 P2P lending mind map