

CROWDFUNDING IN THE BANKING INDUSTRY: ADJUSTING TO A DIGITAL ERA

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ABSTRACT

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<p>Abstract</p> <p>In the aftermath of the global financial crisis, the funding ability of banks has declined resulting in a financial void for riskier enterprises, such as startups and early-stage companies. New financial service providers have emerged in response to the capital deficiency. A particularly prominent incarnation of alternative finance is crowdfunding, where the funding is gathered directly from the market, from several individuals, who invest relatively small sums to compound the target amount. Financial institutions are contemplating the use of crowdfunding, not only for its business implications but also as a preparation for the potential threats it may impose on the traditional finance industry.</p> <p>This thesis sets out to explore the potential use of crowdfunding in the banking industry by examining the key motivations of banks to enter the novel industry. First, the thesis aspires to determine which of the financial instruments, debt, equity or donations should a bank construct its crowdfunding mechanism around and secondly, determine if a bank should enter the market through an arms-length collaboration, by building a platform internally or by setting up an independent subsidiary. Additionally, banks' motivations and attitudes towards novel financial technologies and the development of the industry are scrutinized.</p> <p>The research was conducted as a qualitative field research, where the primary data was collected from seven interviews. The interviewees are banking professionals working for banks in Finland, Germany, Netherlands and Switzerland. Additionally, a ministerial adviser, whose expertise encompasses the regulative issues of crowdfunding, was interviewed. The secondary data for this research consists of existing crowdfunding research and articles.</p> <p>The empirical analysis indicates that crowdfunding does not currently represent the key focus for banks, but is rather seen as an adjustment to digitalization and as a means of elevating their image. Lending-based crowdfunding instruments closely resemble banks' current offerings and could be more easily implemented than their equity counterparts. On the other hand, equity-based crowdfunding could broaden banks' current customer base and extend investors' investment opportunities. However, facilitation of equity crowdfunding is not amongst banks' core competences and would likely require banks to obtain vast external capabilities. The analysis shows that setting up a subsidiary for crowdfunding could provide the lightest regulatory environment for Finnish banks, while collaborating with an existing crowdfunding platform could facilitate the easiest entrance to the crowdfunding market.</p>	
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1 INTRODUCTION

The financial markets are undergoing a digital and structural transformation with the Internet and digitalization remodeling consumers' attitudes towards traditional financial processes. The rapid development of financial technology (Fintech) is defying the standard bank services while simultaneously enabling the emergence of new independent financial service providers. Fintech newcomers provide financial solutions that allow customers and businesses to adopt new, faster and more efficient ways of handling their finances in a digital environment without the rigid regulation imposed on traditional financial institutions.

The novel complementary and substitutional products, such as peer-to-peer lending and crowdfunding provide funding in an online environment, consequently eliminating the requirement for physical interaction. The application of financial technology in banks' operations can become crucial as current banking processes are highly reliant on outdated legacy systems and consequently, cannot match the efficiency and agility of alternative financial service providers. A global report conducted by EY (2016) states that 6 out of 10 customers expressed decreased dependence on their bank as their primary financial services provider. The report emphasizes banks need to simplify their products, improve their customer experience and increase innovation in line with the evolution of Fintech solutions (EY 2016, 10.). The implementation of PSD2 (Revised Directive on Payment Services) in 2018 will further contribute to the disruption of the finance industry. PSD2 allows third-party access to bank accounts and mandates external service providers the use of banks' APIs, thus enabling the emergence of new service offerings. These factors are prime examples of potential threats imposed by technological innovations while defying the prevailing dominance of banks in the financial services industry.

Aside from the technological aspect, another factor causing the disruption of financial services can be traced back to the aftermath of the global financial crisis. Due to the crisis, the regulatory environment for financial institutions has become increasingly strict with capital adequacy demands restricting excessive risk-taking of banks. The change in the financial environment and the protract-

ed weakness of the economy have had a specific impact on the funding of small enterprises in their growth and development stages. New growth-seeking companies are often deemed too risky in the framework of the new regulatory environment, which consequently can affect their ability to collect financing from conventional financial institutions. In some instances, enterprises are facing a funding gap where the funds of the enterprise prove out to be insufficient and the availability of external funding is restricted. The regulatory constraints have led to a tendency where bank financing is increasingly directed towards companies with firm financial standing and already profitable businesses. Venture capitalists and business angels are neither typically interested in investing into newly found enterprises, but instead tend to favor companies in their later development stages.

This research examines the real-life manifestation of the disruption in the finance industry, crowdfunding. In crowdfunding, the funding is facilitated by intermediaries, which in contrast to traditional intermediaries, are not involved in the actual funding process. In other words, intermediaries do not borrow, pool or lend money on their own account. Instead, platforms act as matchmakers between capital-seeking agents and capital-giving agents, funneling the funding from the investors to the capital-seeking enterprises.

In recent years, crowdfunding has become increasingly popular in enterprise financing. With annual growth-rates having repeatedly exceeded figures of hundred percent and more, crowdfunding is establishing itself as a potential source of funding for startups and SMEs (Massolution 2015). As of 2017, crowdfunding does not yet threaten the traditional banking industry, but as the growth rates indicate, there is an increasing demand for alternative funding solutions. However, crowdfunding could provide a new channel for banks to cater riskier enterprises, which are not currently eligible for funding, and a way to adapt to the digital environment.

A report conducted by the European Expertise Centre on Alternative Finance and Community Finance (CrowdfundingHub 2016), states that the banking industry has showcased a wait-and-see approach towards crowdfunding and is slowly entering the industry by either their own platforms or through partnerships with existing platforms. Banks are slowly beginning to realize that in addition to the business potential of crowdfunding, the up-and-coming industry might pose a serious threat to the conventional financial services business. The extent by which banks are integrating to the new industry is largely dependent on the regulation, which in several countries is slowly adjusting to the changing operational environment.

This thesis sets out to explore how banks could utilize crowdfunding in their operations. This is scrutinized by two distinct research objectives. First objective of this paper is to examine banks' motivation and demand of adopting crowdfunding, while also aspiring to find the best suited form of crowdfunding for banks. The forms of crowdfunding can be generally divided into four different funding mechanisms: equity-based, lending-based, donation-based and rewards-based crowdfunding. Lastly, the research aims to construct an overview

of the optimal operating model of a crowdfunding business specifically tailored for the purposes of banking institutions. There are three central models that are examined within this context: providing crowdfunding as part of bank's operations, establishing a subsidiary for crowdfunding and cooperating with an existing crowdfunding platform.

1.1 Research Questions

The change in the operational environment of financial institutions and the emergence of new financial products offer a wide range of research problems that require further examination. Crowdfunding as a phenomenon is particularly interesting to research for its current relevance, high annual growth rates and its potential effect on the transformation of the finance industry.

In recent years, the number of crowdfunding related studies have become more frequent as the phenomenon has become increasingly widespread. Current crowdfunding literature is largely concentrated on different crowdfunding instruments and intermediaries with a distinct focus on individual crowdfunding platforms. Despite the increase of research on crowdfunding, the examination of the potential use of crowdfunding in financial institutions requires further exploration. Haas et al. (2014-2016) have conducted empirical research on lending-based crowdfunding examining the adoption of crowdfunding within a Swiss bank. Their contribution will provide a valid reference for this research, but lacks a comprehensive analysis of different crowdfunding forms and their utilization in a banking environment. In addition, regarding this research, their body of work is missing a thorough evaluation of an optimal platform design within a banking institution.

This research is approached from a new angle with a focus on the application of crowdfunding into already existing businesses of financial institutions. As of now, this area remains largely unexplored. One key factor in banks' willingness to adopt crowdfunding is their inclination to adapt their processes in alignment with the digital transformation of the finance industry. It is particularly interesting to examine whether banks perceive digitalization as an opportunity or will they find their current operations as efficient and adequate.

The focal point of this thesis is to examine the potential of crowdfunding in the saturated banking industry, and more specifically, whether large institutions could benefit from entering the crowdfunding market, and how the implementation should be executed. The research questions are as follows:

RQ1: What is the perception of the banking industry towards alternative finance and the adoption of financial technology?

First research question refers to banks' approach towards novel financial technologies and the adoption of these solutions. In addition, the perceived threats and opportunities of adapting their operations along with the emergence of

new financial providers are scrutinized. It is exceptionally interesting to examine, whether banks perceive alternative finance providers as minor competitors, or will they adopt some of their innovations to broaden their current product offering.

RQ2: Which type of crowdfunding is best suited for financial institutions?

The examination of the first research question focuses on finding the optimal crowdfunding type from a bank's perspective. The forms taken into consideration in this context are primarily the monetary forms of crowdfunding, which are lending-based crowdfunding and equity-based crowdfunding, while donation-based crowdfunding will be lightly touched upon.

RQ3: Should banks provide crowdfunding:

- (i) As part of the bank's current operations
- (ii) By setting up a subsidiary
- (iii) By an arm's length collaboration with an existing platform?

The final research question refers to the design of the business. The advantages and disadvantages of the three alternative models are reflected against the current regulation, existing theory and the overall suitability of the model in a banking environment.

1.2 Crowdfunding

Crowdfunding involves an open call, mostly through the Internet, for the provision of financial resources either in the form of donation or in exchange for the future product or some form of reward to support initiatives for specific purposes.

- Belleflamme, Lambert & Schwienbacher (2013)

The Internet has enabled the democratization and socialization of funding, in some cases eliminating the necessity of the involvement of financial institutions such as banks, venture capitalists and business angels. The term "crowdfunding" is derived from the concept of "crowdsourcing", which defined by Estellés-Arolas (2012), stands for participative online activity where individual traits, such as skills and ideas are sourced from an undefined crowd by a flexible open call to reach a certain objective. Compared to traditional financiers, the financing can be gathered from the crowd where anyone can participate as permitted by their individual capabilities. In addition, crowdfunding is frequently perceived as a more transparent, easy and democratic way of funding compared to banks (Haas et al. 2015, 2.).

Crowdfunding shares similar characteristics with the concept of crowdsourcing as the funding is gathered from a large undefined crowd via

online platforms. The first crowdfunding initiatives were applied to collecting donations and funding for minor creative projects without monetary compensation to the investor. Later, the application of crowdfunding was expanded to loans between private persons (peer-to-peer lending) where lenders would receive interest in exchange for borrowing money. The natural continuum for this new type of capital formation is the emergence of private-to-business loans and equity-based crowdfunding (Haas et al. 2014, 2.). Crowdfunding allows entrepreneurs to fund their ventures by collecting relatively small sums of money from a relatively large number of individuals. The funding is collected through internet platforms without the accompaniment of a traditional financial intermediary. Instead, a crowdfunding intermediary usually serves as a service provider with a specific focus on crowdfunding or peer-to-peer lending (Mollick, 2014, 2.). The underlying mechanisms of the internet economy have shaped crowdfunding in becoming a novel form of financial intermediation.

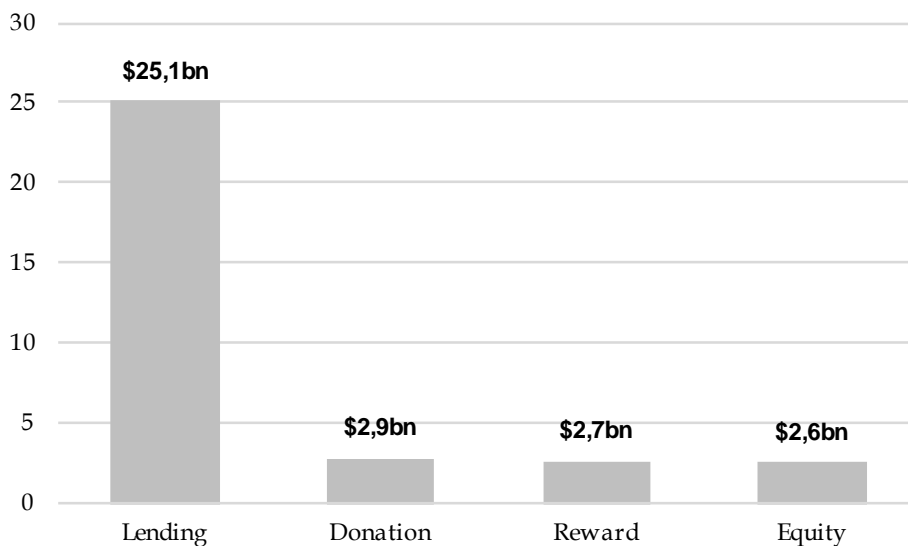


FIGURE 1 Crowdfunding Volumes: 2015 (Massolution 2015).

The size of the total crowdfunding industry in 2015 was estimated to stand at \$34 billion. North America is by far the largest market for crowdfunding with estimated fundraising volume of \$17.2 billion in 2015. Asia is the second largest market with \$10.5 billion raised, while European market trails with \$6.5 billion of funding gathered. As illustrated in FIGURE 1, the lending-based crowdfunding is the most prominent form of crowdfunding with \$25.1 billion compared to the second largest form of donation-based crowdfunding which was estimated to stand at \$2.9 billion in 2015. Rewards-based crowdfunding represented the third largest form with \$2.7 billion, with equity-based crowdfunding estimated at \$2.6 billion in 2015. It should be noted that the lending column illustrates the figures of both peer-to-peer lending and lending-based crowdfunding combined. Nevertheless, even with peer-to-peer figures eliminated, lending-based crowdfunding is still by far the largest form of crowdfunding with an estimated

funding volume of \$10 billion in 2015. Debt- and equity-based crowdfunding have grown substantially fast after the financial crisis with approximate annual growth rates of 130% (Massolution, 2015).

1.2.1 Donation-Based and Rewards-Based Crowdfunding

Both donation-based and rewards-based crowdfunding offer investors non-monetary rewards, such as sense of fulfillment and other social rewards, in return for their money. Donation-based crowdfunding is often used to collect funding for charitable projects. Funders use this as a channel to donate money to causes they wish to support without receiving any monetary compensation or rewards in exchange for their donation (Wilson & Testoni 2014, 2.). Donations can thus be seen as a form of philanthropic activity. In rewards-based crowdfunding funders cannot expect a monetary reward either, but choose to fund a campaign to obtain a product offered by the fund-seeking enterprise (Belleflamme et al. 2015, 12.). Fundraisers often offer variety of rewards in exchange for funders' contributions. The contributions can vary from small sums to thousands of dollars depending on the reward received. The reward is typically the final product, which in many cases can be customized. In addition, it is common for the company to publish a public acknowledgement of the contributors on their website (Belleflamme et al. 2015, 14.).

1.2.2 Lending-Based Crowdfunding

In crowdfunded debt financing, enterprises seek loan with interest for a pre-described time and fixed interest rate from private individuals, companies or other entities. The funding is facilitated through the Internet, through platforms that intermediate crowdfunding. The loans facilitated by crowdfunding platforms are fundamentally very similar to regular loans provided by banks. The main difference is in the financing model. Whereas banks provide financing from their own balance sheets, the crowdfunded loans are provided in a digital market place where multiple investments are combined into a single loan (Tekes 2015). In addition, the crowdfunding platform does not screen between different projects, but rather lets funders decide for themselves if a particular project should be funded (Belleflamme et al. 2015, 13.). A key difference between the provision of traditional loans and lending-based crowdfunding is evident in the loan application process, which in the case of crowdfunding is performed entirely online.

1.2.3 Equity-Based Crowdfunding

Equity-based crowdfunding, also referred to as crowdinvesting, investment-based crowdfunding or securities-based crowdfunding, represents the Internet-based investment in startup companies by the crowd, who expect to obtain some equity claim on future cash flows of a company. The enterprises issue securities to satisfy their financial needs and the funding is directly applied to the

development of the enterprise. Compared to some other forms of crowdfunding, the money raised is not restricted to a specific product (Hornuf & Schwienbacher 2014, 2-3.). Bruton et al. (2014) state that equity-based crowdfunding has grown slower than its debt-based counterpart. This is largely due to legislative constraints concerning equity-investments in businesses. (Bruton et al., 2014, 12.)

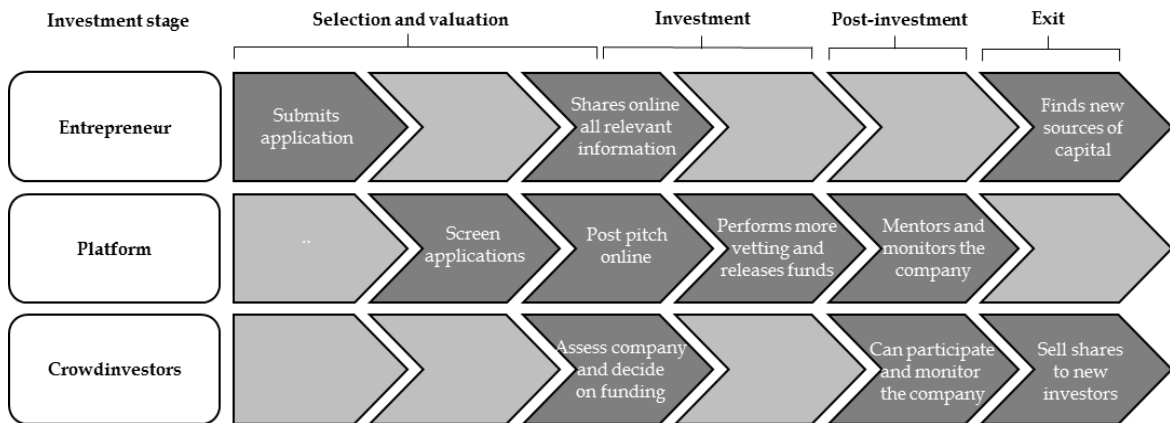


FIGURE 2 The Equity Crowdfunding Process (Bruegel 2014)

The equity crowdfunding process, which is illustrated in FIGURE 2, contains four key phases: the selection and valuation of the enterprise, the actual investment, post-investment and the exit. The process begins with the application by the entrepreneur to the platform, which is then screened by the platform. Second, the information is provided by the fund-seeking enterprise, the pitch is posted online by the platform and the crowdinvestors assess and decide on the funding of the company. Further vetting of the enterprise is still performed by the platform after which the funds are released. In the post-investment phase the platform mentors and monitors the company and the crowdinvestors can also participate in the monitoring of the company's operations. The exit can occur through an IPO or through a merger or acquisition of the enterprise. Wilson & Testoni (2014) note that most of the exits have been through a merger or acquisition and the number of successful exits has been lower compared to the figures before the financial crisis. Some platforms have facilitated the future exits by pooling the investments into a holding company which in turn invests in the startup. In this model the future investors face a single counterparty (holding company), instead of large number of small investors (Hornuf & Schwienbacher 2014, 6.).

1.2.4 Crowdfunding Intermediaries

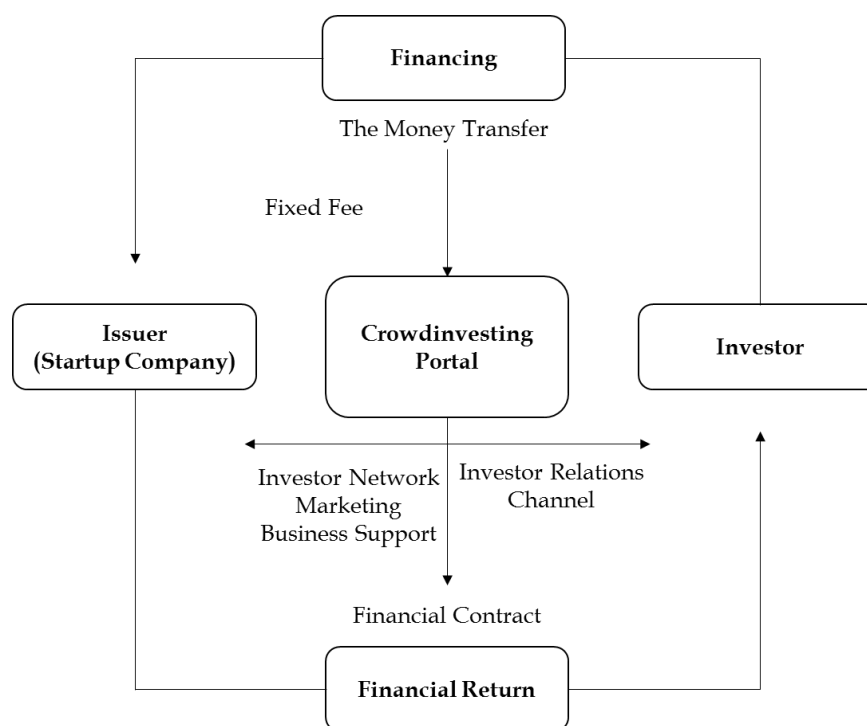


FIGURE 3 Structure of Crowdfunding Transactions (Hornuf & Schwienbacher 2014)

Crowdfunding transactions are performed through intermediaries, which in some countries are mandated by law. The intermediaries offer standardized financial contracts to the issuer while providing a marketing channel and business guidance to the entrepreneur. In addition, the intermediaries function as an investor network, where the securities are advertised through their website and in newsletters. In return, for these services, the intermediaries charge a predetermined fee based on the transaction value (Hornuf & al. 2014.). An overview of crowdfunding transactions is depicted in FIGURE 3.

Crowdfunding intermediary functions as a middleman in between two-sided markets facilitating funding and providing information from the capital-giving agents to the capital-seeking agents. The intermediary acts as an electronic matching market enabling the exchange of information to overcome information asymmetries and to reduce transaction costs by applying similar transformation functions as traditional financial intermediaries (Haas, Blohm & Leimeister, 2014, 4-6.). Ingram & Teigland (2013) note that platforms often prefer to position themselves as sole intermediators of financial instruments, instead of functioning as marketplaces due to the heavy regulation imposed on latter activities. Haas et al. (2014) have found that the attractiveness of the platform increases for both parties along with the increase of the number of agents signing up from the other group of agents. This effect is referred to as the network effect (Haas et al. 2014, 4.). In other words, the large number of investors

is proposed to signal of the quality of the venture, thus making the investment appear more attracting to the investors.

Several classifications for the different types of crowdfunding intermediaries have been introduced by number of researchers. In their paper, Belleflamme et al. (2013) propose a bipartite classification of crowdfunding intermediaries. Pre-ordering where capital-giving agents purchase a subscription right for the future product and profit-sharing, which stands for individuals providing money in exchange for future profits, i.e. equity shares of the company. Bradford's (2012) categorization differentiates the crowdfunding intermediaries based on the returns capital-giving agents receive for their investments. He introduces five different types which are donation, rewards, pre-ordering, lending and equity. The classification proposed by the consulting agency Massolution (2013) gained widespread attention when first introduced. Their model groups crowdfunding into crowd-supporting, crowd-donation, crowd-lending and crowd-investing. Haas et al. (2014) find the above-mentioned classifications conceptual in nature, lacking theoretical grounding and empirical validation. They further argue that crowdfunding is manifold and addresses diverse interests, which reinforces the need for differentiation. This is followed by an explanation, which states that in order to understand the dynamics of crowdfunding, one must understand how crowdfunding today actually works, what the constituent parts are and how crowdfunding intermediaries differentiate (Haas et al. 2014, 2.).

Investors have identified three distinct clusters of crowdfunding intermediaries, which aim at representing their individual value propositions: Hedonism, Altruism and For Profit, which are grounded in the theories of two-sided markets and financial intermediation (Haas et al. 2014, 3). Hedonism cluster describes crowdfunding intermediaries where capital-giving agents invest in innovative and creative projects and products, receiving non-financial compensation in exchange for their money. The most common type of return comes in form of preordered products or some form of acknowledgement of the contribution by the capital-giving agent. One of the most prominent examples within this cluster is Kickstarter, which offers a platform for capital-seeking agents to promote and introduce innovative products and projects (Haas et al. 2014, 11.). According to Haas et al. (2014), Hedonistic intermediaries aspire to address the capital-giving agents' sense of interest, desire or joy, thus striving to create hedonic value for the investors. This cluster fundamentally covers the previously introduced rewards-based crowdfunding forms. The second cluster, Altruism appeals to the altruistic nature of the capital-giving agents. The funders will receive neither monetary compensation nor rewards for their contributions, but are instead being offered with emotional and ideological returns. Thus, this type of crowdfunding intermediaries emphasizes participation for the greater good and altruistic reasons. The intermediaries often apply keep-it-all principle where the capital-seeking agents receive the donated amount, regardless of the intended amount being reached. The final and the most relevant cluster regarding this research is For Profit. The intermediaries in this cluster offer financial

rewards for the support of capital-seeking agents. The forms of crowdfunding related to this cluster are debt-based crowdfunding and equity-based crowdfunding. The compensation comes in the form of interests (loans) or as shares of the future profits (equity capital) of a company, respectively. The intermediaries within this cluster focus mainly on financing startups or similar entrepreneurial ventures (Haas et al. 2014, 12.). The capital-giving agents largely consist of individuals. However, Haas et al. (2014) note that several organizational capital-giving agents are among the common contributors.

1.2.5 Legislation

The legislation for different forms of crowdfunding in Europe is uneven as the regulation varies by country. Along with the popularization of crowdfunding in enterprise financing, some regulators have slowly begun to adjust the regulation to cater the specifics of crowdfunding and to improve the overall efficiency of the crowdfunding market. There is no EU-level regulation for crowdfunding and very few separate national regulations exist. Instead, there are several existing regulations of financial instruments which were not specifically designed to cover alternative financial instruments and this type of activity (Wardrop et al. 2015, 3.). In the US, the implementation of JOBS Act (The Jumpstart of Our Business Startups Act) has allowed the provision of investment-based crowdfunding in an online environment and enabled the offering of these instruments to non-professional investors.

According to Wardrop et al. (2015) UK, along with its leading position in crowdfunding in Europe, is also one of the few countries that have imposed dedicated crowdfunding regulation for alternative finance providers. Recently Finnish regulators have also taken steps towards the modernization of the crowdfunding regulation. The Finnish Crowdfunding Act which came into effect on September 1st 2016 improves investor protection and alleviates the conditions for investment-based crowdfunding instruments while clarifying the rules for lending-based crowdfunding, which were previously treated under the regulation of traditional financial instruments. The crowdfunding act applies to crowdfunding intermediaries, which are required to enter a special register of financial intermediaries. The central difference to the previous regulation is that the intermediaries are no longer treated under the traditional financial market regulation, which required the intermediaries to obtain an expensive operating license. Furthermore, the threshold for minimum capital requirement has been reduced from 125 000 euros to 50 000 euros.

2 LITERATURE REVIEW

The set of theories introduced in this chapter will serve a purpose of explaining the core variables and phenomena related to crowdfunding. Later, the framework enables a meaningful way to compare crowdfunding with traditional and other alternative financial instruments, while also facilitating the description of a bank-specific crowdfunding model. The results of the thesis are also further examined in the light of this framework.

2.1 Financial Intermediation Theory

Financial intermediaries are omnipresent institutions of economies and central actors in the saving-investment process where financial intermediaries lend capital, borrowed from several capital-giving agents and further allocated to numerous capital-seeking agents. The financial intermediation theory is based on models of resource allocation between capital-seeking and capital-giving agents by a market-making mechanism presented by Benston & Smith (1976). The returns of capital-giving agents are based on the amount and type of their initial investment. FIGURE 4 depicts the simplified model of financial intermediation.

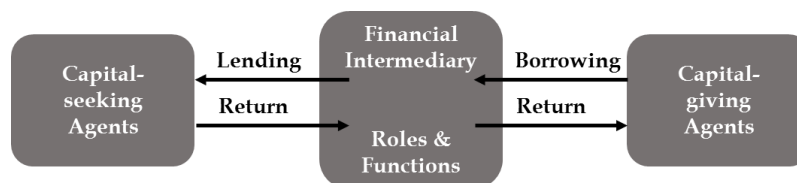


FIGURE 4 Financial Intermediation (Gorton & Winter 2003; Benston & Smith 1976)

Financial intermediaries operate in imperfect markets, which are characterized by transaction costs and information asymmetries and their existence can be

justified by the presence of these phenomena (Benston & Smith 1975, 215.; Haas et al. 2014, 4.). For the examination of financial intermediaries, Merton (1989) suggests a functional perspective to an institutional perspective. The functions of traditional financial intermediaries can be divided into three central functions: lot size transformation, risk transformation and information transformation. The first function, lot size transformation, describes financial intermediaries as providers of payment systems for the exchange of goods as well as providers of mechanisms for pooling funds, which allow the transfer of economic resources through time, geographies and industries. Based on this definition, Haas et al. (2014) deduce that intermediaries act as consumption smoothers and liquidity providers in the market.

According to Merton (1989), financial intermediaries manage and trade risks and uncertainties. This definition is associated with the risk transformation function of intermediaries. Diamond (1984) states that intermediaries can minimize significant costs of monitoring due to diversification and bundling of monitoring activities, while avoiding the problem of free-riding of capital-giving agents, therefore reducing the risk associated with financial transactions. Third function, information transformation, relates to the capabilities of intermediaries in reducing information asymmetries by providing reliable information on the projects of the capital-seeking agents. Related to the information problem, Haas et al. (2014) state that only capital-seeking agents occupy the true characteristics of their projects and intermediaries could alleviate the information asymmetries by supplying relevant information to the capital-providing agents. Haubrich (1989) further addresses the trust and reputation building benefits of a long-term relationship between capital-giving agents and intermediaries concluding that financial intermediaries manage information asymmetries and provide price information.

Financial intermediation theory suggests that a financial service provider needs to fulfill the three functions: lot size transformation, risk transformation and information transformation. Based on the results of existing research, crowdfunding intermediaries have succeeded to deliver these functions with relative efficiency. Thus, crowdfunding could pose a substantial competitive threat to banks by providing a substitutional funding channel for enterprises.

2.2 Transaction Costs

Minimization of transaction costs is a central element in the enterprise funding process. Crowdfunding intermediaries have managed to overcome some of the rigorous processes involved in the funding activities of traditional banking services by automatizing certain traditional functions. This has enabled the intermediaries to develop faster application processes, which along with automatized rating mechanisms can reduce transaction costs as the requirement for manual labor becomes minimized. Furthermore, the lower transaction costs

enable the crowd to make smaller investments and spread its capital over a great number of projects (Agrawal, Catalini & Goldfarb 2014, 33.).

One of the most lauded academics in the field of transaction cost research is Nobel laureate Oliver Williamson and his theory of transaction cost economics. Its main contributions to organizational productivity are the managerial implications of how inter-firm transactions, and intra-firm activities are organized in a cost-efficient manner (Viitamo 2012, 135.). Chandler's (1990) observations imply that the costs of transactions are reduced by more efficient exchange of goods and services between units. His findings indicate that transaction costs have a profound influence on the overall cost efficiency.

The transaction cost analysis by Williamson (1985) and Chandler (1990) follows the principles of the contingency theory. Granovetter (1998) states in his study, that Chandler and Williamson envisage the balance between federations of firms and single combined units which derives from the need to adapt to technology variations, consumer demand and market structure. This demonstrates a deliberate pursuit of "transactional efficiency" (Viitamo 2012, 136.). Williamson (1993) describes that transaction cost economics at the operative level encourages managers and firms to organize economic activity in a manner that economizes bounded rationality while safeguarding the transaction against hazards of opportunism at the same time.

According to Meyer & Cuevas (1990): "Transaction costs can be defined as the costs of transferring resources between markets or between participants in the same market.". In financing, transaction costs refer to the resources required to transfer (lend) one unit of currency from a saver to a borrower, and recover that unit of currency at a later date, added with a predetermined interest charge. Lenders' returns are represented in the form of interest and other charges as a compensation of mobilizing the funds, allocating them to borrowers and recovering them through loan repayments (Meyer & Cuevas 1990, 1.). Compared to transactions in other markets, financial transactions always involve some risk as the completion of a contract is dependent on a future date of loan repayment.

Alterations in technology and consumer borne transaction costs affect the financial commodities produced, how they are packaged, and the institutions that produce and sell them to consumers (Benston & Smith 1975, 229.). The automatized processes have reduced transaction costs and subsequently enabled the emergence of crowdfunding. In their research, Wilson & Testoni (2014) describe two fundamental elements that support crowdfunding as a funding mechanism. First, the Internet lowers transaction costs substantially by enabling small transactions from a large crowd in an online environment. Second, the Internet facilitates a direct connection between capital-seeking agents and capital providers.

Transaction cost theory suggests that the industry equilibrium is reached in a situation where transaction costs are minimized. Crowdfunding facilitates the reduction of transaction costs as the platforms operate in an online environment and because the regulatory burden for crowdfunding intermediaries is lower compared to traditional financial service providers. The lighter regulation

of lending-based crowdfunding can be partly attributed to the lack of maturity transformation. Therefore, crowdfunding can be considered to pose a considerable threat to banks' current equity offerings and loan instruments, and for this reason, it is likely for banks to be investing in the new business model.

2.3 Asymmetric Information and Adverse Selection

Agrawal, Catalini & Goldfarb (2016) state that information asymmetry is a primary barrier to the financing of new ventures and can impede the formation of a well-functioning market. One of the first and most noteworthy theories on asymmetric information and adverse selection is the lemon principle by economist George Akerlof (1970.). The theory examines the impact of asymmetric information between buyers and sellers, which can degrade the quality of goods sold in the market and can lead to adverse selection. Akerlof (1970) uses a market of second-hand cars in his examination, but his theory can be applied to other fields as well. In short, Akerlof's (1970) theory describes a market where two types of goods are sold, good cars and "lemons" (bad cars). The buyers cannot distinguish whether they are buying a good car or a "lemon" due to lack of available information. Thus, they are willing to pay only the average price of good cars and "lemons". As a result, an informational asymmetry has emerged, where the sellers possess more information than the buyers. This leads to a situation where the owners of good cars should stay locked in, as the buyers are only willing to pay the average price of good cars and bad cars, while the sellers benefit more from selling "lemons", leaving the market with mostly "lemons" and possibly eliminating the good cars altogether (Akerlof 1970, 489-490.).

Spence (1973) originated the idea of signaling in job markets as a means of reducing asymmetric information. In his paper, Spence (1973) proposes that in the prevalence of information asymmetry, it is possible for people to signal their type, thus believably transferring information to the other party and resolving the asymmetry. His paper implicates that employers lack complete information about the quality of job candidates. In response, candidates obtain education to signal their quality and thus reduce information asymmetries (Connelly, Certo, Ireland, & Reutzel 2011, 42-43.). While the paper is examined in the context of the job market, Spence (1973). states that the theory can be applied to several other areas such as variety of market and quasi-market phenomena like admissions procedures, promotion in organizations and loans and consumer credit.

Connelly et al. (2011) state in their research that potential investors evaluate the unobservable characteristics of venture quality by interpreting the signals transmitted by entrepreneurs. Crowdfunding intermediaries are able to convey these signals via internet to the investors. According to Ahlers et al. (2015), retaining equity and providing more detailed information about risks are effective signals and have a significant contribution to the funding success of an enterprise. Their research notes that human capital, such as level of education of board members, can produce a positive signal, while intellectual capital

(patents) and social capital (alliances) did not show a notable correlation with funding success (Ahlers et al. 2015, 976.).

In their paper, Leland & Pyle (1977) state that informational asymmetries exist in numerous markets, but they are particularly pronounced in the financial markets. The informational disequilibrium in financing arises from the fact that the borrowers typically know collateral and their own work and moral ethics better than their counterparts. Thus, entrepreneurs possess “inside” information about the projects for which they seek financing. Lenders would benefit from a full disclosure of the true characteristics of borrowers, but in reality this is infeasible for several reasons. Borrowers cannot be expected to be entirely transparent about their characteristics, nor entrepreneurs about their projects, since there may be significant rewards for exaggerating positive qualities. Furthermore, the verification of these characteristics by outside parties may prove out to be costly or even impossible (Leland & Pyle 1977, 371.).

The information asymmetry plays a key role in investors’ decision-making in crowdfunding and is one of the primary barriers in the financing of early-stage ventures (Agrawal et al., 2016.). In the case of equity-based crowdfunding, the informational transparency is crucial. In rewards-based crowdfunding the funder is only required to be concerned about receiving the product he/she has preordered. However, when funding a company by buying its shares, the investor needs to trust the entrepreneur to generate equity value by building a solid profitable business. In addition, the requirements for equity-instruments in crowdfunding largely differ from those of publicly traded security markets, thus posing a relatively high risk for investors (Agrawal, Catalini & Goldfarb 2014, 68.). Moritz, Block & Lutz (2014) have explored the communication between the enterprise and the investors in equity-based crowdfunding. Their research states that the overall impression of the venture, which constitutes of characteristics such as perceived sympathy, openness and trustworthiness, is a key factor in reducing information asymmetries in equity crowdfunding. Furthermore, their paper suggests that the entrepreneur should embody these traits in his/her public behavior as well as communicate the involvement of prior investors and references from key customers and suppliers (Moritz et al. 2014, 28.).

In the context of crowdfunding, and especially equity-based crowdfunding, the informational equilibrium is highly important. In a case where information is not openly available for investors, the role of the intermediary in assessing finance-seekers becomes increasingly important to ensure a tolerable level of investor protection and keeping the incentives of each party correctly aligned. Overcoming the barriers of asymmetric information will thus be a key driver for winning platforms. In this regard, banks have existing data and assessment tools that could facilitate lending-based crowdfunding, but the competences for conducting proper due diligence for equity-instruments is lacking. Thus, outside experts, such as business angels or venture capital funds could provide requisite capabilities to ensure adequate evaluation of enterprises for banks to offer equity crowdfunding.

2.3.1 Pecking Order Theory

Pecking order theory proposes that the cost of financing increases with higher prevalence of asymmetric information. According to Brealey, Meyers & Allen (2014), the asymmetric information affects the choice between internal and external financing by companies and also the choice whether operations should be financed by debt or by issuing equity securities. The pecking order theory implicates that companies prefer internal finance over debt and equity finance. The essence of the pecking order theory lies in the examination of the effects of asymmetric information - a term which indicates that managers are more aware of their companies' prospects, risks and values than the outside investors. Profitable companies prefer financing their operations with internal financing for a simple reason that they do not need external financing. In a scenario where external finance is required, the companies prefer the safest security first, which in this case is debt or hybrid securities such as convertible bonds. (Brealey et al. 2014, 468-467.) Brealey et al. (2014) note that according to pecking order theory, external equity financing is a last resort according to the pecking order theory.

The pecking order theory cannot always be directly applied to all businesses as external investors can add value to the company through their ownership. Garmaise (2001) further elaborates this by explaining that, if the investors possess greater knowledge of the assessment of the project quality than the entrepreneurial team itself, the external equity financing is a signal of a high quality firm. The paper introduces an alternative pecking order, which is in contrast to the original pecking order theory first introduced by Myers (1984). This theory takes into account the maturity of the firm, which is not considered in Myers' original theory. Garmaise (2001) argues that the original pecking order theory applies to well established enterprises whereas their revised theory is more applicable to young firms. In the paper the success of U.S. venture-capital firms is also partly explained by their ability to purchase equity claims of the enterprises they finance, a feat traditionally not existent in bank financing (Garmaise 2001, 2.). The model's outcome is that junior equity (call-option) and debt financing can be applicable to new firms without a loss of efficiency. Additionally, it is proposed that entrepreneurs should always honor investors' request for junior equity over debt, which is an opposing idea compared to the original pecking order theory's concept. (Garmaise 2001, 25.) Garmaise also states that their theory applies to new firms whereas Myers' (1984) theory is more applicable to mature firms.

2.4 Resource-Based View

Company's resources are vital in its ability to develop new product offerings. Resource-based view stresses the significance of the unique resources and capabilities in firm's strategy planning. Wernefelt (1984) defines a resource as anything that can be thought as the strength or a weakness of a firm. Furthermore,

he adds that the resources can be defined as the assets (tangible and intangible) which are fixed semi-permanently to the firm. Hunt (2002) refers company's resources as bundles of potential services, while Penrose (1959) asserts that resources themselves are not the inputs in the production process, but only the services that the resources can render. Viitamo (2012) also describes in his research that resource-based view stresses the significance of the unique resources of the firm.

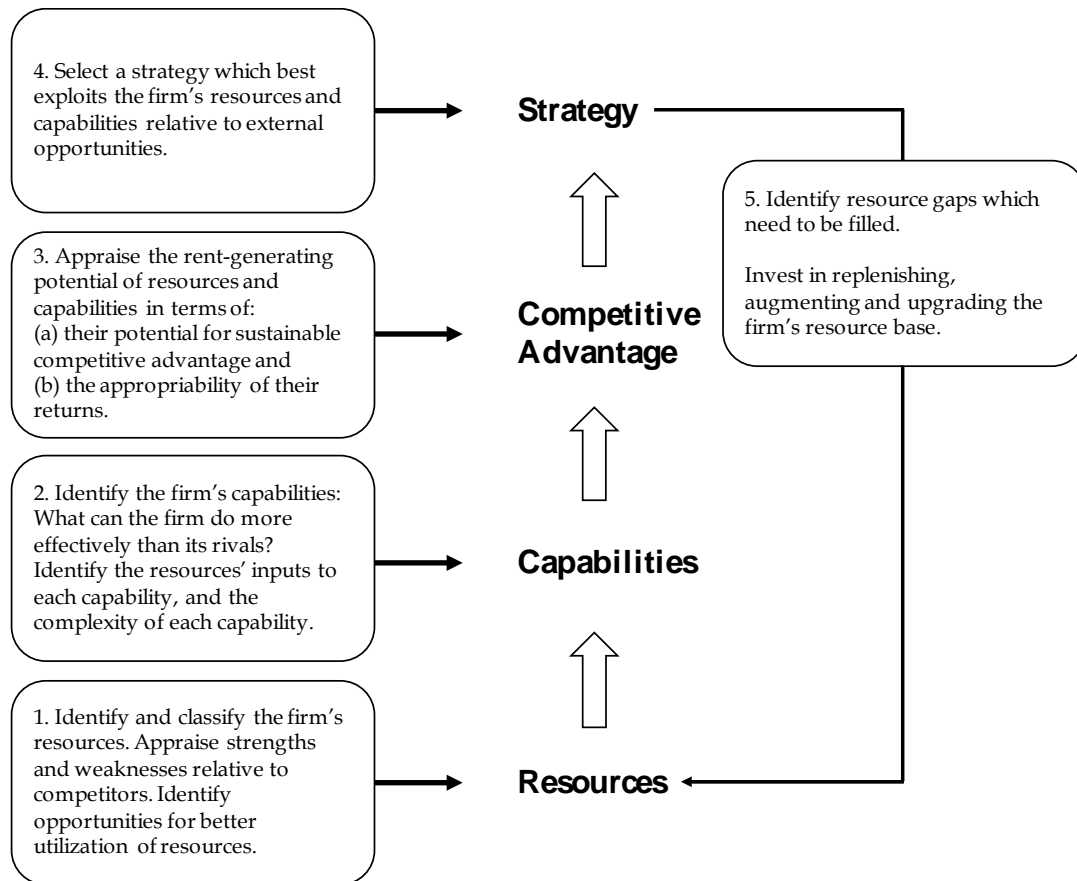


FIGURE 5 A Resource-Based Approach to Strategy Analysis: A Practical Framework (Grant 1991, 115.)

Based on the resource-based view, Grant (1991) has developed a practical framework for firm's strategy analysis. The framework is outlined in FIGURE 5 and depicts a five-stage procedure for strategy formulation constituent of following procedures: analyzing the firm's resource-base; appraising the firm's capabilities; analyzing the profit-earning potential of firm's resources and capabilities; selecting a strategy; and extending and upgrading the firm's pool of resources and capabilities (Grant 1991, 115.). The framework illustrates a continuous cycle where after each analysis the missing, required resources should be replenished. In his paper, Grant (1991) emphasizes the critical role of the re-

sources and capabilities of a firm in its strategy formulation and describes them as the primary sources of its profitability.

Novel Fintech solutions enable profit oriented crowdfunding intermediaries to serve market segments that banks could not serve efficiently. The innovative approaches include behavior-based risk scoring models, high modularization and automation of the services provided. In addition, improved technology allows the construction of partnership ecosystems in which each partner focuses on providing the services of their core competences resulting in a unified service bundle for capital seekers and givers (Haas et al. 2015, 2.).

Haas et al. (2015) remark that crowdfunding services are not entirely unique compared to traditional banking services, as both aim at decreasing transaction costs and information asymmetries. Their research further notes that banks already possess some essential components required to provide crowdfunding, such as account management and payment processes. In addition, banks have already established competences in meeting regulatory requirements, which help meet the special requirements involved with the regulation of profit oriented crowdfunding. Nevertheless, disruptive services such as online matchmaking and automatized data-based risk scoring are quite novel to traditional financial institutions.

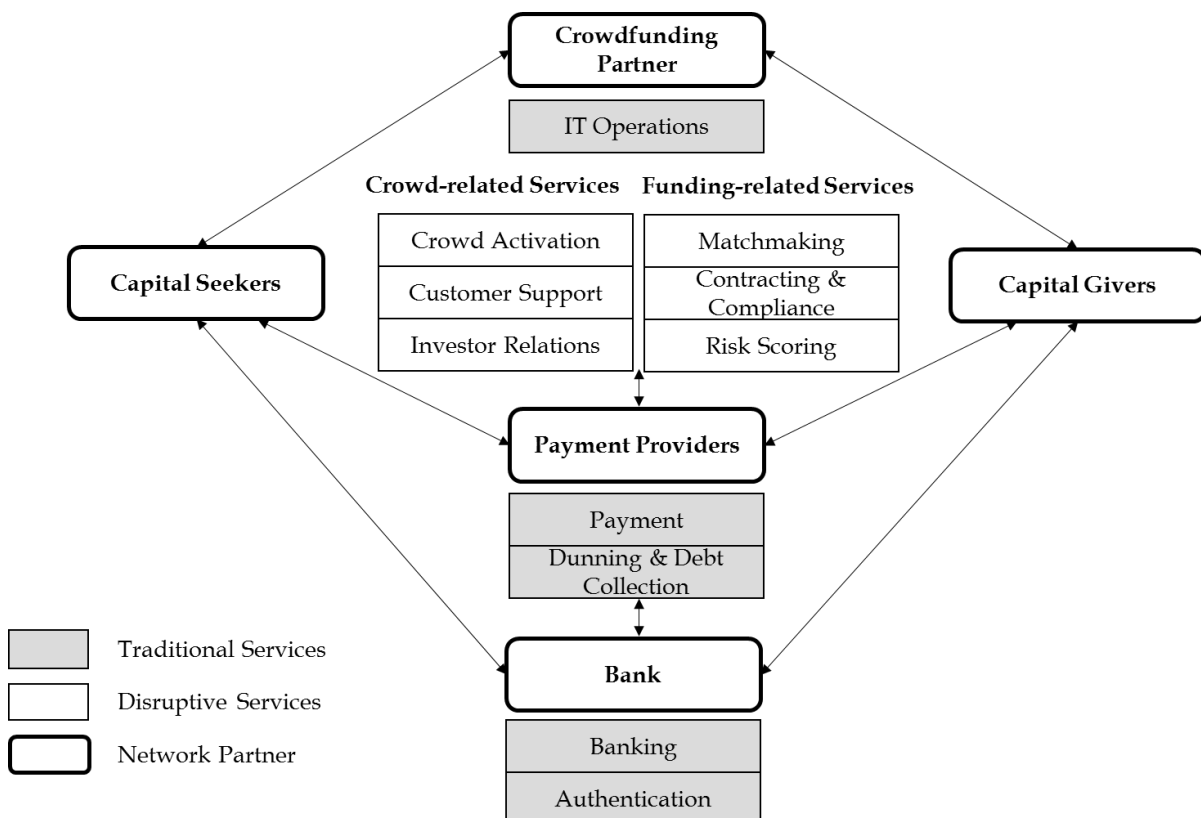


FIGURE 6 Crowdfunding Service Ecosystem (Haas et al. 2015)

In their study, Haas et al. (2015) present a modular model which enables a bank to utilize crowdfunding (FIGURE 6). The model fulfills the gaps presented in the framework by Grant (1991) by acquiring required competences from an external operator. The research of Haas et al. (2015) is based on the theory of modularization which is described as: “The decomposition of one object into decoupled single components with specified interfaces that can be combined to create new single object configurations.” Two major principles of modularization theory are cohesion and loose coupling. In this context, cohesion refers to the intra-module cohesion of the module elements with loose-coupling referring to the inter-module dependency between the independent modules (Haas et al. 2015, 3.). Previously modularization attempts have been mainly conducted in a service context. Haas et al. (2015) identify eleven preliminary crowdfunding services and their interdependence within an ecosystem:

- Matchmaking
- Contracting & Compliance
- Customer Support
- Risk Scoring
- Authentication
- Crowd Activation
- Investor Relations
- IT Operations
- Payment
- Banking
- Dunning & Debt Collection

These eleven services are divided into two categories based on whether they represent traditional or disruptive services. Traditional services represent services which can be provided by the bank as they possess the necessary skills, experiences and capability to carry out these services. Disruptive services, on the other hand, describe novel services which are beyond the experiences and competences of the bank and require the involvement of an external service provider. FIGURE 6 illustrates the interconnection between the partners and the services provided by each partner while also illustrating the division of traditional and disruptive services.

Based on the implications of the resourced-based view, we suggest that banks possess several resources and capabilities to provide some components of the lending-based crowdfunding by themselves. Collaboration with an external service provider can facilitate the necessary components required for the provision of certain disruptive services, which applies to both lending- and equity-based crowdfunding. Furthermore, it should be noted that equity crowdfunding will most likely require further external monitoring and screening capabilities to fulfill the resource gaps of banks.

2.5 Theoretical Comparison of Financial Instruments

TABLE 1 Overview of Different Sources of Finance. Modified from Lukkarinen et al. (2016)

Features	Rewards-based Crowdfunding	Equity-based Crowdfunding	Debt-based Crowdfunding	Donation-based Crowdfunding	Financial Institutions	Business Angels	Venture Capital
Typical Funder Background	Various, many may have no investment experience	Various, many may have no investment experience	Various, many may have no investment experience	Various, many may have no investment experience	Vast experience in providing loans. Equity instruments not often the core expertise	Former entrepreneurs	Finance, consulting, industry
Source of Funds	Investing own money	Investing own money	Investing own money	Investing own money	Transforms deposits into credit	Investing own money	Investing other people's money
Funding Instruments	Non-financial, e.g., products	Shares	Loans	Donations	Loans	Shares	Shares
Deal Flow	Through web platform	Through web platform	Through web platform	Through web platform	Through physical branches, some activities online	Through social and/or angel networks	Through social networks and proactive outreach
Due Diligence	Very limited; may be conducted by individual, if at all	Conducted by individual, if at all	Conducted by individual, if at all	No expected returns	Conducted by business analysts	Conducted by individuals based on their own experience	Conducted by staff in VC firm with potential assistance from outside firms
Geographic Proximity of Funders	Investments made online: funders often distant from venture	Investments made online: funders often distant from venture	Investments made online: funders often distant from venture	Investments made online: funders often distant from venture	Often provided by local branches	Most investments local	Invest nationally (or internationally with local partners)
Post-funding Role of Funders	Most remain passive	Most remain passive	Most remain passive	Most remain passive	Predetermined repayment plans	Active (hands-on)	Active (strategic)
Return on Investment	Financial return not relevant	Financial return important (but not the only reason for investing)	Financial return important (but not the only reason for investing)	No financial return (altruism)	Financial return important, collaterals highly important	Financial return important (but not the only reason for investing)	Financial return critical

Previously, transaction costs have prevented small amounts to be offered to the public as individual contracts would have exceeded the potential benefits of individual investments. However, in recent years, the Internet has enabled the offering of small investment opportunities to a large crowd. (Hornuf & Schwienbacher 2014, 2.). Hornuf et al. (2014) further elaborate this by explaining

that platforms can provide boilerplate contracts to crowdfunders, which alleviates the process by eliminating the negotiation and drafting costs. This is far more intriguing for the entrepreneurs as tailor-made financial contracts' transaction costs can outweigh the potential gains of the contract. The tailor-made contracts are traditionally used with business angels, who invest larger sums and demand greater protection for their investments. In crowdfunding, the investor base is significantly broader and the sums invested are substantially smaller which enables the attraction of non-experienced investors and the use of standardized boilerplate contracts (Hornuf et al. 2014, 15.).

TABLE 1 illustrates the difference between crowdfunding instruments and traditional equity instruments. There are several similarities between the new forms of finance and traditional equity instruments. Equity-based crowdfunding bears closest resemblance with angel and venture capital investments as all three investments result in ownership in the target company. The most significant variations between crowdfunding and traditional financiers can be found in the backgrounds of the investors, deal flows, due diligence, geographical proximity of the investors and the post-funding role of the investors. Crowdfunders are often inexperienced investors, which emphasizes the due diligence responsibility of the finance provider. Banks' core competences lie in the origination of loans, whereas equity investments are relatively new to them. In order to provide equity crowdfunding, a proper due diligence mechanism is required.

2.5.1 Equity Crowdfunding vs. Traditional Equity Instruments

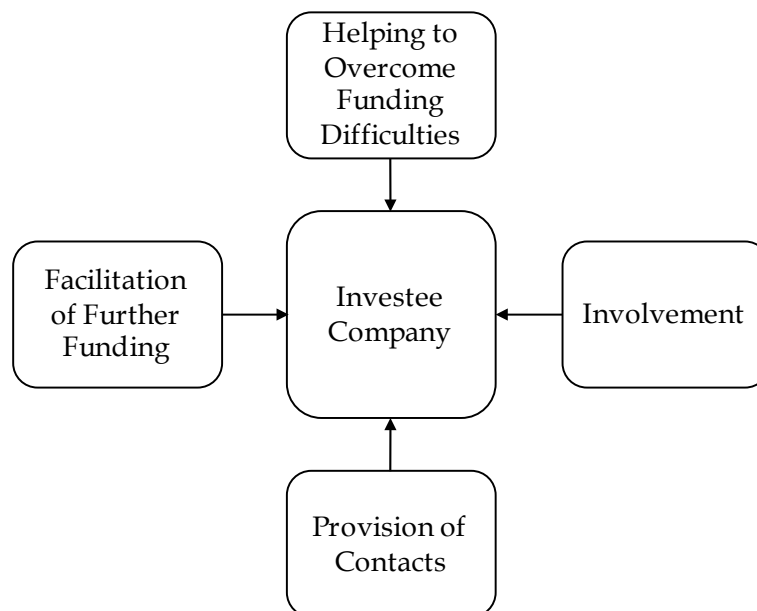


FIGURE 7 Framework of Business Angel Benefits (Macht & Robinson 2008)

Agrawal et al. (2016) state, that information asymmetries are prevalent in equity crowdfunding as well as in other markets for equity capital. These are frequent in the assessment process of new ventures as the company information is not completely transparent for investors. Business angels face similar problems in their investment decision-making as some of the core information is tacit.

Deakins & Freel (2003) describe business angels (BAs) as wealthy individuals who invest their private money and experience in small, unlisted enterprises with which they have no family connection. The capital provided by BAs is referred to as “informal venture capital” as a separation from institutionalized venture capital (VC) financing. Despite the separation, both BAs and VCs typically invest in companies in exchange for an equity stake. The exact size of the business angel market is unknown due to BAs willingness to remain anonymous about their investments (Macht & Robinson 2008, 188.). Aside from providing funding for enterprises, business angels can benefit investee companies in several other ways. Harding & Cowling (2004) note that business angels can also provide management expertise, access to networks, technological stimulation and help in obtaining further funding. Macht & Robinson (2014) remark that while business angels invest similar amounts that can be raised through crowdfunding, they are not sufficient to overcome the funding gap for majority of small companies. Business angels require investees to showcase high growth potential, which excludes companies with limited growth prospects. Furthermore, business angels invest into only a small fraction of companies they encounter, the number of business angels is limited and they tend to favor geographically proximate ventures and some businesses lack “investment readiness”, meaning these companies require time and capital to become attractive to business angels.

Despite a few high-profile stories of the success of angel investments, the majority of these investments will never prosper. Freedman & Nutting (2015) note that some of the investments are moderately to very successful but yet, most of them are losses. The possibility of a meteoric growth in the value of the startups is equally accompanied with a risk of slow growth or a complete failure. Successful angel investors typically diversify their risks by investing in multiple startups, thus increasing their chances of finding the golden goose of startups (Freedman & al. 2015, 17.). Similar risks are involved in equity-based crowdfunding and it is probable that the market will showcase parallel insolvency rates in the future.

Apart from obvious financial rewards obtained by businesses, the angel investments usually also offer strategic benefits. Angel investors involvement enables the creation of close associations with developers, inventors, entrepreneurs and well-connected directors of companies. Furthermore, angel investors may become affiliated with the enterprises in the role of strategic partners, board members or paid consultants. The participation can offer an insider look at innovative business models and products, new technology and proprietary research. In the later phases of the company, the angel investors who have already made investments, may have an opportunity to further invest in future

rounds of angel, venture and pre-IPO financing. There are also social rewards for angel investors, such as community development, job creation, supporting of their favorite products and services as well as helping people fulfill their dreams (Freedman & al. 2015, 17.). Haas et al. (2014) have also found similar non-monetary motivations with crowdfunding investments. Equity-based crowdfunding draws comparison to business angel and venture capital investments as all types invest their money in exchange for company shares. The key difference derives from the post-investment involvement of investors. As opposed to the active role assumed by angel investors in the post-investment face, the crowdinvestors rarely have an opportunity to get involved with the businesses.

The equity-based crowdfunding differs from angel and venture capital investments in its process, as the transactions are intermediated by an online platform (Wilson & Testoni 2014, 4.). According to Hornuf & Schwienbacher (2014), the platforms offer standardized contracts to the issuer, provide marketing and guidance to the entrepreneur, and function as an investor network by advertising the securities on the platform. In exchange for the provided services, the platforms charge a previously determined success fee of the transactions. Generally, if the minimum threshold is not reached during a pre-specified funding period, the investments are returned to the investors (Hornuf & Schwienbacher 2014, 6.).

The financial aspect is not the sole driving force behind the investment decision, but similarly as in angel financing, the social and emotional factors play a key role in the process. According to Wilson & Testoni (2014) crowdinvestors tend to invest in enterprises that share their own values, vision or interests. The top three motivations for investors to fund startups are the desire to help entrepreneurs in starting their businesses, the ability to exploit tax reliefs and the hope of achieving financial returns (Wilson & Testoni 2014, 5.). Haas et al. (2014) express their concerns over equity-based crowdfunding, where costs and handling of an overwhelmingly broad co-owner structure may be too high, thus possibly complicating a future sale of the company.

In his paper Garmaise (2001) examines the pecking order theory in the context of venture capital funding. Garmaise (2001) justifies the attractiveness of angel financing to entrepreneurs by the provision of expertise in addition to sheer funding. In the case of crowdfunding, the funders comprise of a heterogeneous group of individuals who often do not possess expertise of the field whereas venture capital investors can often add value to the company by their existing experience. (Macht & Weatherston 2014, 11.).

The asymmetric information for companies funded by crowdfunding can generate different types of operating risks compared to ones funded by angel investors. The difference stems from the screening of the company, which in the case of crowdfunding, is not performed by professional investors. The information, such as production costs and operating efficiency, on which crowdinvestors rely on, is largely based on the appreciation of the founders, which increases the operating risk compared to angel finance (Hornuf et al. 2014, 13.).

Schwienbacher (2014) describes a second risk-factor concerning the information asymmetries of crowdfunding. In a scenario where the fund-seeking company runs prematurely out of funds, the angel investors are more likely to reinvest further funds into the company. In the case of crowdfunding, however, companies can only raise additional funding when there are tangible results and visible progress, as the crowdfunders do not possess insider information of the company, thus posing a threat to the continuity of company's operations (Hornuf et al. 2014, 13.).

2.5.1.1 Syndicates

Agrawal et al. (2016) propose syndicates as a solution for overcoming the information asymmetries in equity-based crowdfunding. Syndicates are a consortium of angel investors and crowdfunders but can involve angel groups and venture capital (VC) funds as well. In this model, business angels (BAs) function as leads who provide the due diligence and progress monitoring on the behalf of the investors. Rather than just screening the potential investments, leads also invest their own money into the enterprises, which in turn is backed by the investors (backers). The syndicate "lead" provides a written investment thesis for each investment he/she makes and discloses potential conflicts of interest regarding the investment. The investors who choose to back the leads agree to invest in the same terms as the lead and to pay the lead a carry (commission) for their investment opportunity (Agrawal et al. 2016, 114.).

According to Agrawal et al. (2016), syndicates solve the information problem by aligning the incentives of both leads and backers. The lead investors are faced with a reputational and financial penalty for poor performance and in turn, gain reputational and financial rewards for good performance. The entrepreneurs also face reputational risk for not delivering promised actions and results to the lead. Agrawal et al. (2016) conclude that this model aligns the incentives of all participants involved in the investment process.

There are three principal costs associated with asymmetric information in angel investing: general awareness of the deal, transaction costs and due diligence (Agrawal et al. 2016, 116.). Agrawal et al. (2016) state that the first two costs have been successfully reduced by equity crowdfunding platforms but the due diligence continues to be an issue. Despite the communication of key elements of ventures and cost-effective processes, the investors face a high cost of conducting due diligence on their own. The syndicates resolve this issue by providing ability and incentive for the leads to leverage the information they gather through their relationships and by conducting due diligence on behalf of other investors (Agrawal et al. 2016, 117.).

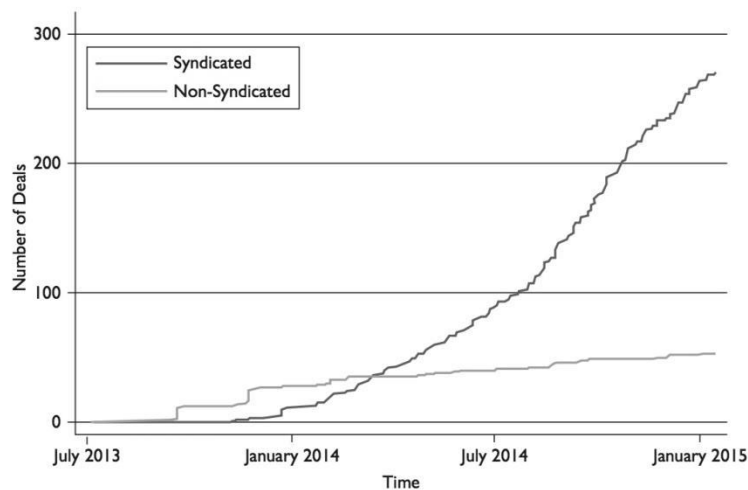


FIGURE 8 Cumulative Number of Successful Syndicated and Non-Syndicated Deals on AngelList (Agrawal et al. 2016)

FIGURE 8 illustrates the difference between syndicated and non-syndicated deals based on data from an investor-matchmaking service AngelList. The figure exemplifies the substantial difference between the two types of crowdfunding signified by the number of successful deals.

2.5.2 Lending-based Crowdfunding vs. Bank Financing

According to Palmer (2015), the price of capital is not in fact the main driver for entrepreneurs when seeking funding for their projects. From a range of interviews Palmer (2015) conducted with entrepreneurs who had funded their ventures by crowdfunding, he came to a fascinating conclusion. The main driver for entrepreneurs to choose crowdfunding over bank financing was not the eligibility, but instead, the rigid and slow application process of banks. Furthermore, crowdfunding platforms allow entrepreneurs to fill out a loan application outside of normal business hours, which for now is not the case for banks (Palmer 2015, 189.). Palmer (2015) further elaborates that the application process for banks can take up for weeks due to high level of bureaucracy whereas crowdfunding platforms can perform similar assessments just under 48 hours.

Green (2014) has found similar obstacles in banks' lending process. He describes how small-business owners are often required to provide hand written application forms, personal financial statements and printed copies of other information. All the documents will then be handled by two or more people which can waste valuable time and in some cases information due to the mishandling of physical documents (Green 2014, 16.). Green (2014) notes that the large quantity of gathered information is due to the tight regulations imposed upon banks. According to him, banks traditionally assess bank loans against the five Cs of credit: capacity, capital, credit, collateral and capital. Green (2014)

adds that the rigidness of the process can eliminate some potential borrowers from applying a loan. Despite acknowledging the flaws in the system, few banks have adopted new processes in the handling of loan applications. Integrated technology could simplify the transfers and the examination of information for both parties of the process (Green 2014, 8.).

2.6 Previous Research

Number of crowdfunding related studies have emerged along with the popularization of crowdfunding in enterprise financing. Due to being a relatively recent phenomenon the research papers largely follow a “phenomenon-based approach” which involves constructing a definition and description along with a differentiation to related subjects and concepts (von Krogh, Rossi-Lamastra & Haefliger, 2012). Before the term crowdfunding had been coined, scientific articles on lending-based crowdfunding applied terms “social lending” and peer-to-peer (“P2P”) lending (Hulme & Wright, 2006; Freedman & Jin, 2014, 2008). The first scientific papers using the term crowdfunding were mainly examining the legal issues under the U.S. law. The discussion of venture financing through crowdfunding was first discussed by Belleflamme, Schwienbacher and colleagues (Belleflamme, Lambert & Schwienbacher, 2010., 2013a, 2013b; Belleflamme & Lambert, 2014; Schwienbacher & Larralde, 2012). Plenty of scientific papers have since emerged, following a descriptive, explanatory or concept-based approach, often accompanied with case studies within the authors’ national context (Giudici et al., 2012; Hemer et al., 2011; Hemer, 2011; Ingram, Teigland, & Vaast, 2014; Kläbe & Laycock, 2012; Kortleben & Vollmar, 2012; Martínez-cañas, 2012; Meinshausen et al., 2012; Mitra, 2012; Tomczak & Brem, 2013; Vitale, 2013; Wheat, Wang, Byrnes, & Ranganathan, 2013).

The research of crowdfunding literature can be divided into three distinct categories (Moritz & Block, 2014):

1. Literature focused on capital seekers
2. Literature focused on capital providers
3. Literature with a focus on the intermediary

The most relevant of these categories, concerning this paper, is the examination of the role of intermediaries, while the focus on capital seekers and capital providers constructs a backbone for the examination of platform development.

Literature on capital seekers is mainly focused on the motivations for crowdfunding, the determinants of success and the legal issues and restrictions of equity-based crowdfunding. Belleflamme et al. (2013b) identify three distinct reasons for entrepreneurs to finance their projects through crowdfunding. These are collection of funds, public attention and receiving feedback of their products and services. Gerber et al. (2012) have ended up with very similar results in their research. The results of their semi-structured interviews of entre-

preneurs resulted in five different categories of motivation: financing, forming relationships and networks, self-affirmation, replication of success stories and increased awareness of the product. Crowdfunding can also solve the problem with a possible funding gap in the early stages of a company's life cycle (Hemer et al. 2011, 30.). Additional identified reasons for pursuing finance through crowdfunding are speed and flexibility of the funding, little formal obligations, market product testing, multiplier effects, positive signaling effects and taking advantage of the "wisdom of the crowd" for company activities (Hemer et al., 2011, 77; Hienert & Riar, 2013; Macht & Weatherston, 2014; Surowiecki, 2004).

The research on capital providers has largely focused on the motivations of the capital providers in participating in crowdfunding and the factors that influence their investment decisions. According to Allison et al. (2014) & Lin et al. (2014) capital providers are not solely motivated by financial aspects of crowdfunding, but their motivations can be of visceral nature. Aside from the financial motivation, the social reputation of a company and intrinsic motives play a key role in the investment process. Ordani et al. (2011) have found in their interviews with founders and employees of three crowdfunding platforms, that capital providers share some common characteristics. They are described as innovation-oriented, interested in interacting with each other, identifying themselves with the company or the product, and being interested in the financial result of the target company.

The research into crowdfunding intermediaries and examination of the best model for businesses remains scarce, with only few articles being examined compared to the previous two categories, despite the existence of a variety of different crowdfunding platforms. The intermediary serves both parties of the crowdfunding transaction process by providing information and functioning as a communication and execution portal. The informational aspect can reduce information asymmetries and by this lower the risks of the participating parties (Allen & Santomero, 1997; Berger & Gleisner, 2009; Elsner, 2013; Haas, Blohm & Leimeister, 2014, Leland & Pyle, 1977). Platforms can also function as a trust builder between the market participants (Burtch et al., 2013a; Greiner & Wang, 2010). Chen et al. (2013) examined if the auction model in crowdfunding markets leads to an optimal result for market participants by analyzing data of the auction model used on Prosper.com until 2010. The auction model functions in such way that the interest rate of the borrower is determined by the number of bids by the capital providers. Chen et al. (2013) concluded in their research that this model does not provide results in the best interests of the capital seekers. In addition, the model is less transparent and more complex than a fixed interest rate model from the capital providers' perspective when profit-sharing is applied.

In their research paper, Belleflamme, Lambert & Schwienbacher (2014) examine the financing selection from the entrepreneur's standpoint. They distinct two forms of crowdfunding in their study, pre-ordering in which early investors receive a product in advance and profit-sharing in which consumers provide money for the entrepreneur in exchange for future profits. Belleflamme et

al. (2014) have found that entrepreneurs prefer the pre-ordering over profit-sharing when the initial capital demand is relatively small. On the other hand, entrepreneurs prefer the latter option in a situation where the amount of required capital is larger. The pre-ordering mechanism allows entrepreneurs to attract customers by price discrimination as the individuals who choose to fund a product in advance will receive benefits over other customers by early access to products or in the form of discounted prices of the final product. This model will be applicable in the early stages, while launching the first products. However, as the volume of business grows and the capital needs increase, the discrimination strategy will force entrepreneurs to distort the prices in a way that is not optimal for the profitability of the initiative. In the case of profit-sharing the entrepreneurs are not forced to create concentrated incentives, but instead solicit investors without affecting the profitability itself. (Belleflamme et al. 2014, 586.)

Lukkarinen et al. (2016) have found in their research that traditional investment criteria such as business features, as well as financial and legal features are not determining factors in the success of equity-crowdfunding campaigns. Instead, their research indicated that softer criteria were more indicative of the success of these campaigns. Their research indicates that campaign success is related to predetermined campaign characteristics, networks and understandability. The relevant campaign characteristics are the amount of money the company is seeking to raise, the smallest accepted investments size, the duration of the campaign and whether or not, financials have been provided. The networks criterion contains two characteristics. First, the more funding the company has been able to collect prior to the campaign is indicative of success. Second, presenting the campaign in social media is a positive predictor of success. The understandability criterion, as measured by whether company's products are targeted directly to consumers, is indicative of success. This is derived from an assumption that consumers may be more comfortable in investing in products that they know or understand (Lukkarinen et al. 2016, 35.). Lukkarinen et al. (2016) conclude their research by stating that the investment decision making of equity crowdfunding investors resembles more of that of providers of other types of crowdfunding than traditional providers of early-stage financing.

The most relevant studies related to this paper have been published by Haas et al. (2014-2016). Their studies focus on the examination of the role of intermediaries in crowdfunding. Haas et al. (2014) present three archetypes of crowdfunding intermediaries: Hedonism (reward-based), Altruism (donation-based) and For Profit (equity- & lending-based), based on the underlying instrument provided by the intermediary. They define crowdfunding as: "Digitally transformed model of financial intermediation with crowdfunding embedded in the theory of two-sided markets and financial intermediation."

In their paper Haas, Blohm, Peters & Leimeister (2015) examine application of disruptive innovations in the banking industry with crowdfunding platform design as their primary focus. The results are retrieved from an ongoing

crowdfunding project with an unidentified Swiss Bank. Their research resulted a depiction of a modular design combining the strengths of banks existing capabilities with the processes of an outside crowdfunding platform. In order to research the utilization of crowdfunding, an interdisciplinary project team was set up consisting of researchers specialized in crowdfunding and innovation management, researchers specialized in service engineering, and bank executives specialized in innovation management and banking services. Their research process was structured in three cycles. First cycle focused on conceptualization to identify a fitting market segment for the application of crowdfunding, to derive crowdfunding services, and to determine ecosystem partners. The objective of the second cycle is to decompose the identified crowdfunding services on a process level to develop modules as building blocks for the profitable utilization of crowdfunding service bundle by enabling synergies and management of the service ecosystem. Third and final cycle consists of the actual implementation of the modules and the service bundle (Haas et al. 2015, 4-5.). Haas et al. (2015) argue that a modular design could enable a bank to utilize crowdfunding without having to provide the whole infrastructure by itself. At the time of the publication, cycle 1 was completed while cycle 2 was in action. As concluding remarks, Haas et al. (2015) remark three contributions that they expect to retrieve from their research project. First contribution is expected to expand the findings of existing research of crowdfunding by considering crowdfunding as modular, IT-enabled service bundle performed within an ecosystem. Second, their study illustrates a dynamic Internet phenomenon, such as crowdfunding, affects an established industry. Final contribution is expected to expand the modularization and service research.

3 METHODOLOGY

As stated earlier, crowdfunding at its current form is a relatively new phenomenon in enterprise financing. The unestablished phase of the market imposes some limitations for research with the most prevalent barrier being the lack of analyzable data. This limits especially the application of quantitative methods in examination of the realized profits in the crowdfunding market. Nevertheless, crowdfunding is a fascinating topic to examine for its topical and constantly developing nature, backed by the high annual growth rates of the market. Due to the lack of market evidence, it is sensible to survey the opportunities of the market and seek validation and possible deviations from existing research results by qualitative methods. Furthermore, the development of the financial industry supports the examination of the implementation of novel financial instruments within the banking industry. The study is conducted in cooperation with a New Business Development unit of a Finnish bank.

The aim of the empirical study is to explore banks' prospects of entering the fast-developing crowdfunding market. Several components are examined in the research, most notably the motivation and willingness of banks in adopting crowdfunding, the threats and opportunities imposed on banks by the phenomenon and furthermore, the exploration of an optimal form and operational model for crowdfunding in the framework of the banking industry. The research design considered most appropriate to address the research questions of this study is an exploratory field research, relying on interviews conducted with banking professionals.

Edmondson & McManus (2007) define field research as a systematic study of original data – qualitative or quantitative – gathered from real settings. Dehoratius (2011) continues by stating that field research is critical to the development of scientific knowledge within operations and supply chain management, and is commonly characterized by a detailed understanding of the practice of operations in a particular firm, business, or industry. Edmondson & McManus (2007) list four essential elements of field research along which the study should be constructed by: the research question, prior work, the research design, and the contribution to literature. The research question defines the the-

oretical and practical significance of the study while establishing the boundaries for the research. The less extensive the prior literature, the broader the research question might be. The research design, which includes collected data and the type of data collection and the analysis methods, is derived from the research question. The final element proposed by Edmondson & McManus (2007), refers to determining the theoretical contribution of the findings, building connections with existing literature and summarizing key practical results. The results should convey the new theory generated by the research or possible deviations and novel findings of the phenomenon (Edmondson & McManus 2007, 1156.).

According to Meredith (1998), case/field research is an example of an alternative research paradigm known as interpretivism. Interpretivism applies both quantitative and qualitative methodologies in the quest for understanding certain phenomena. The essence of field research lies in the duality of being situationally grounded, while seeking a sense of generality. Meeting both requirements satisfies the duality criterion. Conducting a situationally grounded research requires being empirically disciplined and taking into consideration the specific contextual characteristics already in the data collection phase. On the other hand, the findings induced from empirical data must be applicable in some extent outside the research subject. The sense of generality involves an attempt to go beyond the empirical context and seek broader theoretical comprehension through abstraction (Ketokivi & Choi 2014, 234.). Benbasat & al. (1987) have identified three major advantages of case research. First, the phenomenon can be examined in its natural surrounding and it allows meaningful, relevant theory to be generated from the understanding gained through observing actual practice. Second, the case method enables a deeper understanding of the nature and complexity of the phenomenon by asking *why* rather than just *what* and *how*. The final advantage of case research is that it allows early, exploratory examination of the subject while the variables remain unknown and when the phenomenon is not yet fully understood.

3.1 Data Collection

Two methods of data collection were used for this research. The primary data was collected by conducting seven semi-structured interviews with banking professionals. Secondary data is derived from the examination of previous research and reports on crowdfunding. Interviewees were selected by their involvement in the banking industry with a special emphasis on their association with crowdfunding related projects. The seven interviews were conducted with banking professionals from four different countries. Geographically four of the seven interviews were conducted with Finnish representatives with the remaining three individual interviews being composed of professionals from Germany, Netherlands and Switzerland. All interviewees, apart from the representative of the Ministry of Finance of Finland, work for a major cooperative bank in their respective countries. The Ministerial Adviser brings a legislative perspective for

the research, as he was a central figure in the drafting process of the Finnish Crowdfunding Act.

Despite, being conducted for a Finnish banking institution, the international scope for the thesis can be justified by widening the angle of the research and by providing alternate results from similar banking institutions in different countries. Finnish interviewees were interviewed in Finnish while the rest were conducted in English. All the quotes are represented in English and the direct quotes of the Finnish interviewees were translated into English.

The interviews were conducted throughout August, 2016. The structure of the interviews followed a semi-structured questionnaire framework, which was not intended as exhaustive. Rather, the interviews were structurally designed as flexible, guided by the individual expertise of each interviewee. All interviews were recorded and transcribed into text form. The transcriptions were written word by word excluding duplicate phrases and comments irrelevant to the topic. The results of the interviews are reflected on the pre-existing theoretical research in the field of crowdfunding. The data was subsequently retrieved from the transcribed interviews by analyzing the text and identifying the prevailing themes in the interviews.

The list of interviewed professionals signified with their titles and respective countries:

- Business Manager at a Dutch bank
- Head of Capital Markets Financing at a Finnish bank
- Head of Marketing at a Swiss bank
- Ministerial Adviser at Financial Markets Department in the Ministry of Finance of Finland
- Business Development Manager at a Finnish bank
- Product Manager at a Finnish bank
- Senior Consultant at a German bank

4 RESULTS

4.1 Background of the Phenomenon

The emergence and prominence of crowdfunding and other alternative forms of finance can be traced back to the global financial crisis. Banks willingness and ability of carrying risks has declined in the aftermath of the crisis and has been further restricted by the tightened regulation imposed on banks after the crisis. Subsequently, a funding gap has emerged for some enterprises limiting the financing of their ventures (Lukkarinen et al. 2016, 27.). Business manager at a Dutch bank, describes the events leading to the emergence of crowdfunding:

After the crisis, there was a look for alternative finance for SMEs and crowdfunding initiatives started, especially (platforms) like Kickstarter where there was a sell offer of items and promotion for arts and sports. As the crisis became more and more apparent, the banks couldn't provide all sorts of finance and platforms started to approach the SMEs. First it started off with a pure crowdfunding where the platform offered a podium where SME could present itself and organize all friends and relatives and the best way to take care of administration, handling money and all sides. Over the time, more crowdfunding platforms got the bigger part of the market share.

Based on the conducted interviews, all respondents saw digitalization as one of the core factors in the future development of the banking industry. The views of banking professionals on the evolution of the industry were relatively unanimous. Each interviewee considered the adoption of digital solutions vital in adapting to the disruption of the industry. Crowdfunding was generally perceived as one form of adjustment to the disruption, rather than being an economically significant move at this stage. As the Head of Capital Markets from a Finnish bank described:

Banks think this through the disruption, rather than having a major business opportunity at this point. It is more about how banks should alter their own business model.

One of the interviewees described the significance of crowdfunding as such:

I believe that crowdfunding is really one of the most important innovative business models that arose from the whole digitalization of the banking sector, because before that you weren't really able to do something like that. If you needed a loan, you had to go to a bank, but now thanks to digitalization, the Internet, social networking, now you have an alternative, so to speak. (Senior Consultant at a German bank)

As shown above, the emergence of Internet-based finance providers has not gone unnoticed by banks. The current rigorous banking processes are slow and inefficient compared to automatized processes of the alternative financial service providers. An interviewee illustrated the rigorous application process in banks as such:

If you apply for a loan, you first speak to a clerk whose hands are pretty much tied up, after which you're transferred to a separate credit unit, even though the bank has all your information. In there, someone with a slightly higher rank will give the credit decision, apparently by inserting your information to some Excel sheet or to a program. And, this process can take for days. (Ministerial Adviser at Financial Markets Department in the Ministry of Finance of Finland)

The example demonstrates the rigidity of the banking process which has largely remained unaltered apart from transferring parts of the process into a digital environment. New alternative finance providers offer faster application processes due to automatized rating systems which rely on advanced algorithms. The data is retrieved from public registers and from information provided by the applicants online. Thus, the fund-seeking enterprises can receive their individual credit rating and credit decision instantly. A respondent detailed the advantages of the novel processes:

It is far more automatized and quicker process, which is why I'm not surprised that in some cases enterprises are willing to pay higher premium for it. Furthermore, there are hardly any collaterals or covenants involved, as is the case with bank loans. When banks lend money, they want to ensure that they can get their money back, and usually there are quite restrictive terms, which can be detrimental to growth-seeking startups and SMEs. (Ministerial Adviser at Financial Markets Department in the Ministry of Finance of Finland)

The responses indicate that crowdfunding could provide a channel for banks to cater riskier clients, which currently cannot be served due to regulatory constraints. Furthermore, crowdfunding could be the determining factor for banks to transform some of their processes into the digital era.

4.2 Risks Involved with Crowdfunding

4.2.1 Reputational Risk

A recurring theme among the interviewees, regarding the risks of adopting crowdfunding, was the reputational risks associated with crowdfunding. This

section examines the reputational risk aspect of crowdfunding. An interviewee noted that the reputation of the bank is beneficial in soliciting investors, but it also increases the importance of acting responsibly towards the customers. A respondent from a Finnish bank described the special characteristics of banks entering the crowdfunding market:

Undeniably, banks have had, and still have different capital adequacy requirements and other conditions, which definitely are the root cause for very different risk policies in comparison to the smaller players. Banks surely examine this more from the perspective of a traditional financier. They want to assess the risks and benefits bit more carefully (Business Development Manager at a Finnish bank)

She further detailed the risks involved with crowdfunding from banks' perspective accordingly:

I guess the negative issues are similar with the positive ones. In a way, with reputation, it can open opportunities of collecting investments from new target groups. Then again, the flip side of having a good reputation and certain expectations (from investors) is that there is also a lot more to lose. Banks' strength in general, is that the risks are maybe evaluated a bit more thoroughly and crowdfunding, being a risky and new market, poses a question what will happen in the next five years. How big of a percentage of those who can pay back their loans today, will also be able to repay their loans in later years. In one sense, there are more platforms, more funding channels, which naturally lowers the threshold (for the capital-seeking agents) in receiving financing. Inevitably, bad actors will appear in the market. In a way, there's more to lose on the reputational side (for banks). (Business Development Manager at a Finnish bank)

The immaturity of the market is one factor causing the banks to take a cautious approach towards crowdfunding. The potential profits and defaults have not yet been realized in the market, which makes it hard to evaluate the benefits of entering the novel industry. When asked whether banks possess a competitive advantage in crowdfunding, one of the respondents discussed the potential reputational risks involved in the full intermediation of loans:

[...] there is a lot of reputational risk, if we assess the clients and we let investors take a full risk. So, in the way of our model, we take half of the risk and we give out half the loan towards the crowd. That is the situation that might be acceptable. We don't know yet, if there is a market for the way we do right now. Only assessing the loans and then giving them out to investors, that is too much of a reputational risk at the moment, but that might change in the future or we should find another label, not under our flag. I don't know yet, how the public will react to this, but right now, the reputational risks are way too high. (Business Manager at a Dutch bank)

A representative of a German bank also weighed the reputational risks involved with crowdfunding, reflecting it against the results indicated by the peer-to-peer lending market:

When you look at classic peer-to-peer financing where private customers take out loans from private investors, I believe it carries a large reputation risk for your bank. Because usually loans are rather anonymous. So, if I put my money into my bank account, of course the bank is going to hand out loans but I as an investor don't know exactly which loans. But, with a crowdfunding platform you suddenly have a transparency depending on how the platform works. But, if you follow that classic model

where the first peer-to-peer loaning platforms came up with, that you can actually see like a social network profile of the borrower, you have to ask yourself as a bank whether you want to get involved with that, because there's always going to be some kind of reputation transfer. Especially when a loan defaults. I'm not sure if you really want to put your own bank brand in association with such a platform. I think it's better suited for business to business customers, so like corporate loans. (Senior Consultant at a German bank)

Another respondent saw reputational risk as one of the core factors preventing banks entrance to the crowdfunding market:

If you think of this, there is a reputational risk for banks. When customers invest in it, they have to understand what they're doing. This is of course a reason why banks haven't applied this (crowdfunding) before. The reputational risk has been evaluated higher than the potential benefits. That's the biggest obstacle in my opinion. What I've seen, when I have observed the market, crowdfunding platforms and enterprises applying for funding, there are very vague future prospects, and other things presented by enterprises. Also, after the funding round, the implied market value is not often there. In some cases, the future scenarios seem to be completely fabricated, just to make them sell well. (Product Manager at a Finnish bank)

The representative of the Ministry of Finance of Finland also acknowledged the reputational risks involved with crowdfunding, and especially with equity-based crowdfunding. He noted that, although, the legislation was drafted with relatively light disclosure obligations in mind, it does not prevent banks from providing additional relevant information to the investors:

From banks' perspective, it is essential. Currently, banks are entering the market, one way or another, and for them, the reputational risk is even higher. Our legislation does not prevent (banks) from telling additional information or highlighting the risks beyond the requirements of our legislation. (Ministerial Adviser at Financial Markets Department in the Ministry of Finance of Finland)

The reputational risks involved with crowdfunding are major barriers to entry for banks. The assessing of startups and growth-seeking enterprises is not among the core competences of banks and can intricate the selection of ventures. Furthermore, the market is still immature and the defaults are yet to be realized, which could prove out to be detrimental image-wise, especially when investors carry all the risk. Providing crowdfunding under a different brand could alleviate the reputational risks for banks, while clear communication of the related risks should be conducted as explicitly as possible to the investors.

4.2.2 The Significance of an Aftermarket

Crowdfunding instruments are fundamentally similar with their traditional counterparts. The key difference that came up during the interviews was the lack of an aftermarket, which reduces the market efficiency. As one of the respondent described the differences between traditional and crowdfunding instruments:

All the other instruments have an aftermarket. This one (crowdfunding) doesn't have one yet, but surely someone will construct it at some point. In some sense, the differ-

ence is similar to comparing derivatives to common stocks. The uncertainty of the payback is quite significant. (Product Manager at a Finnish bank)

Another respondent considered the lack of aftermarket as a major issue with crowdfunding instruments:

This is one of the biggest drawbacks of the market at this moment, although I see this as a temporary thing. With these stocks, you don't have an aftermarket and if you look at the platforms, the selling of stocks can in some cases even be forbidden, you can't participate in the shareholder meetings, you don't have voting rights and you can't sell them to your friend, which makes it kind of an incomplete product. Also, often you won't get any dividends until five years or so and in the worst case you end up with nothing. Without the aftermarket, you can get rid of the stocks either by the company buying back its shares or in a case where the company lists its stock into some aftermarket. (Head of Capital Markets at a Finnish bank)

A problem regarding the liquidation of the investments is further caused by the relatively small size of the funded companies. The companies funded by crowdfunding are often too small for an IPO, which diminishes the exit opportunities of crowdfunders. On the other hand, a proprietary aftermarket for crowdfunding instruments could solve this problem but would also require relatively high volumes to function properly.

4.3 Benefits of Providing Crowdfunding

Respondents described several motivations for entering the crowdfunding market. Due to the immaturity of the market, the financial motivations were not regarded as the key reason for banks to enter crowdfunding. Instead, the respondents described the adjustment to the digital disruption of the industry and reputational factors as the most prominent motivations. One of the respondents elaborated their motivations for providing donation-based crowdfunding:

Mainly it's reputation, so uplifting the (image of) cooperative banks who really have had a bit of a laidback reputation, not being really top notch in terms of digitalization. With that, we try to really modernize our image, be close to the people and really help the people, so that's number one. And then secondly, the cost reducing aspect of the sponsoring side. (Head of Marketing at a Swiss bank)

The comment supports the argument that financial motivations are not the only reason for banks to provide crowdfunding. Crowdfunding can help boost banks' image as a digital player and allow them to facilitate charitable projects in an online environment.

A recurring topic among the interviewees and in crowdfunding research is that crowdfunding could provide a platform for offering financing to enterprises which are commonly regarded as too risky for traditional financial institutions. Crowdfunding platforms have focused on this segment, which traditional finance institutions cannot currently serve efficiently. An interviewee elaborat-

ed the possibilities of applying this type market funding mechanism by acknowledging crowdfunding as an opportunity to expand banks current offerings:

Here we're talking about a very traditional banking business, financing and how it could be expanded to the smaller end. Also, when we're talking about the facilitating of funding, it is market funding. The money doesn't come from bank's balance sheet, but instead, it is collected from the market. Traditionally this has been available only for listed companies and large enterprises. Furthermore, banks must take into consideration the evolving regulation and the existing capability of funding smaller, riskier enterprises. Thus, the two aspects related to crowdfunding are business development and the evolution of the regulation, which forces banks to come up with new alternatives. (Head of Capital Markets at a Finnish bank)

Crowdfunding could provide a new channel for customer retention as well as a mean of risk management for banks. Acting as an intermediary, the funding would not strain the balance sheets of banks, thus allowing the funding of riskier enterprises and possibly alleviating the funding gap of small enterprises. One of the respondents illustrated this as such:

With the crowdfunding platform you can definitely leverage new customer groups, or do business where for various reasons you couldn't do business otherwise. For example, just in terms of risk management. Maybe you would help a customer, whether it's a private or a business customer take out a loan but you just can't provide that loan by yourself, because of the risk involved. And (with) a digital crowdfunding platform, for example, you could get other investors into the boat, which would help you serve your customer. So, it's a very interesting field. (Senior Consultant at a German bank)

He also found the image benefits involved with crowdfunding a relevant motivation for banks to enter the market:

If one of the old established banks was going to start a crowdfunding platform, I believe they would usually try to leverage their brand and their existing customer base to fuel that platform. So, for them, it's probably also another advantage that it makes you look very innovative. (Senior Consultant at a German bank)

A representative of a Finnish bank described the advantages of banks compared to individual platforms as such:

Banks clearly have major advantages (in providing crowdfunding). It (crowdfunding) is still a marginal business, and at the beginning it doesn't even have to be profitable, to get it started. In addition, banks already have all the customers, enterprises and individual customers, who could invest in the projects. In that sense, the competitive position compared to individual platforms is completely different, which will make it difficult for platforms. Especially, when it's evident that banks are willing to enter crowdfunding. Also, in the big picture, the costs for banks in entering the market are quite insignificant. (Product Manager at a Finnish bank)

The large customer base of the banks and their reputation as trustworthy institutions would most likely increase the popularity of crowdfunding as the new form of finance. Additionally, new investment opportunities would become more easily accessible for individual investors. An interviewee further elaborat-

ed the potential competitive advantage of banks over the proprietary crowdfunding platforms:

Banks have the customer base and experience of enterprises, as well as of investors. So, they probably do have an advantage in certain target groups, even though experienced investors involved with crowdfunding don't necessarily care if it's organized through a bank or not. Nevertheless, there is a lot of capital laying on bank accounts, and there are certain target groups to whom banks have a different access to. Just because of their (banks) reputation, as compared to the smaller platforms. The reservations towards crowdfunding are perhaps also minor with banks. And of course, facilitating funding is traditionally associated with banks, so there's the competence. (Business Development Manager at a Finnish bank)

As illustrated above, crowdfunding could provide several benefits for banks. Whereas the reputational risks were perceived as a major barrier to entry, crowdfunding could conversely provide positive image effects for financial institutions. Offering novel financial instruments in an online environment could help shift the image of banks from outdated service providers to digital trailblazers. Moreover, crowdfunding can offer banks a channel for customer retention and facilitation of funding for riskier ventures. In addition, the new instruments would broaden the investment selection for investors.

4.4 Form of Crowdfunding

As loans, have represented the core business of banks since the inception of the banking industry, it would seem natural that a lending-based model would also be the optimal form of crowdfunding for banks. The interviews on the other hand produced mixed responses among the interviewees. Each of the respondents discussed the different forms of crowdfunding and their applicability in a banking environment. All respondents agreed on the immaturity of the market, which does not yet support entering the crowdfunding market for sole business purposes. Nevertheless, they acknowledged the future potential of for-profit models, such as equity and debt-based crowdfunding. This chapter presents the results of the interviews regarding the optimal form of crowdfunding from a bank's perspective.

4.4.1 Donation-Based Crowdfunding

The donation-based crowdfunding is already implemented in banks, with 2 out of 7 of the interviewed banks having already started donation-based crowdfunding platforms. The motivation for applying this model stemmed from non-profit objectives such as serving communities and gaining image benefits. One respondent described their current donation-based model:

Speaking from our perspective as the cooperative financial group in Germany, first of all, it's the way we use crowdfunding with our crowdfunding platform. It is mainly (used) for customer retention, and also from a social point of view. How our

crowdfunding works, it's a donation-based platform, we have our local branches, the local cooperative banks and they have their own incarnation of this crowdfunding platform. If you have a local project and maybe you want to build a new soccer field for your local community but there's not enough money, you can put a request on the crowdfunding platform and then you can look for donations within the local community. (Senior Consultant at a German bank)

He further elaborated the reasoning behind the building a donation-based model:

[...] it's not for driving business and it's not providing us with revenues but its primary focus is customer retention and just serving our community. So, this is definitely one aspect where crowdfunding can be used by banks.

Another respondent described their choice of donation-based crowdfunding by similar motives, also adding that the current platform works as a proving ground for possible future incarnations of crowdfunding:

It is a platform that is basically only donation-based crowdfunding, and it's focusing on associations and individuals that collect money for their association, for welfare projects or sponsoring engagements. We use that basically as a first entry into the sponsoring, into the crowdfunding area, in order to learn, to have a look how these develop, before we go into fully business related crowdfunding platform, like lending- or equity-based crowdfunding. (Head of Marketing at a Swiss bank)

It is evident that donation-based crowdfunding serves as a less risky platform for initial crowdfunding endeavors. This way, banks can refine their online platform and its functionality without excessive reputational risks arising from potential monetary losses faced by investors. The donation-based model can serve as a first entry into the crowdfunding, of which banks can learn and observe how the rest of the market develops. The model of the Swiss banks is offered locally with each individual bank having their own charitable projects targeted for their local customers.

4.4.2 Equity-Based Crowdfunding

Equity-based crowdfunding is well suited for ventures that require large amounts of capital and for businesses that are seeking to grow without excessive financial stress, imposed by loan repayments and interest payments. An interviewee saw equity crowdfunding as a potential channel for customer retention:

Starting an equity-based platform can be a good idea if you want to tackle the whole startup market, if you're looking for contacts with startup companies. Maybe you decided at the bank that it's important to grow your business customers for tomorrow, so you want to put greater effort into dealing with startup companies that could become very viable business customers for your whole product range. Therefore, it could also be a good idea to engage in equity-based crowdfunding. (Senior Consultant at a German bank)

One of the respondents elaborated the use of equity-based instruments by the capital need of startups. He justified this by the structure of the balance sheets

of startups and their inability to use financial leverage due to a lack of equity. He explained how startups might strengthen their balance sheets to complete a project:

Startup might have a good idea for which they need some amount of equity. After acquiring equity, a startup could apply for a loan of the same amount and thus balance the structure of their balance sheet. (Head of Capital Markets at a Finnish bank)

Equity-based crowdfunding offers investors a way to diversify their portfolios over traditional financial instruments. As one of the interviewees elucidated:

This is the only new investment area that wasn't available to private investors before. Because with startup companies, it was really difficult to invest into startup companies. And most of the companies that use equity based crowdfunding are startup companies. Not all of them, but most of them are. So, for them it's a new channel to gather funds for their companies, and for investors it's a new asset class really. So, before you couldn't invest into venture capital funds, but now you can pick specific companies that appear interesting to you where you're sure that this is really the product of the future. So, for investors crowdfunding provides them with a larger variety of assets they can invest in. (Senior Consultant at a German bank)

Regarding the investor risk involved with equity-based crowdfunding, he expressed concerns of adequate investor protection. The risks he mentioned were related to the expertise required to make equity investments, which is often not possessed by less experienced investors. He detailed that the less experienced investors might not possess the necessary abilities required to diversify their portfolios efficiently:

It's often an investment of affection and love rather than of economic sense [...] So, for this reason I believe it's good if even less experienced investors invest in a startup company, but looking at the return on investment overall diversification is really important. And less experienced investors don't have the experience that is necessary to spread their investments across for example, debt-based project in combination with some equity-based ones. (Senior Consultant at a German bank)

One of the respondents found equity-instruments more interesting asset class for the investors:

I would say that, from investor's perspective, equity is more interesting. Of course, it depends on the enterprises available. For example, an IT firm, which wants to expand its operations, but doesn't have any collateral or capital to obtain collateral loans, could still be a good, healthy firm to invest in. With loans, the rating process should be completely different and it's hard to think that this type of loans could be issued with reasonable interest levels, which the firm could also accept. Then again, with equity, there is always a certain "lottery win" opportunity, which doesn't exist with loans. (Product Manager at a Finnish bank)

An interviewee expressed concern over the due diligence side of equity-based crowdfunding:

Evaluating start-up companies is quite difficult because all traditional, like discounted cash flow models you can't really apply it, it's really something that you need to practice. And this is something where experienced angel investors are, they seek companies that are really good, the people, speaking to the people, of course also

looking at the business plan, the feasibility of certain assumptions that the founders have made. This is something that can't be done by looking at an online profile on an equity-based crowdfunding platform. (Senior Consultant at a German bank)

Equity-based crowdfunding would allow investors an early access to startup companies, which are traditionally inaccessible for small investors. The most significant challenge in equity-based crowdfunding comes from banks' lack of expertise in issuing of equity-instruments. An interviewee emphasized banks' lack of experience in equity-instruments and deemed it necessary to recruit experts for banks to facilitate equity-based crowdfunding.

4.4.3 Lending-based Crowdfunding

The most prominent reasoning among the respondents for the use of loan based instruments in crowdfunding was its similarity with regular bank loans and current competences possessed by banks. One of the respondents described the benefits of lending-based crowdfunding:

We would probably start with lending, because that's our core business. That's where we feel at ease. It would probably be easier for us to enter these markets. And then secondly, hopefully (there is) slightly less risk involved on the lending side. If you go into startup equity financing, then it's obviously high risk, high return. And this is not really the culture we're having in the bank. So, there would be, a slightly more reputational risk, because obviously 90% of the startups will fail, so we'll lose the money and it's not really comparable with our (current) case. Our key story to the clients is always, our bank is safe, our investments are worth doing and are safe. So, it would be a bit of a conflict. (Head of Marketing at a Swiss bank)

Another respondent expressed similar advantages of a lending-based model, and additionally, highlighted the risks of providing equity instruments for SMEs:

As a bank, we are in the business of providing loans and have been doing so for over a hundred years and our models and structures are built on the basis of providing loans. So, it is easier to incorporate and to start off with. Doing equity would be a completely new ball game for us. Especially for SMEs and everything. (Business Manager at a Dutch bank)

The Dutch bank is already piloting a small-scale lending-based crowdfunding platform by offering to invest a minimum of 50 percent to each loan and collecting the remaining amount from their private banking clients. The minimum investment sum is 100 000 euros. In this model the investors share the collateral, the profits and in case of a default, the losses. The results of the pilot will be shared with Dutch lawmakers and supervisory instances. He further reflected their current model against a pure crowdfunding model as such:

By doing it all by ourselves we know at least, what kind of risk we incorporate. Especially for the smaller tickets, if you have a loan of like 500 000 and you're with three parties at the table and you're trying to get a club deal or a syndicated loan, it takes too much arrangements. We try to build a model where we do all the arrangements pre-modeled and straightforward towards our SME clients but we find on the back-

side of the bank, we find participants who want to participate on a loan by loan basis. (Business Manager at a Dutch bank)

The representative of a German bank justified the application of a lending-based model by the potential revenue generation and the existing expertise of banks:

If you want to create business volume and revenue, I believe debt-based crowdfunding is the way to go for bank entering the market, because loans are really where the bank has expertise and that's the turf they know. So, also in terms of credit rating, risk assessment, that's home turf and that's where they have experience. And they can use that, if they want to build up the crowdfunding platform. (Senior Consultant at a German bank)

An interviewee illustrated the benefits of debt-based instruments to equity instruments:

Loans can be more suiting for banks in a sense that there is a due date and a coupon, which can be paid monthly. This ensures that you can get a hold of the company at an early stage in case the firm faces problems. With stocks, you cannot necessarily get a hold of the company until it's too late as the stock is the first one to burn. (Head of Capital Markets at a Finnish bank)

Nevertheless, he also saw problems with debt-based crowdfunding instruments:

With loans, the rating process should be completely different and it's hard to think that this type of loans could be issued with reasonable interest levels, which could also be accepted by the firm. (Head of Capital Markets at a Finnish bank)

His comment reflects the lack of technology, which could facilitate the automated rating processes in banks which are fundamental for providing quick and effortless lending processes for enterprises seeking for finance. Nonetheless, lending-based crowdfunding possesses similar qualities to traditional loans, of which banks are familiar with and could be more easily implemented by banks than equity-instruments.

4.5 Operational Model

The choice of an operational model for crowdfunding cannot be seen unequivocal. The design is highly dependent on the individual objectives of banks and how they perceive the fit of crowdfunding with their current operations. A respondent illustrated the reasoning behind the choice of a design for crowdfunding:

I would say, that it is naturally a question of business strategy and it depends on how you design the business; what is your business plan and how you perceive its role in serving your clients and the bank's business in general. (Ministerial Adviser at Financial Markets Department in the Ministry of Finance of Finland)

Regarding the design of the crowdfunding platform, he identified three conceivable models with their individual characteristics, which banks could utilize:

[...] either you practice it (crowdfunding) as part of your banking operations where some of the regulations of the Crowdfunding Act are applicable, but then again, you must also take into consideration the vast palette of legislation imposed on credit institutions, which remains in the background. Also, what restricts a bank to establish a subsidiary, through which it would only provide crowdfunding? In this case, it would be the subsidiary that solely practices crowdfunding, which would be separated there and would be considered only as a provider of crowdfunding. Another approach for banks would be to collaborate with existing crowdfunding platforms, which we have already seen in the market. (Ministerial Adviser at Financial Markets Department in the Ministry of Finance of Finland)

The three models are presented below, commencing with the examination of the integrated model, followed by the subsidiary approach and concluded with an analysis of a cooperation with a crowdfunding platform.

4.5.1 An Integrated model

As stated previously by the representative of the Ministry of Finance of Finland, the choice of platform design is highly dependent on the individual business strategies of banks. Constructing crowdfunding internally can be justified by a desire to have full control over the platform. However, there are a few hindrances of having an internal design. First, based on the responses of the Finnish Ministerial Adviser, the regulation in Finland is far more rigid for an internal model, as it is mostly treated under the regular bank regulation. Second, retrieving the necessary competences within a bank may prove out to be challenging. One of the respondents commented the internal approach as follows:

In a way, it's about what you're looking to achieve. The easiest way is to build it with a partner, but then again if you want more influence on the way it turns out or who's coming there, then an internal platform might be the way to proceed. However, only a few banks might have the ability to build it from scratch. In that sense, having a partner or collaborating with someone can be somewhat appealing. (Business Development Manager at a Finnish bank)

One respondent detailed the risks of banks constructing crowdfunding internally by stating:

You have to be really careful there, especially coming back to the reputation point, if I as a bank build up such a platform, the least thing I want to have is an unsatisfied investor, who later goes to the media and says: well, the consulting process was terrible, they didn't tell me how risky it was and I was able to invest into those loans and now all my money is gone. You don't want that. So, I'm skeptical that it's a good idea for a bank to do it all themselves, so I would prefer a cooperative approach. (Senior Consultant at a German bank)

To summarize, internal model does allow banks to design the business freely, without the involvement of external partners. However, banks rarely possess adequate resources to provide the whole crowdfunding ecosystem. Additionally, in Finland, the regulation for providing crowdfunding as part of bank's cur-

rent operations is far more regulated in comparison to individual crowdfunding platforms.

4.5.2 Providing Crowdfunding Through a Subsidiary

The Ministerial Adviser suggest that the use of an external platform for providing crowdfunding can be justified by lighter regulation and outsourcing of risks, compared to an internal structure. He described the use of a subsidiary in Finland from the legislative perspective:

If I think of the lightest possible structure for a financing institution or for a credit institution, also from a risk perspective, then a subsidiary would seem like a reasonable choice. The risks would be allocated there and of course the reputational risk will still be there, but somehow it would seem like a viable option. Of course, I understand that banks, also in Finland, have aimed at reducing subsidiaries from their previous structures and transfer majority of their businesses in different units under the main activities. This is also possible, but then again, you must accept that, in many parts, it (crowdfunding) is viewed as a regular banking operation and building these, type of "Chinese walls" can be quite difficult and will lead to major questions of interpretation. Thus, my view is, that if you consider this from the risk perspective, a subsidiary could be the smartest choice. (Ministerial Adviser at Financial Markets Department in the Ministry of Finance of Finland)

The subsidiary model is relevant especially in Finland, as the Finnish Crowdfunding Act came into effect in September 2016. The new regulation clarifies the rules for crowdfunding platforms and alleviates the conditions for the platforms. The Ministerial Adviser further concluded the stance adopted by the Ministry of Finance:

In principle, banks will abide the regulation imposed on credit institutions, which in many ways is quite a lot stricter than the current Crowdfunding Act. If a bank wants to concentrate on this (crowdfunding), then setting up a subsidiary will definitely be a viable option. (Ministerial Adviser at Financial Markets Department in the Ministry of Finance of Finland)

From banks perspective, as mentioned by the Ministerial Adviser, the regular banking regulation is applied to crowdfunding, if facilitated as a division of current banking operations. However, if a bank would set up an independent subsidiary, which would function for the sole purpose of providing crowdfunding, the regulatory requirements would be much less restrictive as it would be treated under the recently introduced Crowdfunding Act.

4.5.3 Cooperation with an Existing Platform

A couple of different cooperative models came up in the interviews. Essentially the models were to build a platform together with an existing crowdfunding platform or to partner with a platform by directing customers to the platforms without an active part in the process. One of the respondents detailed the potential of a cooperative model by stating:

I believe that some type of a modular, flexible platform, with the capability of adding new functionalities to the current (banking) system might be the best way to move on from bank's perspective. Banks are used to being attached to these big "mastodon systems", which have remained practically the same for the last 20 to 30 years, and it is common knowledge how hard it is to develop them. For these reasons, this type of modular system, which could be integrated to our internet banking or internet application, might be the smartest way to proceed with. (Head of Capital Markets at a Finnish bank)

The representative of a Dutch bank explained the benefits of cooperating with crowdfunding platforms:

[...] we foresee that, because of capital pressure on our side, it will be beneficiary to work together with crowdfunding platforms. It's a way to get higher risk loans for SMEs, so cooperation with them would be nice. (Business Manager at a Dutch bank)

He further continued about the cooperation with existing platforms, while describing the experienced downsides of crowdfunding platforms and the issues regarding the founding of a proprietary platform within the bank:

They are small and they can have fast adjustments to their processes and everything. You can put some reputational risk to the side. We think the time is not right (for our own platform). We have our ongoing business to run and banks can always acquire these businesses. There's no need to start evolving them ourselves right now. But we do keep in close contact with the few, like the three we collaborate with. As of now, they are too small, there are too many risks, and the market isn't mature yet. You don't know the results in the long run. They all have difficulties with their business models. For us, as a bank, there is a lot of pressure on our costs that our clients have to pay and with crowdfunding platforms, there are a lot of issues around the costs involved. If we should be behind this, it would come back to us. So, the market is not ready for a bank to have a large crowdfunding platform. (Business Manager at a Dutch bank)

When asked about the choice of an optimal design for the platform, the representative of a German bank responded regarding the choice between an internal and an external platform:

Well, I think something in between. If I want to build up my own platform, then it's probably not a good idea to cooperate with a later competitor. Then, I would rather do a cooperative approach from the beginning and not even try to build my own platform. On the other hand, I would definitely not do it all by myself, because with online platforms, banks don't do too well. They don't have too much experience there when it comes to usability and customer interaction in an online space. Obviously, it depends on the bank, but for our group for example, we are really good with the customers in the local branches, the personal contact. So, I would definitely recruit some help, or people who've built up online platforms and markets before. (Senior Consultant at a German bank)

He also added a comment on the benefits of collaboration in equity-based crowdfunding:

My theory is, it would be a good idea maybe to do that (equity-based crowdfunding) together with other companies or even other banks, and not necessarily alone because you will have difficulty to get the good startups. Especially with equity-based startups, the market is probably even more narrow than with loans and debt-based crowdfunding. Because, there are only that many good startups out there and there

is a big competition, from a funding perspective. If you're really good (startup) and you have a good team, you have good connections, well you will get venture capital. You will be able to bootstrap as you want to, depending on what you want to do. So, it's not necessarily that all the startups are just waiting to finally have another equity-based crowdfunding platform. (Senior Consultant at a German bank)

Cooperating with an existing platform could help banks acquire the necessary competences to provide crowdfunding, either by arm's length collaboration or by business acquisitions. Additionally, it is crucial, especially when embarking into equity crowdfunding, that the finance provider can solicit good companies to their platform. Thus, a cooperative approach can further assist banks to attract good enterprises on their platform and provide capabilities in conducting proper assessments of the companies.

4.6 Regulation

The crowdfunding legislation in Europe is tied to country specific legislation as there is no harmonized legislative framework in Europe. In some countries, existing regulation of traditional financial instruments is applied to crowdfunding instruments. Due to the distinctive nature of crowdfunding, this approach may cause somewhat peculiar interpretations and rigorous processes for enterprises. Therefore, the market has expressed the need for a specific regulation of crowdfunding instruments. The representative of the Finnish Ministry of Finance detailed the objectives behind the drafting process of the Finnish Crowdfunding Act and elaborated the bank specific limitations from the legislative perspective:

After the Crowdfunding Act, our objective has been to ensure that the lighter legislation would also be applicable to credit institutions, with certain limitations so that banks can enter the market as well. Then again, you must remember that bank is a bank, certain stricter disclosure obligations and capital adequacy requirements are imposed on credit institutions, which cannot be circumvented by national legislation. All in all, the Crowdfunding Act enables banks to practice crowdfunding and it can be designed in multiple ways. (Ministerial Adviser at Financial Markets Department in the Ministry of Finance of Finland)

The regulation poses some restrictions for crowdfunding platforms in regards of trading securities. Individual platforms can intermediate tradable securities, such as stocks and bonds, only to a counterparty with a banking license. From Finnish banks' perspective, which already have acquired the banking license, this could provide a unique advantage in creating an aftermarket for crowdfunding instruments. A respondent detailed this accordingly:

When you have the banking license, you have more obligations and a slightly heavier process. Then again, you also have considerably broader authority in designing crowdfunding. Thus, you also benefit quite substantially from the license and can operate more freely. (Ministerial Adviser at Financial Markets Department in the Ministry of Finance of Finland)

According to the representative of the Swiss bank, the regulation for starting a platform is relatively light and even less strict for financial institutions. As he put it:

It's easier if you're a bank, because you need to have an okay from the financial authority to start that platform. And we as a bank, we inherently already have these approvals from the authorities to do our banking services. (Head of Marketing at a Swiss bank)

The Swiss regulation on donation and rewards-based crowdfunding instruments is essentially not regulated. The equity and debt-based instruments on the other hand, are widely regulated by law. Dutch regulation is still evolving as the market keeps maturing. The business manager of the Dutch bank explained the stance taken by the regulators:

As for now, they see the crowdfunding market evolve over time, and they don't want to put regulatory framework in place and therefore stop innovation and development of the market. They do have rolled the given rules about normal investments and they don't quite match the crowdfunding issues but they are easy to give out a waiver so the platforms can still operate. (Business Manager at a Dutch bank)

The crowdfunding regulation is evolving along with the development of the market. No harmonized EU-level regulation exists, which is problematic for cross-border activities to operate efficiently. The Ministerial Adviser noted that, even if crowdfunding intermediaries possess a banking license, which allows them to operate in Europe, there are still some rigidities, which are hindering cross-border operations. However, as a silver lining, he added that the European Commission is actively monitoring the development of the market, despite their current stance not deeming a European level regulation necessary.

5 DISCUSSION

This thesis set out to examine three separate research problems. First research question focused on the examination of banks' motivations to enter the crowdfunding industry, the overall attitude towards the development of financial industry and the willingness to adopt novel financial technologies. Research questions 2 and 3 delved into the design of the crowdfunding service by examining the optimal crowdfunding instrument for banks and the business design, respectively.

The results illustrate the existence of several crowdfunding practices in different banks across Europe. The crowdfunding approach of each bank is highly dependent on the individual business strategy and the perceived impact of crowdfunding to the financial industry. All respondents emphasized the immaturity and distinctive quality of the market which is exhibited by the various approaches taken by banks towards the phenomenon. Despite the justifications made by the interviewees regarding the adoption of crowdfunding, there seemed to be a lack of clarity concerning the direction and place of crowdfunding in their business models. The respondents justified the adoption of crowdfunding by image benefits, as an adjustment to shifting consumer demands and as a means of adapting to the digitalization. These are quintessential issues in adjusting to the transforming operational environment, but have a vague quality to them. This type of rationale deems the development of crowdfunding as a secondary objective, opposed to considering it as a standalone business opportunity.

There are multiple aspects that justify the incorporation of crowdfunding into the banking environment. One of the most fundamental contributions of crowdfunding is its ability to narrow the funding gap of risky ventures which cannot be served efficiently by banks due to strict regulatory constraints (Haas et al. 2015, 2.). The results indicate similar motivations, as all respondents acknowledged banks' inability to cater this segment due to tightened capital adequacy requirements. The respondents highlighted crowdfunding's potential to widen their customer base and to help serve their current customers more

efficiently. The restricted financing has been one contributor to the increasing success of crowdfunding (Belleflamme et al. 2014, 586.).

Another implication for the application of crowdfunding is the technological aspect. Crowdfunding can provide banks the proving ground in their first forays towards Internet-based platforms and a podium to evolve their current processes towards the digital age. In their research, Haas et al. (2015) recognize the rising popularity of innovative Fintech newcomers as a major force, pushing banks to develop their own IT-driven business models and products, challenging the prevailing dominance of traditional financial institutions. Liebenau, Elaluf-Calderwood & Bonina (2014) emphasize the increasing pressure of providing digital services over newer platforms, which is enforced by customers who are accustomed to online services. One of the respondents elaborated banks' rigorous application processes, which in some cases can eliminate potential customers from applying loans from traditional funding channels (Green 2014, 8.). Current lending process of banks still contains time-consuming manual labor, which alternative finance providers have been able to minimize significantly. The adoption of automatized rating and application processes can be justified by reduced transaction costs and provision of quicker, more efficient service offerings. As derived from Williamson (1985) transactional efficiency stems from adapting processes to technology variations, consumer demand and market structure. This is also in line with the findings of Haas et al. (2015). They conclude that banks have become increasingly aware of the disruptive potential of crowdfunding as it represents a novel way of financing projects or companies, involving a diverse crowd of private capital givers over the Internet, and is also considered more transparent, easy and democratic way of funding compared to banks.

There are also immaterial motivations for banks to enter the crowdfunding market. Alongside the profitable exploitation of the market segment, crowdfunding should provide positive image effects for the bank regarding its innovativeness and digital leadership (Haas et al. 2015, 6.). A respondent saw crowdfunding as a way to improve the overall image of banks, which is often deemed as undeveloped and dated. A report conducted by EY (2016) supports this view, as customers perceive banks being behind the curve in the development of the financial industry.

The reputational risks and regulative constraints were perceived as the key issues for banks to enter the crowdfunding market. All interviewees considered the reputational risk as a major obstacle in the adoption of crowdfunding. Walter (2006) defines reputational risk as a risk of loss in the value of a firm's business franchise that extends outside event-related accounting losses and is further reflected in a decline in its share performance metrics. (Walter 2006, 3.). Reputational losses can be avoided to a certain extent by providing crowdfunding under a different label. Nevertheless, respondents did not consider another label completely impervious to reputational effects. The reputational risks can be seen as a major factor to the decision of banks commencing with donation-based platforms. Donation-based crowdfunding is more likely to

create positive image effects as there are no financial rewards or losses involved with the model.

The results on the optimal form of crowdfunding turned out relatively disperse. The donation-based crowdfunding was seen to offer image and charitable benefits for banks. Several implementations of the donation model have already been put into practice in several banks. The monetary models divided the respondents' opinions more drastically. Equity-based crowdfunding was perceived as a relatively risky instrument for banks for a couple of reasons. First, the required competence for rating startups and unlisted companies may be outside the core expertise of banks. Second, the risks involved are quite significant for the investors, which should be communicated with a strong emphasis in the marketing phase. On the other hand, equity crowdfunding was perceived as a channel to tackle the whole crowdfunding market, which could function as a means of customer retention. Equity-based crowdfunding was also seen as an exciting instrument for the investors as the profits are conversely higher with successful ventures. Furthermore, equity-crowdfunding opens a new market for small investors and provides exposure to early-stage financing, as startup investments have traditionally been available only for business angels and venture capitalists.

The lending-based instruments were seen to bear a closer resemblance with banks current offerings and competences. It was also considered less risky than equity instruments, with higher transparency and lower information asymmetries. Banks already possess large quantities of data, which could be translated to the crowdfunding process. Moreover, as lending represents the largest share of the crowdfunding market, it could create larger business volume and revenues for banks. However, the transaction costs of banks' current processes are overly high compared to the automatized processes of crowdfunding platforms and unsuited for the provision of numerous small investments.

The results revealed that among the respondent's banks crowdfunding is either built as part of the banks' operations or conducted in cooperation with crowdfunding platforms. The choice of a particular design depends on the business strategy and how the business is designed. The use of an internal model for crowdfunding can be rationalized by the possession of full control of the service, but it may be too far away from banks' current competences. Majority of the respondents viewed the partnership model as the easiest way to commence crowdfunding. This viewpoint is supported by the research conducted by Haas et al. (2015), where they argue that a modular design enables a bank to utilize crowdfunding. In their model, traditional financial services are provided by a bank, while disruptive services are facilitated by an external partner. The inclusion of an outside partner could also resolve the informational problems of rating startups and early-stage enterprises, which is not the core expertise of banks. Building a platform as part of bank's operations could prove out to be a challenge due to a lack of competence regarding crowdfunding. The partnership approach can also be justified by the theory of resource-

based view where resources are considered as the key component in the formation of company's strategy (Grant 1991, 115.). Whereas, banks do not possess the required resources for providing disruptive functions, a partnership model would allow them to acquire these functions from an external partner.

From the Finnish legislative perspective, constructing crowdfunding within a bank is subject to more rigorous bank regulation. The results retrieved from the representative of Finnish Ministry of Finance indicate that some of the regulation can be circumvented by setting up a subsidiary for crowdfunding. This model could prove out to be functional in Finland, where a subsidiary would enable the treatment of crowdfunding under the less regulated Crowdfunding Act, as opposed to tight bank regulation. As of 2017, no harmonized legislation in Europe exists, which can hinder the opportunities of setting up crowdfunding activities encompassing multiple regions.

6 CONCLUSIONS

This paper offers an overview of the approaches taken by different banks towards crowdfunding. Overall, the thesis succeeded in providing a vast outline of the impressions of banking professionals on crowdfunding. Despite, not offering exhaustive results or strict guidelines on how to construct crowdfunding within a bank, this paper illustrates the several approaches of different banks and the reasoning behind their views of the immature market. The research succeeded in producing new information and helped to understand a relatively new phenomenon. The objectives of the field research were reached by constructing early, exploratory examination of a new phenomenon, which included the broader set of questions proposed by Benbasat et al. (1987) of *why*, in addition to *what* and *how*.

As showcased by the results, it is evident that crowdfunding is still gaining momentum in the banking industry and the implementations vary largely. One of the core reasons for the wait-and-see approach of banks is the immaturity of the market, which is causing banks to examine the market with caution. The profits and defaults have not yet been realized and it is interesting to see how the market develops over time. While the crowdfunding industry is still at its infancy, banks should prepare themselves by reviewing their current resources and capabilities against the functions required to provide crowdfunding. Grant's (1991) framework (FIGURE 5) could offer a standardized model for the analysis of banks current resources, and their suitability for the provision of each crowdfunding instrument. As indicated by the financial intermediation theory and the research conducted by Haas et al. (2014), the alleviation of transaction costs and asymmetric information is the central role of financial intermediaries, which supports the development of the current processes.

Derived from this, it would be highly fascinating to examine the results of a syndicated approach in providing equity crowdfunding in the banking industry. A dedicated model of a cooperation between banks, venture capital funds and crowdinvestors could possibly alleviate the transaction costs for banks, while reducing the prevalence of asymmetric information for the investors, as the vetting would be performed by venture capital experts of this field. As pre-

sented in the syndicates chapter of this paper, syndicated crowdfunding deals have proven to be more successful than their regular equity-based crowdfunding counterparts. Thus, the use of professional investors could reduce market failures caused by information asymmetry by transferring the focal investment activities of the crowd from the startups to professional investors (Agrawal & al. 2016, 1.). In addition, the banks involvement in the financing process would be an interesting area to scrutinize by examining if banks and VC funds could provide a base sum for crowdfunded enterprises to further solicit investors, and help fund-seeking agents in fulfilling their funding targets.

Crowdfunding will surely be subject to numerous studies as the market further evolves and the market data becomes available. It is interesting to see whether crowdfunding will pose a serious threat to banks, or will it prove to be just another trend among a slew of financial innovations.

REFERENCES

- Agrawal, A., Catalini, C. & Goldfarb, A. (2014). Crowdfunding: Geography, Social Networks, and the Timing of Investment Decisions (Working Paper). Retrieved July 20, 2014, from http://www.catalini.com/s/Crowdfunding_Geography_Social_Networks_2014_05_27.pdf
- Agrawal, A., Catalini, C. & Goldfarb, A. (2014). Some Simple Economics of Crowdfunding. *Innovation Policy and the Economy*, 14(1), pp. 63-97.
- Agrawal, A., Catalini, C. & Goldfarb, A. (2016). Are Syndicates the Killer App of Equity Crowdfunding? *California Management Review*, 58(2), pp. 111-124.
- Ahlers, G. K. C., Cumming, D., Günther, C. & Schweizer, D. (2015). Signaling in Equity Crowdfunding. *Entrepreneurship Theory and Practice*, 39(4), pp. 955-980.
- Akerlof, G.A. (1970). The Market for Lemons: Quality Uncertainty and the Market Mechanism. *Quarterly Journal of Economics*, Vol. 84 (1970), pp. 488-500.
- Belleflamme, P. & Lambert, T. (2014). Crowdfunding: some empirical findings and microeconomic underpinnings (SSRN Working Paper No. 2437786). Retrieved June 20, 2014, from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2437786
- Belleflamme, P., Lambert, T. & Schwienbacher, A. (2013a). Crowdfunding: Tapping the right crowd. *Journal of Business Venturing*, 29(5). doi:10.1016/j.jbusvent.2013.07.003
- Belleflamme, P., Lambert, T. & Schwienbacher, A. (2013b). Individual Crowdfunding Practices. *Venture Capital*, 15(4), 313-333. doi:10.1080/13691066.2013.785151
- Belleflamme, P., Lambert, T. & Schwienbacher, A. (2010). Crowdfunding: An Industrial Organization Perspective. Prepared for the Workshop Digital Business Models: Understanding Strategies, Held in Paris on June 2010. Retrieved from http://economix.fr/pdf/workshops/2010_dbm/Belleflamme_al.pdf
- Belleflamme, P., Omrani, N. & Peitz, M. (2015). The Economics of Crowdfunding Platforms. *Information Economics and Policy*, 33, pp. 11-28. Retrieved from http://ac.els-cdn.com/S0167624515000463/1-s2.0-S0167624515000463-main.pdf?_tid=3603db38-deeb-11e6-bffa-00000aacb361&acdnat=1484901428_ac41fa131e3d95278e720ec60198f069
- Benston, G. & Smith, C. (1976). A Transactions Cost Approach to the Theory of Financial Intermediation. *The Journal of Finance*, 31(2), 215-231. doi:10.2307/2326596
- Berger, A. N. & Udell, G. F. (1998). The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking & Finance*, 22, 613- 673. doi:10.1016/S0378-4266(98)00038-7

- Bessière, V. & Stéphany, E. (2014). Le financement par crowdfunding: Quelles spécificités pour l'évaluation des entreprises ? *Revue Française de Gestion*, 242, pp. 149-161,165.
- Böhmman, T. & Krcmar, H. 2006. "Modulare Servicearchitekturen," in *Service Engineering*, H.-J.
- Chandler, A.D. (1990), *Scale and Scope, The Dynamics of Industrial Capitalism*, The Belknap Press of Harvard University Press, Cambridge, Massachusetts, London, England.
- Chen, N., Ghosh, A. & Lambert, N. S. (2013). Auctions for social lending: A theoretical analysis. *Games and Economic Behavior*, 1, 1-25. doi:10.1016/j.geb.2013.05.004*
- Coase, R. (1937). "The Nature of the Firm," *Economica*, N.S., 4(16): 386-405. Reprinted in "The Nature of the Firm: Origins, Evolution, Development," 1991, ed. Oliver E. Williamson and Sidney Winter, pp. 18-33. New York: Oxford University Press.
- Collins, L. & Pierrakis, Y. (2012). The venTure Crowd. NESTA, (July). Retrieved from <http://www.thesoholoft.com/wp-content/uploads/2012/07/TheVentureCrowd.pdf>
- Connelly, B.L., Certo, S.T., Ireland, R.D., & Reutzel, C.R. (2011). Signaling theory: A review and assessment. *Journal of Management*, 37, 39-67.
- CrowdfundingHub (2016): Current State of Crowdfunding in Europe. An Overview of the Crowdfunding Industry in more than 25 Countries: Trends Volumes & Regulations. Retrieved from: <http://www.crowdfundinghub.eu/the-current-state-of-crowdfunding-in-europe/>
- Cumming, D. J., Leboeuf, G. & Schwienbacher, A. 2014. "Crowdfunding Models: Keep-It-All Vs. All-OrNothing," retrieved September 7, 2016, from https://www.eurofidai.org/Schwienbacher_2014.pdf.
- De Buysere, K., Gajda, O., Kleverlaan, R. & Marom, D. (2012). A framework for European crowdfunding. European Crowdfunding Network (ECN), available at www.europecrowdfunding.org/european_crowdfunding_framework (2012).
- Deakins, D. & Freel, M. (2003), *Entrepreneurship and Small Firms*, McGraw-Hill Education, Maidenhead.
- Dehoratius, N. (2011). Field research in operations and supply chain management. *Journal of Operations Management*, 29(5), pp. 371-375.
- Diamond, D. (1984). Financial Intermediation and Delegated Monitoring. *The Review of Economic Studies*, 51(3), 393-414. Retrieved from <http://www.jstor.org.ezproxy.jyu.fi/stable/2297430>
- Edmondson, A. C. (2007). Methodological Fit in Management Field Research. *The Academy of Management Review*, 32(4), pp. 1155-1179.
- Estellés-Arolas, E. 2012. Towards an Integrated Crowdsourcing Definition. *Journal of Information Science* 38 (2), 189-200.
- EY (2016). The Relevance Challenge: What Banks Need to Must Do to Remain in the Game. Retrieved from

- [http://www.ey.com/Publication/vwLUAssets/ey-the-relevance-challenge/\\$FILE/ey-the-relevance-challenge-2016.pdf](http://www.ey.com/Publication/vwLUAssets/ey-the-relevance-challenge/$FILE/ey-the-relevance-challenge-2016.pdf)
- Freedman, S. & Jin, G. (2008). Do social networks solve information problems for peer-to-peer lending? Evidence from prosper. com (NET Institute Working Paper No. 08-4). Retrieved April 10, 2013, from <http://www.nsd.edu.cn/cn/userfiles/Other/2010-05/2010050714211151671581.pdf>
- Freedman, S. & Jin, G. (2014). The Signaling Value of Online Social Networks: Lessons from Peer-to-Peer Lending (NBER Working Paper No. 19820). Retrieved May 15, 2014, from <http://www.nber.org/papers/w19820>
- Garmaise, M. (2001). Informed Investors and the Financing of Entrepreneurial Projects, Working Paper, University of Chicago Graduate School of Business.
- Giudici, G., Guerini, M. & Rossi-Lamastra, C. (2013). Why Crowdfunding Projects can Succeed: The Role of Proponents' Individual and Territorial Social Capital (SSRN Working Paper No 2255944). Retrieved April 29, 2013, from <http://ssrn.com/abstract=2255944>
- Giudici, G., Nava, R., Rossi Lamastra, C. & Verecondo, C. (2012). Crowdfunding: The New Frontier for Financing Entrepreneurship? (SSRN Working Paper No 2157429). Retrieved March 20, 2013, from <http://ssrn.com/abstract=2157429>
- Granovetter, M. (1998). Coase Revisited: Business Groups in the Modern Economy, in Dosi, G., D.J. Teece and J. Chytry, (eds.) (1998), *Technology, Organization and Competitiveness, Perspectives on Industrial and Corporate Change*, Oxford University Press.
- Grant, R. M. (1991). The resource-based theory of competitive advantage: Implications for strategy formulation. *California Management Review*, 33(3), p. 114.
- Green, C. H. (2014). *Banker's guide to new small business finance: Venture deals, crowdfunding, private equity, and technology*. Hoboken, New Jersey: Wiley.
- Haas, P., Blohm, I. & Leimeister, J. M. (2014). "An Empirical Taxonomy of Crowdfunding Intermediaries," International Conference on Information Systems (ICIS), Auckland, New Zealand.
- Haas, P., Blohm, I., Peters, C. & Leimeister, J. M. (2015). "Modularization of Crowdfunding Services - Designing Disruptive Innovations in the Banking Industry," in: 36th. International Conference on Information Systems (ICIS). Fort Worth, USA.
- Haas, P., Blohm, I., Peters, C., Leimeister, J. M. & Jakob, T. (2016). "Managing Disruptive Innovation through Service Systems - The Case of Crowdlending in the Banking Industry," International Conference on Information Systems (ICIS), Dublin, Ireland.
- Harding, R. and Cowling, M. (2006), "Points of view: assessing the scale of the equity gap", *Journal of Small Business and Enterprise Development*, Vol. 13 No. 1, pp. 115-32.

- Haubrich, J. G. (1989). "Financial Intermediation: Delegated Monitoring and Long-Term Relationships," *Journal of Banking & Finance* (13:1), pp 9-20.
- Hemer, J. (2011). A snapshot on crowdfunding (Working Paper Firms and Region Nr. R2/2011, Fraunhofer ISI). Retrieved April 10, 2013, from <http://www.econstor.eu/handle/10419/52302>
- Hemer, J., Schneider, U., Dornbusch, F. & Frey, S. (2011). *Crowdfunding und andere Formen informeller Mikrofinanzierung in der Projekt-und Innovationsfinanzierung*. Stuttgart, Germany: Fraunhofer Verlag.
- Hornuf, L., & Schwienbacher, A. (2014a). Crowdfunding-Angel Investing for the Masses? *Handbook of Research on Venture Capital: Volume 3. Business Angels*. Retrieved March 1, 2014, from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2401515
- Hulme, M. & Wright, C. (2006). Internet based social lending: Past, present and future. *Social Futures Observatory*, October(2006). Retrieved from http://www.socialfuturesobservatory.co.uk/pdf_download/internetbasedsociallending.pdf
- Hunt, S. (2002), *Foundations of Marketing Theory: Towards a General Theory of Marketing*, Armonk, New York: Sharpe.
- Ingram, C. & Teigland, R. (2013). Crowdfunding among IT entrepreneurs in Sweden: A qualitative study of the funding ecosystem and IT entrepreneurs' adoption of crowdfunding. *Stockholm School of Economics*
- Ingram, C., Teigland, R. & Vaast, E. (2014). Solving the Puzzle of Crowdfunding: Where Technology Affordances and Institutional Entrepreneurship Collide. In *System Sciences (HICSS), 2014 47th Hawaii International Conference On, IEEE.*, 4556-4567. doi:10.2139/ssrn.2285426
- Ketokivi, M. (2014). Renaissance of case research as a scientific method. *Journal of Operations Management*, 32(5), pp. 232-240.
- King, S. (2013). Two-Sided Markets. *Australian Economic Review* [serial online]. June 2013;46(2):247-258. Available from: Business Source Elite, Ipswich, MA. Accessed November 3, 2016.
- Klaebe, H. & Laycock, R. (2012). How to work the crowd: a snapshot of barriers and motivations to crowdfunding. *Artsupport Australia*, July. Retrieved April 10, 2013, from <http://eprints.qut.edu.au/53471>
- Knüpfer, S. & Puttonen, V. (2014). *Moderni Rahoitus*. Talentum Media 2014 7. uud. p.
- Kortleben, H., & Vollmar, B. (2012). Crowdfunding-eine Alternative in der Gründungsfinanzierung? *Forschungspapiere PFH No 2012/06*. Retrieved from <http://www.goettingen.pfh.de/images/stories/pfh/pdf/crowdfunding-eine-alternative-in-der-gruendungsfinanzierung.pdf>
- Leland, H. & Pyle, D (1977). Informational Asymmetries, Financial Structure, and Financial Intermediation. *The Journal of Finance*, Vol. 32, No. 2, Papers and Proceedings of the Thirty-Fifth Annual Meeting of the American Finance Association, Atlantic City, New Jersey, September 16-18, 1976. (May, 1977), pp. 371-387.

- Liebenau, J. M. (2014). Modularity and Network Integration: Emergent Business Models in Banking. *System Sciences (HICSS), 2014 47th Hawaii International Conference on*, pp. 1183-1192.
- Lukkarinen, A., Teich, J., Wallenius, H. & Wallenius, J. (2016). Success drivers of online equity crowdfunding campaigns. *Decision Support Systems*, 87, p. 26.
- Macht S. A. & Robinson J. 2009. Do business angels benefit their investee companies? *International Journal of Entrepreneurial Behaviour & Research* 15: 187-208.
- Macht, S. A. & Weatherston, J. (2014). The Benefits of Online Crowdfunding for Fund-Seeking Business Ventures. *Strat. Change*, 23: 1-14. doi: 10.1002/jsc.1955
- Martínez-cañas, R. (2012). Crowdfunding And Social Networks In The Music Industry : Implications. *International Business & Economics Research Journal*, 11(13), 1471-1476. Retrieved from <http://www.cluteinstitute.com/journals/international-business-economics-research-journal-iber>
- Massolution (2015). Crowdfunding Industry 2015 Report. Retrieved from http://reports.crowdsourcing.org/index.php?route=product/product&product_id=54
- Meinshausen, S., Schiereck, D. & Stimeier, S. (2012). Crowdfunding als Finanzierungsalternative- Innovative Ansätze in der Unternehmensfinanzierung. *WiSt*, 11 (November 2012), 583-588. Retrieved from <http://ideas.repec.org/p/dar/wpaper/59836.html>
- Meredith, J.R., (1993). Theory building through conceptual methods. *Int. J. Oper. Prod. Manage.* 13, 3-11.
- Merton, R.C. 1989. "On the Application of the Continuous-Time Theory of Finance to Financial Intermediation and Insurance," *The Geneva papers on risk and Insurance* (14:52), pp 225-261.
- Meyer, R. & Cuevas, C., (1990). Reducing the Transaction Costs of Financial Intermediation: Theory and Innovations. *Economics and Sociology Occasional Paper No. 1710*.
- Ministry of Finance of Finland (2016). Draft of a Crowdfunding Act. Retrieved from <http://vm.fi/documents/10623/2033991/Hallituksen+esitys+eduskunnalle+joukkorahoituslaiksi+sek%C3%A4+er%C3%A4iksi+siihen+liittyviksi+laeiksi/207e76b1-a44d-4ab1-99d3-ffd1d9bbd015>
- Mitra, D. (2012). The role of crowdfunding in entrepreneurial finance. *Delhi Business Review*, 13(2), 67-72. Retrieved from http://www.delhibusinessreview.org/v_13n2/v13n2g.pdf
- Moritz, A. and Block, J. (2014). Crowdfunding: A Literature Review and Research Directions (August 11, 2014). Available at SSRN: <https://ssrn.com/abstract=2554444> or <http://dx.doi.org/10.2139/ssrn.2554444>
- Moritz, A., Block, J., & Lutz, E. (2014). Investor Communication in Crowdfunding: A Qualitative- Empirical Study (SSRN Working Paper No

- 2462282). Retrieved from [http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2462282*](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2462282)
- Penrose, E. (1959). *The Theory and Growth of the Firm*, Oxford: Oxford University Press, 3rd Edition.
- Salomon, V. (2016). Emergent models of financial intermediation for innovative companies: from venture capital to crowdfunding platforms in Switzerland, *Venture Capital*, 18:1, 21-41,
- Schwiebacher, A. (2014). *Entrepreneurial Risk-Taking in Crowdfunding Campaigns*. Working paper. Available at: <http://ssrn.com/abstract=2506355>.
- Schwiebacher, A. & Larralde, B. (2012). Crowdfunding of Small Entrepreneurial Ventures. In: Cumming D. (Ed) *The Oxford Handbook of Entrepreneurial Finance* (pp. 369–391). New York: Oxford Univ. Press.
- Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics*, 87, 355–374.
- Tomczak, A. & Brem, A. (2013). A conceptualized investment model of crowdfunding. *Venture Capital*, 15(4), 335–359.
- Viitamo, E. (2012). *Productivity as a competitive edge of a service firm: Theoretical analysis and a case study of the Finnish banking industry*. [Espoo]: Aalto University, School of Science.
- Vitale, M. (2013). Crowdfunding: Recent International Developments and Analysis of Its Compatibility with Australia's Existing Regulatory Framework (SSRN Working Paper No 2324573). Retrieved May 15, 2014, from [http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2324573*](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2324573)
- Von Krogh, G., Rossi-Lamastra, C., & Haefliger, S. (2012). Phenomenon-based Research in Management and Organisation Science: When is it Rigorous and Does it Matter? *Long Range Planning*, 45(4), 277–298. doi:10.1016/j.lrp.2012.05.001
- Walter, I. (2006). Reputational risk and conflicts of interest in banking and finance: The evidence so far. <http://archive.nyu.edu/bitstream/2451/27392/2/FIN-06-033.pdf>
- Wardrop, R., Zhang, B., Rau, R. & Gray, M. 2015. *Moving mainstream: The European alternative finance benchmarking report*. London: Wardour.
- Wernerfelt, B. (1984). A Resource-based View of the Firm. *Strategic Management Journal*, 5(2), p. 171.
- Wheat, R. E., Wang, Y., Byrnes, J. E. & Ranganathan, J. (2013). Raising money for scientific research through crowdfunding. *Trends in Ecology & Evolution*, 28(2), 71–2. doi:10.1016/j.tree.2012.11.001*
- Williamson, O.E. (1985), *The Economic Institutions of Capitalism: Firms, Markets and Relational Contracting*, New Your: Free Press.
- Williamson, O. E. (1988). Corporate Finance and Corporate Governance. *Journal of Finance*, 43(3), pp. 567-591.
- Williamson, O.E. (1993). The Logic of Economic Organization, pp. 90-116, in Williamson O.E. and S.G. Winter (eds.) (1993), *The Nature of the Firm*,

Origins, Evolution and Development, New York, Oxford, Oxford University Press.

Wilson, K. & Testoni, M. (2014). Improving the role of equity crowdfunding in Europe's capital markets. *IDEAS Working Paper Series from RePEc*.