Abstract:
In the working paper we examine crowdinvesting as a new way to finance new ventures, which helps to close the early stage equity gap. This way of financing start-ups leaves us some questions: Is crowdinvesting able to finance new ventures in a sustainable way? Which risks and chances come along with it? Is the method able to establish itself as a basic instrument among others in the financing canon? We answer these questions by analyzing the different forms existing in Germany. To define crowdinvesting we first explain the antecedents of it - crowdsourcing and crowdfunding. Then, we present the central crowdinvesting platforms in Germany. Afterwards we discuss the use of crowdinvestment in the venture financing process and compare crowdinvesting with related financing methods. The paper closes with two discussions important for future research: first, the role of motivation and herding behavior and second, the role of trust with regard to the principal-agent problem.

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0. Introduction

The following article deals with the emerging trend of obtaining financial resources to start a company via crowdinvesting. Since the launch of the first platforms in fall 2011, it has become more and more popular among founders, investors, media and government in Germany. The development of other crowdfunding service providers with a broad variety of investment offers also contributed to its popularity. Several new possibilities to finance a business in the early stage emerged, namely various versions of crowdinvesting (see chapter 4.2 and 5), which can help to avoid one of the biggest founding constraints, the lack of seed capital (see Hagen, Metzger & Ullrich, 2012).¹

Crowdinvesting or crowdinvestment² could become a promising financing instrument for complementary use in addition to other classical financing methods like bank loans, money from family and friends, public loans and guarantees, public grants and scholarships, overdrafts and venture capital. Especially for new ventures with a small financial demand and a preference for equity resources, the method can offer a new, easily obtainable way to acquire capital.

In addition, the new financing possibility is appreciated by founders, who had problems funding their business. In 2011, around 16 per cent of the founders who obtained external financial resources said they had problems with the acquisition (Hagen, Metzger & Ullrich, 2012). Besides, the market is narrowed down to Business Angels and Venture Capitalists as main suppliers for founders who have chosen equity as their preferred capital resource.

1. Current Literature

Crowdinvesting is a very new research area for academia. It has been analyzed in the context of research on crowdsourcing and crowdfunding, where it has been addressed by articles, master theses and study works. Few researchers mention crowdinvestment in papers about crowdfunding and crowdsourcing (see for instance Gassmann (2012), Wolfson (2012), Schwienbacher et al. (2010) or Hemer et al. (2011)), while most authors focus on the less explored field of crowdsourcing or crowdfunding (see for example Kappel (2009)). During our literature research we identified one recent study by Klöhn & Hornuf (2012), who examined all of the five existing crowdinvesting platforms under legal perspective. This very detailed work gave us an impression of the complexity and disorder of the market and motivated us for further investigation.

There has also been general research on the motivational aspects in crowdsourcing (see Reichwald and Piller, 2005; Reichwald et al., 2004; Carpenter, 2011) as well as on crowdfunding (Kleemann et al., 2008; Harms, 2006; Hemer et al., 2011). Here, the work of Hemer et al., (2011) can be mentioned

¹ According to a survey of the GfK - the German “Gesellschaft für Konsumforschung” 71 per cent of the participants name the lack of starting capital as one of the main constraints for founding a business. Only 8.2 per cent resp. 24.6 per cent out of the 67 per cent of the founders, who used financial resources for the venture, obtained external financial or external and internal financial resources. See http://de.statista.com/statistik/daten/studie/166750/umfrage/wahrnehmung-von-huerden-in-die-selbststaendigkeit-in-deutschland/ accessed on the 15.01.2013,
² The term Crowdinvestment is also used among practitioners and will be used as a synonym in the following.
as fundamental for research. Hermer et al. (2011) provide a general overview of the German crowdfunding market. Their work contains basic principles, which can also be relevant for crowdinvesting. However, the research on crowdfunding is only partly applicable to the field of crowdinvesting. The great variety of the examined study objects so far prevents from a generalization, while a few patterns can be identified that match crowdinvesting. Furthermore, crowdinvesting uses a different approach compared to crowdfunding regarding the financing method. This difference implies different motivations of the money provider (we are already speaking of investors here), rising possibilities for start-ups considering the amount of acquirable capital, which leads us to the question of opportunities and threats of crowdinvesting.

As a starting point of crowdinvestment research, the work of Schwienbacher et al. (2010) can be mentioned. He and his colleagues were the first European scholars who discussed crowdfunding with main focus on venture financing (see also Lambert et al., 2010; Belleflamme et al., 2010). While we found few works in academia solely discussing crowdinvestment, the daily media, digital media and fact books paid a lot of attention to it. For example, the private institute ikosom (“Institut für Kommunikation in den sozialen Medien”) carried out a survey among all six crowdfunding and crowdinvesting websites between May 2010 and April 2011. The result was the first comprehensive study on German crowdinvestment and crowdfunding platforms (Eisfeld-Reschke et al., 2011).

Besides that, only a few authors solely discuss crowdinvesting in their articles. This is mainly due to three issues: First, the research area is very new compared to others. The first investments in Germany were only made almost two years ago. This implicates less study material which provides fewer opportunities for thorough empirical investigations. Second, the method of crowdinvestment is not popular in every country. For example, it cannot be applied in the U.S. because of regulatory restrictions that are only slowly changing. Even other European countries, for example Poland or Italy, are just discovering new financial possibilities for entrepreneurs. This prompts the question, how important the entrepreneurial culture is for the way in which mass-compatible financing instruments are used. Also the economic welfare plays a vital role in attracting private investors. From the distribution pattern it can be presumed that countries with a high GDP like Switzerland, the Netherlands, Great Britain and Germany are more likely to use crowdinvesting than countries with a smaller overall GDP. Third, the terminology “crowdinvesting” lacks an exact and common definition that would ease the academic classification and research approaches. We will provide a clear definition in the following section.

Apart from the literature in the study field itself, a lot of related literature on mass-psychology can be found. Research has been done on the motivation of participating in charity events, for example by Brady et al. (2002) or Mcclelland (2004). Mass-phenomena have also been analyzed, for instance by Le Bon (2010) or Turner and Killian (1987). Some literature in psychology concentrates on mass-phenomena in the internet. Russ (2007) developed a model on the processes inherent in online crowds, which will be presented later on. Also Surowiecki, (2005) and Wallace (2001) investigated

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3 For example the threshold-pledge system, which is setting a funding limit that must be reached in order to execute a transaction to the project initiator. Almost all crowdfunding and crowdinvesting websites are using this kind of limiting system. See (Hemer, et al., 2011)
4 Further information can be found in the American “JOBS-Act”.
phenomena in the internet-crowd, while for instance Freiberg (2004) researched on the herd-behavior in economia. Surowieckis' work on the “wisdom of the crowds” has been widely discussed as a fundamental study for the development of new theories and concepts about the crowd-intelligence and herding behavior. We will introduce the mentioned works during the article.

2. Methodology

The aim of this working paper is to provide a deeper insight into crowdinvestment and to give an overview of the current research in this field. Therefore we made a literature and platform analysis. As stated before, there is a growing interest among researchers in this issue. To support the interested reader in gaining basic knowledge, we gathered and summarized information from practice and academia. We chose an explorative approach. After a short discussion of the need for new financing methods in chapter 3, we examine crowdsourcing as an antecedent of crowdfunding and crowdinvestment in chapter 4. We present the terminology and discuss the function. We are also presenting different variations of crowdsourcing in practice in chapter 4.1.1, followed by an examination of the motivations for participation in chapter 4.1.2. Therefore we use the research of Reichwald and Piller (2005) regarding the motivation of participation in open innovation. In Chapter 4.2 we pay attention to the process of crowdfunding. First we define the instrument, while afterwards we provide an overview of the market for crowdfunding in Germany (chapter 4.2.1) and discuss the different forms (chapter 4.2.2).

In chapter 5 we come to our main study object and examine the functioning of crowdinvestment. To provide a deeper understanding, in chapter 5.1 we present the Model of Social Contagion by Russ (2007), which explains the herd behavior of individuals in the internet. This process is highly relevant, because it could help to provide an understanding of how crowdinvestment projects are successfully done as well as how platforms develop. Since the investments in crowdinvesting bear a high risk of default, the legal issues are a very important point for investors, platform providers and issuers; we furthermore ask the question why private investors are using high risk investments. Therefore we use outcomes from chapter 4 and add thoughts about trust and trust building. It is also worth mentioning that this chapter 5 is mainly based on our own analysis of crowdinvesting platforms, while in the chapters before mostly literature research is done. In chapter 5.2.1 general findings of our website analysis are presented, while in chapter 5.2.2 the functioning of the different platforms and instruments used by the platforms as well as the legal aspects the construct faces before explaining our findings more detailed in chapter 5.2.3. The article closes with a conclusion and outlook in chapter 6.

In our research we made not only a literature analysis, but also interviewed platform providers and users, visited conferences and analyzed the active German crowdinvesting platforms. In the first step, we made an explorative analysis to get an overview of crowdfunding and crowdinvesting. Thereby we started with a literature review to gain first knowledge and then expanded our research by interviewing experts, visiting conferences and participating in workshops. Naturally our main experts are located in the group of a young, web-affine start-up community, for instance independent digital journalists and bloggers, platform providers, investors and users. That circumstance brought up the pitfall that the quality of information must be evaluated very thoroughly, since the information in the internet is not very long-lasting. Although our goal is to analyze the German crowdinvesting community, we also considered data from all over the world in this step.
The interviews and conference visits can be considered as very helpful, because new platforms were presented. For the identification of the crowdinvesting platforms we also used a collection of 139 worldwide listed crowdfunding and crowdinvesting platforms. Out of this set we identified 20 crowdinvesting platforms in total in Germany, of which 11 are currently active. Then we analyzed, categorized and compared the different forms of crowdinvesting platforms in Germany in a second step by using the following categories (see appendix for further information):

<table>
<thead>
<tr>
<th>funding system</th>
<th>funding instrument</th>
<th>the branch</th>
<th>financing phase</th>
<th>costs for issuers</th>
</tr>
</thead>
<tbody>
<tr>
<td>minimum investment amount</td>
<td>type of platform service</td>
<td>evaluation of the business idea</td>
<td>evaluation of the business value</td>
<td>number of projects conducted</td>
</tr>
<tr>
<td>holding period</td>
<td>used additional service providers</td>
<td>community building</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Categories for the empirical analysis

After finishing the study, we prepared leading research questions that build the frame of this working paper. The questions are:

- Is there current research on crowdinvesting? If yes, what are the main findings? (Chapter 4 and 5)
- What is the current development of the crowdinvesting market in Germany? (Chapter 4.2.1 and 5.2)
- What type of financing method is used in crowdinvesting? (Chapter 5.2.3)
- What is the legal situation of crowdinvesting? (Chapter 5.2.1)
- What is the role of trust regarding crowdinvestment? (Chapter 5.1)

Our working paper will not answer all of the aforementioned questions in detail, because the market is still developing. Instead it provides presumptions about the answers. Furthermore it should be the starting point for other researches to concentrate on.

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6 Other websites like crowdsourcing.org count 536 active crowdfunding websites (updated in December 2012). Subsumed under this term are equity-based, lending-based, donation-based and reward-based business models. According to this website the platforms raised almost 1.5 Bn Dollars. Given a reduced traceability of this number (the report is not naming every platform) we decided to rely on the mentioned 139 platform. See also: http://www.crowdfunding.nl/wp-content/uploads/2012/05/92834651-Massolution-abridged-Crowd-Funding-Industry-Report1.pdf accessed on 13.03.2013

3. The early-stage equity gap in Germany

The possibilities for entrepreneurs to finance their businesses are very widespread. From bank loans to bootstrapping over venture capital- the opportunities are manifold and can be applied depending on the state of development of a venture. Considering the capital requirement to the state of the development of the business, we rank crowdfunding between the financing by family and friends and the financing by starting capital from public resources as shown in Figure 1, because it can be used as a financing method for small amounts in a comparably young development state of the venture. On the contrary, crowdinvestment developed as a serious financing method for amounts with more than 100.000 Euros, which is why we ranked it between venture capital and business angel financing, although it can also be applied in an early development state (see Kortleben & Vollmar (2012)).

The advantage and at the same time disadvantage of crowdfunding and crowdinvestment compared to other financing forms is the flexibility regarding the length of the financing period, the frequency of the recourse and the amount of money. Any small amount can be acquired in a relatively early state of venture development, see Figure 2. On the contrary, this flexibility may lead to relatively high transaction costs compared to the acquired amount of money. Also it should not be underestimated, that the capital is obtained in a venture state where no or only small profits are generated and therefore the acquisition of higher amounts through crowdinvestment could raise the pressure of fast profitability of the business, which is shown in the lower part of Figure 2.
Other advantages are the low controlling and voting rights for investors compared to venture capital financing or bank loans. On the contrary, crowdfunding and crowdinvestment are only available to a limited extent (Volkmann, Tokarski & Grünhagen, 2010), and it remains unclear if the targeted amount of money could be obtained until the investment period is expired, since theoretically every single investor has to be convinced of the profitability of the investment. In this perspective, the founder has to put a relatively high effort in advertising activities, which could prevent the founder from concentrating.

Crowdfunding and crowdinvestment help to overcome the early-stage equity gap to a certain extent, German business founders facing in the seed and start-up stage of the venture. The reasons for this gap are mainly on the one hand the small market for venture capital in Germany, and on the other hand due to systemical problems that raise the risk and uncertainty for investors.

The total venture capital investment in relation to the German GDP scored 0.03 per cent in 2011. This has been in line with the European average, but is still in the European middle field. On the other hand only 12 per cent (around six billion Euros) of the total private equity investments in Germany have been invested in new ventures in Germany (Statista, 2013a). This fact is due to the natural behaviour of an investor to realize profits by selecting fields of investments with a high probability of matching the desired outcome. From the perspective of a private venture capitalist the investment in the early stage of a new venture is generally considered unprofitable. This is among others resulting from systemic problems a new venture is facing, such as the lack of management experience paired with less economical references. The high uncertainty with which a venture in the seed and pre-seed phase is confronted and the high information asymmetry between investor and investee related to

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8 This can be confirmed by statistics: 41.5 per cent or 96.89 Million Euros of the money invested in 2011 in early stage-investments has been lost totally. In other words 81 companies, venture capitalists have invested in failed. On the other hand, 42.6 per cent or 101 companies could successfully pay back their equity. See (BVK-Bundesverband Deutscher Kapitalbeteiligungsgesellschaften e.V., 2012): tab. 4 p. 8 accessed on 15.01.2013
other stages of a venture, which raises the additional time a venture capitalist must invest to counteract this asymmetry and by this lowers the return. The consequence is a shift of investments of the venture capitalist into later stages or the rising of the total amount invested per project and the decreasing availability of venture capital. A lack of capital supply is for example compensated in the U.S. by the investments of Business Angels, although structural problems and a different investment culture in Germany also constrain the financial resources (Geyer & Heimer, 2010).

Besides that, the structure of venture capital investments varies among sectors (Statista, 2012b). For example, the German venture capitalists invested around 26 per cent (Euro 83.49 Mio., 142 companies) in start-ups in the life science sector in the first half of 2011, while only eight per cent of the overall new ventures in Germany were related to this group (Hagen et al., 2012). Further 19 per cent (104 companies) has been invested in new ventures in the IT/Consumer Electronics sector, while the smallest amount of investments has been obtained by the chemical sector.

Although not every sector is perceived as profitable, the venture capital investments supported 163 ventures with 40.3 Million Euros in their seed phase and 395 new ventures with 390.3 Million Euros with so called “start-up-investments” in 2011. It can be distinguished between private and public venture capitalists. While 38.2 per cent of the investments in start-ups have been made by private venture capitalists, public venture capitalists participated with 54.5 per cent (4,9 per cent of the investments are made by foreign venture capitalists, while for the rest of the overall sum the investor is not classified). In other words, the public sector is supporting new ventures more than private institutional investors (BVK, 2012, Table 3). It also shows that public investors might be more generous than private ones and invest where the market would not. In addition, the amount of investments in new ventures by venture capitalists and business angels is correlated with the periodical development of an economy. That means that in times of economic crisis the total amount of investments in new ventures is lower, while it is higher in upswing phases.

The result of all these factors is an equity gap for new ventures that is constrains the financial resources (For more information, see for instance Veugelers, 2011). This equity gap is lowering the success of the new startups or preventing it from fully concentrate on its core activities of its business model (Geyer & Heimer, 2010). Therefore, crowdinvesting is a potential solution for reducing this gap.
4. The development of new venture financing methods

In the following chapter we will develop initial definitions of the main terminologies of the field by following the historical development and origin of “crowdinvesting” and also explain the terminologies “crowdsourcing” and “crowdfunding” as well as the underlying philosophy. We will start with the umbrella terminology “crowdsourcing”, proceed with our discussion with the terminology “crowdfunding” and finally come to “crowdinvesting”. The following Figure 3 maps our path of explanation.

Figure 3: Map of our explanatory approach

4.1 The antecedent: Crowdsourcing

In our literature review we found a broad range of definitions. The concept itself has grown in the past ten years. It can be distinguished between definitions of crowdsourcing in the closer and wider sense, which can be seen as an expression of the manifold heterogeneity of its forms in practice. Hereby crowdsourcing can be used in different ways; for instance as an open innovation tool or for microfinancing issues (see for a more detailed distinction (Kortleben & Vollmar, 2012)).

Crowdsourcing is an artificial word and includes the words “crowd” and “outsourcing”. The terms “crowdfunding” and “crowdinvesting” were created analogically. The term “crowdsourcing” in general means the outsourcing of a special problem to a large, unspecified and anonymous group of individuals (the “crowd”) with the intention to solve the problem by drawing on their assets, resources, knowledge or expertise (Kleemann et al., 2009; Hermer, 2011). A good example is “Tchibo Ideas” where customers become idea suppliers for new products by assigning problems from everyday life.

The website Tchibo Ideas calls upon the crowd to name practical problems of their everyday life and also submit potential solutions. Through this, the company is provided with new ideas for their product development by the crowd. Additionally, the crowd can evaluate the problem and the solution, which provides the ordering party with additional information about how important the problem and
how useful the solution is perceived. Furthermore, the company has been provided a first estimation about how likely the market demand for the new product would be.9

The denomination is used in various contexts, like “open innovation” (Chesbrough, 2003), “working consumer” (Kleemann et al., 2008), “swarm intelligence” (Horn & Gisim, 2009) or “interactive Wertschöpfung” (Reichwald et al., 2005). The term “crowdsourcing” itself was first used by Jeff Howe in 2006 in an article in the magazine “Wired”, an American magazine for high technology. They defined it very specific as:

“[...] the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call.” (Howe, 2006).

Gassmann (2010) opens the definition of crowdsourcing as a strategy of outsourcing of knowledge production and problem-solving to external agents through a public call to a group of people, while Kleemann et al. (2008) concretizes crowdsourcing by nominating the ordering party as a “[...] profit oriented firm” (Kleemann et al., 2008) and criticizes the fact that the individuals in the crowd (named here as “working consumer”) work for this firm voluntarily, in other words for free or for a significant less contribution than their work is worth.

The authors conclude that the working consumer takes part in the production process and by this replaces the former need for employees to perform specific tasks. Hereby the working consumer has almost the same characteristics of an employee: they are taking part in the production process and creates value; their capacities can be mostly considered as valuable assets; they can be integrated into corporate structures and, more importantly, their actions can be monitored as if they were employees. The only difference is that the working consumer does not have to be paid. On the contrary, a relationship between the parties must be established, which can be built by reputation, trust, appreciation and a mechanism that fosters a continuous engagement of the crowd in order to keep the platform interesting.

Martin et al. (2008) redefined crowdsourcing as an interactive form of service provision, not necessarily outsourced by a company, thereby expanding the possibilities of heterogeneity. Rather, they rather stress the collaborative and competitive character and the involvement of a large group, in which individuals have different knowledge levels, whereas the results could be products or services of different innovation levels. These results are developed due to reactive or proactive behavior of the participants.

Many authors in this field of research (including Brabham, 2008; Kleemann et al., 2008; Gassmann, 2012) acknowledge the application of modern information technologies as a prerequisite to the development of crowdsourcing. The infrastructure of the web-technology is perceived as mandatory for any ordering party to be able to reach networks of consumers that easily and fast. It promises various creative ways to get in contact with masses for any problem or idea, reduces communication costs and offers manifold ways to get the people to express themselves.

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9 See tchibo-ideas.de for more information.
Lee et al. (2008) also highlight the sociological effects of the Web 2.0 by nominating it as the foundation for the creation of networks of people who share the same interests. They define three main characteristics: *collaboration*, which permits the combination of each other’s knowledge and resources; *openness*, which allows people to contribute freely to different projects and also *participation*, which is increased by easy access and the use of computers and the worldwide web. In other words, anyone can create and develop content and upload it on the internet, which fosters common knowledge, diversity of ideas and contributions, but also implies threats like herding-behavior (Freiberg, 2004) and the facilitation of “irrational exuberance” (Shiller, 2000).

However, using the crowd as a source is a systematical but spontaneous act. It does not work simply by using the internet but needs a systematical environment. The crowd is part of a multilateral system, which is mostly structured by a social network. Incentives foster the motivation of a crowd to participate in the way a platform is leading it (see chapter 5.1). The motivation to take part can be widely varying as the following chapter shows.

### 4.1.1 Diversity of crowdsourcing forms

Crowdsourcing in the wider sense can be distinguished between different areas of knowledge, for instance such as marketing and public relations (Idea Bounty, Brand Tags), academia (Innocentive, Hypios), idea generation and open innovation (JAtizo, Big Idea Group), collective intelligence and prediction platforms (Inkling News Futures), creative co-creation like product ideas, design and branding (Guerra Creativa, 99designs), and others more.

For the definition in the narrower sense, Kleemann et al. (2008) describe different types of crowdsourcing as presented and further developed in Table 2 below. This classification is based on the perspective of the ordering party and differentiates between different forms of customer involvement, starting from the plain customer feedback to the development of a new product by customers. Crowdfunding and crowdinvesting are not included specifically in this characterization, but may be seen as a special form of crowdsourcing where the crowd is asked to solve a financial problem of the ordering party. By linking the phenomenon of crowdsourcing to the method of crowdfunding and crowdinvesting, the problem comes up that not every definition of crowdsourcing allows the classification of mentioned financial instruments as crowdsourcing methods. That is why crowdfunding and crowdinvesting can only be subsumed under the definition of crowdsourcing in the wider sense (for instance with the definition of Gassmann, 2012).
<table>
<thead>
<tr>
<th>Type of Crowdsourcing</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation of consumers in product development and configuration</td>
<td>Involvement of customers by asking for comments, suggestions and future products</td>
<td>Tchibo-Ideas, BMW Group VIA, Ford New Ideas, Kraft Collaboration Kitchen</td>
</tr>
<tr>
<td>New Products/New Product Design</td>
<td>Development of a whole new product</td>
<td>Fiat Mio, Cafepress, Lego Design ByMe, Spreadshirt</td>
</tr>
<tr>
<td>Competitive bids on specifically defined tasks or problems</td>
<td>Asking to give solutions to unsolved problems</td>
<td>IBM Jam, SETI@Home, Rosetta@Home, Innovationskraftwerk, Innocentive</td>
</tr>
<tr>
<td>Permanent open calls</td>
<td>Ask for new information or documentation (by a known or unknown community)</td>
<td>Twitter, Facebook, Wikipedia, CNN IReport, Waze-Open GPS, Twitter, Facebook, Map of Life</td>
</tr>
<tr>
<td>Product rating by consumers and consumer profiling</td>
<td>Ask for product reviews and opinions for other users to see</td>
<td>Testberichte.de, Consumersearch.com, Consumerworld.org, eKomi,</td>
</tr>
<tr>
<td>Customer-to-customer support</td>
<td>Ask customers to help other customers and use it for consumer knowledge and product design</td>
<td>Lego Hero Factory, classical help and discussion-forums: like the ebay-community</td>
</tr>
</tbody>
</table>

Table 2: Different sources of crowdsourcing referring to Schwienbacher et al. (2010) and Kleemann et al. (2008)

4.1.2 Motivations for crowdsourcing

Kleemann et al. (2008) stress the aspect of cost reduction for companies, which make use of the crowd. However having the opportunity of cost reduction is not the only reason that makes crowdsourcing attractive to for companies and other institutions. Reichwald and Piller (2005) noted that the probability of success could be raised if external agents are involved in service and product innovations. They argue that through the direct involvement, for instance, of customers, companies can be provided with detailed information (notably “sticky information”)\(^\text{10}\) about their needs (problems) and how to meet them (solutions). This enables a company to realize a better fit-to-market. Information like this is especially important for early phases of incremental and disruptive innovations, allowing the reduction of the length of a product development cycle as well as its costs (Schwienbacher & Larralde, 2010; Kleemann et al., 2008).

Through the participation, for example, in the product design and improvement, users contribute to a company’s value creation process (Schwienbacher & Larralde, 2010). Innovation becomes an interactive process between a crowd and a company that also raises the customer acceptance and increases the perception of product newness (Reichwald & Piller, 2005; Schwienbacher & Larralde, 2010). Thereby the risk and uncertainty of investments in these co-created innovations is lowered. Besides that, companies who use crowdsourcing do not only benefit from the direct feedback and information provided by a crowd. It can also provide valuable signals on the market potential of a product they wish to launch. Lambert and Schwienbacher (2010) argued that crowdsourcing as well as crowdfunding can be used to generate hype around a new product in order to create a marketing campaign in which consumers are able to participate. For instance, artists that use Sellaband.com can estimate a market demand, since consumers commit financially to purchase the CD if it goes into production.

\(^{10}\) Stickiness in terms of information is “the incremental expenditure required to transfer a unit [of information] from one place to another, in a form that can be accessed by the recipient. When this expenditure is low, information stickiness is low; when it is high, stickiness is high” (Hippel, 1994 p. 430).
Howe (2008) argues that crowds can be more efficient than individuals or small teams. According to Brabham (2008b), this efficiency of crowds in solving problems is analogous to the theory on successful teams. It is related to its composition, while diversity and efficiency are positively correlated (Cox, 1993; Jackson et al., 1995; Horwitz et al., 2007). The advantage of the crowd is their ability to accumulate wisdom. This “wisdom of the crowd” is due to solutions aggregating to each other and further development by members who then end up having better overall solutions (Surowiecki, 2004). But regarding our research object - crowdinvesting - it is not finally discussed whether the “wisdom of the crowds” applies or not, because it is questionable if the decision of an individual in the crowd is really independent (see Klöhn & Hornuf, 2012).

But why are customers taking part, if they are mostly “an unpaid workforce”? Although the research on this question has only just started, Reichwald & Piller (2005); Reichwald et al. (2004) and Klee-mann et al. (2008) identified three main categories of motivations: extrinsic motivation, intrinsic motivation and social motivation.

- **Intrinsic motivation** occurs in accordance with the expectation of pleasure or fun of doing the task (Schwienbacher & Larralde, 2010). It is triggered by executing the task itself, often through the facilitation of creativity, fun or exploration (Reichwald et al., 2004). Also the (unconscious) expectation of “Flow” (Csikszentmihalyi, 1990) fosters intrinsic motivation.

- **Extrinsic motivation** relates to the (positive) circumstances or implications that results from doing a particular task. This can be an external reward, for instance money and goods, career benefits, learning, recognition or even dissatisfaction with current products. An essential extrinsic motivation is, for instance, the expectation to use the product for one’s self (Reichwald et al., 2004).

- **Social motivation** occurs if the actions are influenced by others or are influencing others. For example, if the actions of individuals are made public to others, a number of socio-psychological factors trigger the human actions. Hereby the advantage of the internet is the fostering of the social interaction and densities (community building) with less costs. Reichwald & Piller (2005) mention the possibility of an increasing willingness to innovate due to the creation of a common sense (“soziales Moment”, Reichwald & Piller, 2005, p: 13). The expectation of appreciation also seems to be a social motive (Harmon-Jones, 2002), but is sometimes categorized as an extrinsic motive (Harhoff et al., 2003). Appreciation can also be induced by socializing and the possibility to influence an individual’s environment (the expectation of acting in a self-efficacious manner). Ideally goals and moral values of the community fit to those of an individual and the community.

Summarizing the results of the previous chapter we can say that the crowd, consisting of an undefined group of people each with unique lives and histories, can be motivated to create something together. This willingness for co-creation is the seed for different forms of crowdsourcing, including crowdfunding and crowdinvesting, which will be explained in the following chapters. Hereby the basic motivational factors can also be found for crowdinvesting, which we will show in chapter 5. Finally, Franke and Klausberger (2008) add that the concept of crowdsourcing is currently only working, because it is not broadly used. The more companies start using it, the scarcer the resource ‘crowd’ will become.
4.2 Venture and project financing in the first generation: Crowdfunding

Since 2003 there has been a fast growth of crowdfunding platforms in the U.S and Europe. However, crowdfunding had already been used earlier, for instance as a financing method for the building of the American statue of liberty “Liberty enlightening the world” (Lawton et al., 2013). Although the idea of using the financial resources of a group of people to implement projects is not a new one, modern communication technologies play a vital role for the rise of the popularity und systematical use of the instrument (see also chapter 4.1).

Crowdfunding became very popular through internet platforms like Kickstarter or Kiva in the English-speaking world and also appeared in Germany with Startnext and Vision Bakery in Germany. It has three acting parties: the crowd, which contributes money to the project or venture and the intermediary, for instance a website with the social network character. It consists of an undefined and anonymous group of individual supporters, which can be members or followers of an internet platform. So the success of a project is not only correlated with the way an offer is designed, but also how known the crowdfunding website is and how able the platform provider is in terms of managing it. It aims to activate an undefined group of people (a crowd for financing an idea or project instead of professional parties (Hermer, 2011; Gumpelmaier, 2011). Through this, it helps to realize artistic, social or commercial projects.

However, the individuals within a crowd are free to choose their preferred project(s) and provide them with money. The choice is influenced by intrinsic and extrinsic motives (see chapter 4.1.2). Project leaders can also have an impact on the investing behavior by choosing how the offer is presented and what forms of incentives are set (Helm, 2011). Often crowdfunding websites also provide their expertise and additional consulting and marketing services, like Vision Bakery, which helps their clients to prepare an appealing pitch-video. In the artist branch young musicians are able to fund the independent production of their album with crowdfunding (for example with the Dutch platform Sell-a-band).

If an investor engages in a project by giving money, he or she can often choose a gift as an incentive. The type of gift depends on the amount of money a supporter is giving. In our example it can be the nomination as supporter on the album cover or an exclusive concert via Skype. The form of incentives is not default and can be chosen individually by the artist. Thereby additional incentives are provided to give a certain amount of money.

For providing the reader with an exact definition that covers most of the existing forms of crowdfunding, we again face the problem of the mixed approaches and floating transitions of one method into another. Additionally practitioners use different definitions for this instrument, often in a rather narrow sense (Hermer, 2011). Following the previous explanation, crowdfunding can be seen as a special form of crowdsourcing where capital is acquired through a group of non-professional investors. Schwienbacher et al. (2010) describe crowdfunding as:

“Crowdfunding involves an open call, essentially through the Internet, for the provision of financial resources either in form of donation or in exchange for some form of reward and/or voting rights in order to support initiatives for specific purposes”. (Schwienbacher et al., 2010)
Crowdfunding is used in a wider and in a narrower sense. In the wider sense it is an umbrella term for all financial instruments in the field of micro-finance or co-funding. In the narrower sense, it is a terminology for all funding methods, which provide money in a way that an investor does not intend to gain any financial profit, such as interest or dividends (see Hemer et al., 2011). In other words, the term “Crowdinvesting” describes a special form of crowdfunding (wider sense) and also an alternative financing instrument besides crowdfunding (closer sense). The typology is visualized in Figure 4.

**Figure 4: Forms of Crowdsourcing**

Hereby crowdsourcing as a whole is seen as a special form of “open innovation”, because a crowd helps to innovate together with a company and is therefore “open”. However for reasons of clarity and comprehensiveness the other aspects of crowdsourcing besides the monetary ones are left out of this Figure. This definition includes the financing of startups by a crowd (see Figure 4), which we will discuss in more detail in chapter 5. For the following examination we focus more on the crowdfunding in the narrower sense, which uses the instruments of sponsoring and donations.

### 4.2.1 The crowdfunding market

As noted earlier, the crowdfunding market is still young but developing in dimensions of the number of platforms as well as the specialization. Data collected in a study by Lambert & Schwienbacher (2010) confirms that impression. Furthermore an international, continuously updated “crowdsourced” collection lists 139 platforms of any kind, while an American study counts more than 530 platforms worldwide.\(^{11}\) Especially niche markets become more and more interesting, as shown by the examples of “Cinema Shares” or “Apps Funder”. After a market enlargement, a market deepening can be experienced now. However, the market does not seem saturated yet. Most of the crowdfunding platforms are not older than three to four years; about 60 percent are situated in Anglo-Saxon countries (Schwienbacher & Larralde, 2010). Compared to the European market, the U.S. has been using more crowdfunding than crowdinvesting, due to entry barriers so far.

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The German market is different. It seems that the four platforms inkubato, pling, Startnext and VisionBakery have already divided the market for their benefit. According to a quarterly presented survey among platform providers by the German founders-website “Für-Gründer.de”, crowdfunding successfully financed 494 of 1.150 proposed projects with an average 59 supporters in 2012, who gave 67 Euros on average. Furthermore, the total funding amount was 1.950.576 Euros (for comparison: the U.S. based platform Kickstarter had until December 2012 about 35.000 successful funded projects with more than 393 Mio. U.S.-Dollars). Compared to 2011 the overall budget quadrupled, with one platform, Startnext, having a market share of around 88 per cent, followed by Vision Bakery, Inkubato and Pling (Für-Gründer.de, 2012). One platform has already disappeared from the market: “MySherpas” had its last funding at the end of 2012 and finished its business activity afterwards.

With reference to the rate of successfully financed projects the leading platforms are widely dispersed. The average success rate for this sector is 43 per cent (in 2011 38 per cent). Startnext and Vision Bakery are with 52 percent and 45 percent respectively above that average, while Inkubato and Pling are with 33 per cent and 8 percent respectively not very successful (Für-Gründer.de, 2012). However the average funding amount per project has been raised from 2.700 Euros in 2011 to 3.950 Euros in 2012. Simultaneously, the last quarter of 2012 was the strongest crowdfunding period so far in terms of the increase of additional funding support (796.058 Euros). This shows that not only the number of platforms providers is growing, but also the willingness of the crowd to provide money.

4.2.2 Forms of crowdfunding

Several studies concentrate on summarizing a general overview of the different crowdfunding types and concepts (for instance Bartelt, 2012; Kaltenbeck, 2011; Meinshausen et al., 2012). However, only a few show the needed abstraction level for presenting sustainable findings (for example Hemer et al., 2011; Schwienbacher et al., 2010).

Although Hemer, et al. (2011) uses the term “crowdfunding” in a wider sense (he also includes preselling systems in his definition), his work can be seen as fundamental for the German research on crowdinvesting. In terms of the organisational embeddedness of the crowdfunding project, he differentiates between projects with independent origin, embedded projects and startups. While in projects with independent origins no linkage to another institution is drawn, crowdfunding projects in startups are established to provide a perpetual organizational unit, for instance a company. In embedded projects the crowdfunding was raised out of an organization or company, for example a new research and development plan. In general, the occurrence of crowdfunding has manifold ways and often depends on the purpose of the funded projects. These studies have shown that three different areas are targeted, while each platform has its own customer strategy (see Figure 5).

Platforms can be distinguished between mainly addressing their offers to various kinds of artists (while this group can also be subdivided into niche markets, for instance musicians like the crowdfunding provider “Sellaband” or “SonicAngel”), to projects with social background such as Better-

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12 88 per cent of the total amounts of active projects are presented on Startnext. Additionally, 77 per cent of the successfully finished projects are financed through Startnext. Source: (Für-Gründer.de, 2012), accessed on 13.03.2013
place and also to customers with commercial projects, which is called crowdinvesting. Mostly mixed-forms can be observed in practice. Although there is a strong differentiation between crowdfunding and crowdinvesting platforms in Germany, Für-Gründer (2012) has shown that crowdfunding is one of the preferred financing methods also for commercial projects. 73 per cent of the overall amounts of successfully financed projects are classified as commercial (while only 27 per cent are non-commercial projects). Obviously the category “commercial projects” is too broad to clearly distinguish crowdfunding and crowdinvesting platforms. A deeper insight into the systems should be gained in order to produce a thorough systematization. By taking the different purposes into account, the methods used by crowdfunding to obtain capital can be narrowed down to the following main forms, which are presented in Figure 5. The Figure presents forms of crowdfunding in the wider sense. The dark-blue tiles stress the findings for crowdfunding as a financing instrument itself, while crowdinvestment instruments are light blue.

![Figure 5: Methods to obtain capital through crowdfunding and crowdinvestment](image)

According to our studies, crowdfunding for social reasons is mostly done through donations or sponsoring. Hermer et al., (2011) distinguishes between the donor-model, where donations are made, and the reward-model in which the supporter receives an incentive for providing money. In crowdfunding for economic reasons (crowdinvesting), the capital is provided by forms of stock shares, silent partnerships or (subordinated) participating profit loans (see chapter 5). Hermer et al. (2011) also add pre-selling and pre-ordering systems as a method to obtain capital for economic reasons.

This form of financing a new product has been used, for instance, in the case of Scott Wilson, an American designer, who designed a wristlet called “LunaTik” for the secure transport of a special portable music player. He was able to fund the production of the product over a crowdfunding website (Kickstarter) with around one million U.S. Dollars (see Kickstarter, 2010). Also noteworthy is the fact that the funding was done with donations over a crowdfunding website with more social and artistical background rather than by a platform with investment character. Examples like this one can be seen as exemptions and are not the general case, which is why it is not presented in Figure 5.
5. Venture financing of the second generation: Crowdinvestment

In this chapter we discuss our findings regarding the crowdinvestment-platform analysis and combine it with essential theoretical aspects. Following a definition of the relatively young financing method, we present the central crowdinvesting platforms which have recently been established in Germany. After this overview we discuss, in a differentiated reflection, the use of crowdinvestment in the venture financing process. Ensuing this discussion we compare crowdinvesting with other financing methods that are related in regard to the satisfaction of the specific financial demand of start-ups. The chapter closes with two subchapters that are especially interesting for the future research: first, the discussion of the herding behaviour and the role of motivation for crowdinvesting and second, the role of trust with regard to the principal-agent-problem on the level of platforms and the financed ventures.

Crowdinvestment can be seen as the second generation of crowd-based venture financing and the latest trend in using the crowd for different purposes. It is a subset of crowdfunding (Hemer et al. 2011), that is used as a method for financing companies. Unlike crowdfunding, crowdinvesting concentrates mainly on financing young ventures or commercial projects by equity or mezzanine capital through the issue of shares and thereby requires a legal body. Compared to crowdfunding, the participation is not mainly rewarded by gifts or material incentives, but by the return on the investment.

Klöhn & Hornuf (2012) defined it as a form of crowdfunding, where issuers submit equity or other hybrid financial instruments through the internet. The innovation herein lays in the coordination of supply and demand of multiple users in the investment process by internet platforms. This essential part is missing in the definition of Klöhn & Hornuf (2012). We perceive it as essential, because it distinguishes crowdinvestment from the simple submission of shares by brokers or single suppliers through the internet, like the platform “Direct Startups”. The innovative idea is that anyone can offer investment possibilities to a platform and to investors (if minimum standards regarding the sustainability are fulfilled) and anyone can invest in it. Therefore we define crowdinvesting:

"Crowdinvesting is a financing method for young ventures and other commercial projects that supports the acquisition of equity by coordinating the submission of different forms of shares to an undefined group of possible investors through social virtual communities."

Besides the access to capital sources, crowdinvestment has, like crowdfunding, positive side effects regarding the evaluation of the business model: founders can test the reaction of the market to their product. Based on the agreement to buy shares, founders can derive the favor of their product or service by an interest to buy it, assuming that investors would only buy shares if they are attracted by the business idea or at least believe that others could be attracted. Founders become a direct feedback from the market about their business idea. Through rating systems, like commenting functions or evaluation systems and internal market places, platforms provide the possibility to let the investor signal to other potential investors how valuable they evaluate the investment.

Crowdfunding and crowdinvesting have in common that the methods are applied on internet platforms, which lowers the costs for reaching potential supporters. The supporter is this case an investor; with his payment he obtains the right to participate in future cash-flows of the venture, which
must be used for the declared purpose (Klöhn & Hornuf, 2012). Sometimes both crowdinvesting and
crowdfunding are offered on one platform in order to attract a bigger group of potential customers.

Figure 6 below presents the circumstances under which the projects were offered. Hereby two rows
are nominating one platform with the first row showing the statistics of crowdinvestment projects
and the second row showing possible crowdfunding projects.

![Figure 6: Distribution of Crowdinvestment and Crowdfunding projects after platforms, per April 2013](image)

No bar indicates that no projects in the respective category have been done, while it has to be men-
tioned that not every platform categorizes every project clearly as either crowdinvesting or crowdf-
unding. For instance Mashup-Finance had one successful funding as well as one successful invest-
ment and one unsuccessful investment in the past, while Best BC had two successful investments. On
the contrary, Berlin Crowd has two fundings currently running and one announced funding. However,
the total number of 11 active crowdinvesting platforms\textsuperscript{13} (and the seven additional platforms that
have not started yet) compared to the number of projects executed on each one leave the impres-
sion that the market is already saturated and is now slowly downsizing. In conclusion crowdinvesting
cannot be the universal remedy for closing the equity gap, but a good alternative for financing small
businesses. Additionally the statistic can only indicate a general trend, since it is already outdated in
the extreme case when a reader is examining the paper. Nevertheless it shows an overview over the
current state (per April 2013) of the market and could be used for future comparisons of the market
development.

\textsuperscript{13} Bergfüst is starting its business activity in September; that it why it has been already taken into account where it is
useful.
Thereby every internet-user can be a potential investor, which leads to questions regarding the ability of the average internet user to evaluate the risks and benefits of the businesses. An offer must fulfil the prerequisite to be explainable in a way that non-experts can understand. That narrows down the potential clients to services and products from the daily life, which could be an explanation why so many e-commerce and IT start-ups are offering investment possibilities. Figure 7 below provides a overview over the branches addressed by crowdinvesting.\textsuperscript{14}

![Figure 7](image)

**Figure 7: Crowdinvesting projects after platforms and branches, per August 2013**

During our analysis we found that a comparatively high number of the 115 identified investment projects (84 already successfully finished) are located in the information-technology sector with 51 projects in total, the commerce sector with 25 projects in total and the entertainment sector with overall 10 projects.

A closer look on the platforms also reveals detailed information about the characteristics of the funded projects. As shown in Table 2 the branch that platforms are specialised in is also widely dispersed. From our analysis of the projects published on the platforms we derived main financing stages. Most of the websites concentrate on offering financing opportunities for start-ups in the pre-seed and seed-phase, while some platforms are offering capital for companies in the growth phase. Additionally two platforms are supporting small and medium sized companies of any branch through

\textsuperscript{14} The classification of the projects into branches has been done by using the German industry sector codification established by the statistical federal office. More information here: https://www.destatis.de/DE/Methoden/Klassifikationen/GueterWirtschaftsklassifikationen/klassifikationwz2008_erl.pdf?__blob=publicationFile accessed on the 5\textsuperscript{th} of August 2013.
crowdinvesting. Nevertheless, it can be expected that not all companies are able to pay back the invested amount of money, since statistically only two third of the total amount of new ventures survive the third year (Hagen, Metzger, & Ullrich, 2012).

Table 3: Analysed crowdinvestment platforms in Germany

<table>
<thead>
<tr>
<th>Platform Name</th>
<th>Founding Phase</th>
<th>Financing Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bankless24 (bankless24.de)</td>
<td>Growth</td>
<td>Participation Right (Genussrechte)</td>
</tr>
<tr>
<td>BestBC (bestbc.de)</td>
<td>Start-up</td>
<td>Participation Right, typical silent partnerships</td>
</tr>
<tr>
<td>Fundsters (fundsters.de)</td>
<td>Start-up and Growth</td>
<td>Silent Partnership, Sponsoring and Donations</td>
</tr>
<tr>
<td>Startkapital-Online (Startkapitalonline.de)</td>
<td>Start-up and Growth</td>
<td>Silent Partnerships, Shares (not listed), Participation Rights</td>
</tr>
<tr>
<td>Berlin Crowd (berlincrowd.com)</td>
<td>Seed</td>
<td>Silent Partnership, Donations, Sponsoring</td>
</tr>
<tr>
<td>United Equity (United-equity.de)</td>
<td>Start-up and Growth</td>
<td>Participations rights, Silent Partnership</td>
</tr>
<tr>
<td>Deutsche Mikroinvest (deutsche-mikroinvest.de)</td>
<td>Mainly growth</td>
<td>Silent Partnerships, Participation Rights, Subordinated loan</td>
</tr>
<tr>
<td>Seedmatch (Seedmatch.de)</td>
<td>Start-up and Seed-Phase</td>
<td>First silent partnership, since fall 2012 subordinated participating-profit-loans</td>
</tr>
<tr>
<td>Companisto (Companisto.de)</td>
<td>Mainly start-ups before commercial launch</td>
<td>First silent partnership, now subordinated participating-profit-loans</td>
</tr>
<tr>
<td>Innovestment (Innovestment.de)</td>
<td>Start-up and growth¹⁵</td>
<td>Atypical silent partnership with pre-auction system</td>
</tr>
<tr>
<td>Mashup-Finance (Mashup-finance.de)</td>
<td>Start-up and Growth</td>
<td>Participations rights</td>
</tr>
</tbody>
</table>

Besides the close similarity to crowdfunding, crowdinvesting is comparable to venture capital financing. As an intermediary, the venture capital companies fulfill important economic functions regarding the transformation of lot-sizes, maturities, liquidity and risk. Crowdinvesting contributes through the collection, coordination and distribution of the money crowdinvesting to the availability and allocation of needed capital. Furthermore, the intermediary provides the market with information and screens and selects the investment offers after the profitability. Unlike Kortleben & Vollmar (2012) we argue, that a crowdinvesting platform combines the capital collection function and the capital investment function, but mostly without accounting for the collected money. Here it is forwarded directly to the startup. Comparable to the venture capital funds, crowdinvesting platforms split the default-risk into small parts and transfer it to the shareholders; crowdinvesting fulfills exactly the same risk transformation function like common funds.

On the contrary, crowdinvesting do not include milestones, ratchets, options, guarantees or governance agreements, but sometimes rudiments of anti-dilution protection and agreements in the case of disinvestment (Schefczyk, 2006). Insofar the crowdinvesting platform is simply a mediator and can be

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¹⁵ Requirements: Allowed legal forms: GmbH or UG. The company must be founded already and it must be just before the commercial launch at minimum.
seen as a service agent for investors and capital seekers, but not as a concrete broker, which draws decisions about the investment and performs a funds-management. At the same time, a crowdinvesting platform, like a venture capital company, fulfills a screening- and coordination function of the possible investments. Through screening for appropriate investments and offering it, a platform coordinates market demand for venture funding and matches it with the markets supply of money from private investors. Nevertheless a crowdinvesting platform faces asymmetric information and by this additional risks. That is why the principal-agent-theory is an important framework for the explanation of crowdinvesting. This will be further discussed in chapter 5.4.

Crowdinvesting is also comparable to the German “Genossenschaften” (cooperative society or German companionship). A German companionship is an association of economic subjects, which support their own economic activities through benefits of a collectively pillared company (Boettcher, 1980). The German companionship is creditworthy directly from the beginning due to extensive auditing by accountants, which is also a reason for high founding costs. Additionally, the companionship is required to install a supervisory board (Göler von Ravensburg et al., 2003), which own extensive controlling and information rights, unlike a crowdinvestment construct. We see here the most important difference between both constructs.

The starting capital is acquired through the submission of cooperative shares to companions. Both cases have in common that the risk is spread between the companions and investors respectively (risk transformation), which makes it possible to start a venture or project that would not have been started otherwise (Göler von Ravensburg et al., 2003). Here the crowdinvestor is taking the risk from the founder as well as the companion is taking it from the companionship. Also both instruments fulfil the capital collection function and the coordination function. Analogue to crowdinvesting, a companion invests a minimum amount of money (Aschhoff et al., 1995) and the individual liabilities can be constrained according to the value of the share (Göler von Ravensburg et al., 2003).

Unlike crowdinvestment the main goal of a companionship is the maximization of the welfare of the companions and other stakeholders, for instance by supporting the supply of housing space, goods, credits or insurances, while the investment and profit maximization is a subordinated goal. The legal form of a companionship is chosen because the opportunity costs of acting alone are higher than acting together to follow a common goal (for example in housing associations). The motivation is often built by extrinsic (financial) factors, like the cost reduction of products or services or the profit an investor gains by doing the investment (Aschhoff & Henningsen, 1995). In a cooperative society the group of investors is seen mostly as a part of the cooperative, which benefit from the companionship. Therefore the investor has a strong interest in the continued existence of the cooperative. On the contrary, the main goal of crowdinvestment is to maximize the profit of the investor, who wants to earn money through the annual revenues and, more importantly, by selling the shares later on. Its purpose is rather commercial. Besides, a participation in crowdinvestment could be triggered by the possibility of the future consumption of the product or service. In other words, a companionship is member and utility-oriented, while a crowdinvesting is profit-oriented.
5.2 Functionality of crowdinvesting

From our empirical analysis we derived a crowdinvesting-process\(^{16}\), which is presented in the following Figure 8. It consists of an application phase, where a founder applies the business plan and other data on a crowdinvestment platform. In the screening and selection phase, the platform evaluates the applications and prepares a negotiation strategy calculating the business value and evaluating the possible conditions. Sometimes the evaluation of the crowd is also taken into account. After a positive evaluation, the founder agrees on a contract in the contracting phase. After this phase, the investment offer will be announced in the roadshow phase to the crowd, including a fixed starting date of the subscription period. The following subscription phase is essential for the success of the funding. Is the investment border not reached, the submission of shares will be canceled and neither the crowdinvestment platform nor the emitter would get any money. Therefore both parties have a strong interest in the success of this phase, which is expressed in a high marketing activity. Also in this phase, the issuer agrees on contracts regarding the conditions of the holding of the shares, for instance the holding period or the dilution of the same. After the positive subscription of shares (which means the reach of the investment border) the holding phase follows. Depending on the individual contracts the investor must hold the shares some determined time period. After this time period the investor is free to sell the share, give them back to the issuer or to prolong the contract. This is called the exit-phase. In the following, each step of this process will be discussed, based on empirical and theoretical data.

![Figure 8: Phases of the crowdinvesting process](image)

1. Application and Screening & Selection Phase

First the founders apply at the platform, because they benefit from it by using its infrastructure to get in contact with the investors-community for marketing and financial purposes. The platform provider selects the best applications by performing a very simplified due diligence (Klöhn & Hornuf, 2012), done in personal talks or online in template questionnaires. This due diligence can contain credit-ratings, the business plan evaluations or even personality tests. Hereby the innovativeness, uniqueness of the idea, scalability, usefulness and explicable are mostly used as selection criteria (Sauer, 2012).

\(^{16}\) Hereby the platforms are either offering only crowdinvestment-services with an optional use of further incentives or crowdinvestment and crowdfunding at the same time, which lead to small changes in the process in practice. Furthermore an early assessment of the process and comparison with the investment process of venture capital companies can be found in Kortleben and Vollmar (2012).
Apart from that the company value is calculated. Basis is often a reliable financial plan from which a possible exit-revenue at the end of the holding period is calculated. From this specific value the platform discounts the yield expectations to calculate the current company value. In one case a pre-auction system is used as a method to indicate the company value. Here the pitfall might be that the investors may not have all information at this time to evaluate the company information correctly, which may cause a winner’s curse.

2. Contracting Phase

After a positive evaluation of the business plan and further information, the platform provider settles with the founder on financial and managerial conditions. Besides the settlement on the acquired amount of capital, which influences the percentage of service fee, it is important for the founder to choose an appropriate form of submission. In our analysis we identified four main funding instruments with varying characteristics. As shown in Figure 9, the platforms make use of typical and atypical silent partnerships, subordinated participating profit loans, participation rights and registered shares with restricted transferability to finance a business. Moreover, we found a platform which cooperated with a bank. By doing so, it can offer investment possibilities above the legal investment border of 100.000 Euros without bearing the costs of owning a banking license. For institutional investors, a new costumer segment is made accessible by the crowdinvesting platform. On the other hand, due to the partnership the platform can offer a reliable and credible professionalized service that signals trustworthiness.

All funding instruments except stock shares\(^{17}\) are issued with a revenue and loss share amounting individually to each campaign and deposit and controlling rights (which cannot be removed due to the German law), but without participation rights. This is advantageous for the entrepreneur because he must not fear that the investors are either enforcing a new management against his will or taking over the whole company. On the contrary, this disadvantage lowers the attractiveness of shares and by this the price of non-voting shares (Zingales, 1994), which could make some investors abstain from the investment (Brennan and Franks, 1997; Mäschle, 2012). In order to attract the investors the emitter should use an underprizing strategy, which is not trivial for the investor to observe since the evaluation of the firm value is only rudimentarily done (see Mäschle, 2012).

\(^{17}\) Regarding the issuing of stock shares we found only one platform, which is not active yet in terms of offered investment possibilities. Since for the submission and trading of stock shares a license by the German financial service authority “Bundesamt für Finanzdienstleistungsaufsicht” is required, the platform might easily obtain a competitive advantage due to high entry barriers and a high credibility. Compared to other platforms, the ownership of the license signals the trustworthiness of the platform.
While the German law restricts the funding amount by using silent partnerships to 100,000 Euros, subordinated participating profit loans and participation rights are unrestricted. Most of the platforms, who use this kind of financing instrument already, included the possibility to enlarge the financing limit above 100,000 Euros. Especially for high technology-based ventures, which often need a high financing budget, this could be an alternative method to obtain capital.

Besides the settlement on financial conditions, the usage of additional marketing and legal services would also be arranged in this phase, such as the creation of a public relations-concept including a pitching video and photo-shootings, the maintenance of investors relations, the procurement of management experts or lawyers, substantial support in preparing a prospectus as well as the provision of co-working spaces. Besides that mentoring services can also be offered. The extent of additional services differs between crowdinvesting providers and often must be paid in addition, which is why users should carefully examine the platforms in order to avoid unnecessary costs. Besides that, all crowdinvesting providers have in common that they support the issuer with the shareholder-management by providing standardized contracts. The contracts, which we found are individual for each platform, leave little space for individual agreements. Mostly, they are written out in full regarding participation-, information- and controlling rights as well as adminstrational issues and termination agreements (see also Klöhn & Hornuf, 2012).

3. Roadshow Phase

Here the platform provider announces the new investment opportunity and the potential investors are given time to evaluate the new venture and the business model itself. Therefore the platform provides the crowd with the business plan of the venture, business descriptions, image videos and other additional material. Every investor is responsible for the evaluation of the investment. Platforms do not provide any investment advisory service and are no investment brokers in terms of customer-related order fulfillment (Klöhn & Hornuf, 2012), but give investors sometimes the chance to interact with each other and the issuers.

In this context the risk of copying the business idea is given by the fact, that with crowdinvesting, confidential business information are transfered to an unknown group of people. Especially for
knowledge based business models, the risk of reproduction by competitors could appear as a thread to young founders, which can violate their first-mover advantage. Surprisingly, the expert interview with Neuronation, a founder team, which used crowdinvesting, leaves an ambivalent opinion: on the one hand the problem could be solved by reducing the detailedness of the provided information, while issuers risk the possibility of law suits in the case of loss. On the other hand some founders do not take this as a problem. They went public with their offering, when their core product or service would be ready for the market and by this the business model would be already developed (Neuronation, 2012). Hereby the founders could even use the first-mover advantage provided by the timespan between starting their business activity and the appearance of first competitors.

The fact that every investor must analyze the business plan by itself leads to a discrimination problem of the investor: In a setting with informed and uninformed investors, the informed investors can discriminate the uninformed ones by buying the underprized shares, while leaving the overprized shares to the uninformed investors (Mäschle, 2012). On the other hand, the uninformed investors can overcome the discrimination if they would have the chance to follow the herding behavior (see chapter 5.4). Mäschle (2012) notes that investors are likely to use a free-rider strategy in order to avoid time-costing searching and evaluation activities, which would reduce individual costs of information production but raises the risk of irrational exuberance. That is why a crowdinvestment platform should install a mechanism to either inform every investor properly, or to make sure that every investor who is interested in the venture can do so. Until now, no analyzed platform has installed such a mechanism in their funding system although the time span with which the shares are sold out depends on the platform and the investment offer.\footnote{In the case “easy card” some investors were complaining that they were not able to participate in the investment due to the fast submission (expert interview with Jens-Uwe Sauer, 2012). The investment limit of a hundred thousand Euros was reached after 87 minutes (Seedmatch, 2012). This questions if the investors are really evaluating the business or just following the herd.}

Considering the possibility of small investment amounts it is doubtful that investors take enough time to evaluate the business idea. Also the range of possible types of investors is greater by using smaller minimum investment amounts, so that the knowledge and expertise of the investors regarding the ability to evaluate the investment decision can be questioned. Besides that Klöhn & Hornuf (2012) found in their study among five crowdinvesting platforms, that the smaller the investment amount the higher the number of investors. This could also be verified in our study. That means that a smaller investment limit would also rise the transactional costs for shareholder management. Two of the examined platforms were supporting small investment amounts and also carried the shareholder management. Those platforms directly buy the shares from the issuer under the suspensive condition that the re-funding reaches the funding limit at minimum, and refund this transaction at the same time by offering the shares to private investors. The advantage is the reduced transactional costs for issuers, who do not have to deal with a crowd but only with the crowdfunding platform.

For higher investments per share, a self-selection mechanism regarding socio-economic characteristics of the investor could occur. However, whether an investor is able to assess the risks and benefits from the business model, especially because everybody can be a potential investor despite one’s ability or knowledge, could not be finally examined in our study.
Hence, most platforms therefore use the **first-come-first-serve model** in combination with the **threshold-pledge system** for their funding process. The threshold-pledge system is using a minimum funding border (Hemer et al., 2011), that must be reached within a period. The period is normally 60 days; most platforms provide the possibility of an extension for additional 60 days. In this time the issuer has the possibility to activate lead users and start the social contagion process. If the funding border is not reached within the agreed period, the project fails and the money is transferred back to the investors. Especially the days before the deadline are very critical if the venture just reaches the limit. The Germany consumer protection allows the cancellation of contracts agreed on the internet within two weeks beginning with the day the contract was concluded (§321d (1) BGB, § 355 BGB). To support this critical phase, platforms sometimes agree to allow a cancellation rate of, for instance, ten percent. That means that ten percent of the investors can cancel their contract without declaring the project as failed.

4. Subscription Phase

If an investor is positive about supporting the business, he is free to subscribe shares in a determined time span, the subscription phase. The minimum investment limit per share varies between websites and depending from the type of financing instrument. It differs between five and 1.000 Euro at minimum for the platform using the auctioning system. This starts with 1.000 Euros in the first round and might be raised during the following auction rounds.

It can be distinguished between two main investment methods: the simple subscription method and a pre-auction method. In the **pre-auction method** the value of the shares is determined by the demand of investors. The advantage is a realistic market estimation of the company value. On the contrary irrational exuberance might be a result through rising share-prices. The **simple subscription method** works after the first come-first serve principle. In this case the investment contract is made directly between the company and the founder, while the platform provides the infrastructure and support. In the other case the investor contracts with the platform in the first step, who itself participated in the start-up and refinanced the participation through a following submission of shares in a second step. The advantage is a reduction of complexity for the start-up, which has only one investor and not many small ones.

Our research also identified different legal settings regarding the submission of shares: a **trust model** (direct submission of shares with platform as issuer), a **peer-to-peer model** with a direct submission with platform as intermediary or a **stock-model** as funding systems. In the trust model, which has been identified two times, the investor is, like in a trust- investment, not directly investing in a company but contracting with the platform. The generally used financing instruments on crowdinvesting platforms are either silent partnerships or participating loans. In the peer-to-peer model, which has been recorded in the majority of cases, one can subscribe any desired amount of shares with a constant value directly from the venture until the budget target is reached. Here the first come-first serve principle is applied. The value of the shares is either set by the issuer or it is calculated by an **auction mechanism** (identified one time during the analysis). On the contrary the **stock-model** is used by one crowdinvesting platform. Here it offers stock shares as a way to finance a business, but is also providing the possibility to trade them using the **company-own trading system**.
By clicking on a virtual button the investor accepts the investment offer. For the conclusion of the contract we experienced two main systems: the “offer acceptance” or “invitation to treat”. With the “offer-acceptance”-model, the offer made by the issuer is directly confirmed by clicking on the button on the website. Mostly an automatic payment procedure follows for the investor, supported by a trustee bank. Hereby we identified one bank, which seems to have specialized among others in crowdfunding transactions. In some cases the investor can pay via bank transfer or other transfer services. When the money has been transferred, the investor usually gets the signed contract via email or post. The advantage is a fast handling of payments, while it would not be controllable who is investing.

This is different to the “invitation to treat”-model, where the investor signals interest in investing in this offer by clicking on the button on the project-website. The emitter now can decide whether to accept the investor or not, which would be positively confirmed by the submission of the contract to the investor. The money has to be transferred afterwards individually by the investor. Hereby the advantage is that the issuer can control who is investing. On the contrary this system implies high transactional costs for the issuer. If the funding limit is reached, the capital seeker transfers the service fees to the crowdfunding platform. The process is sketched in following Figure 10:

![Crowdfunding process diagram](image)

**Figure 10: Crowdfunding process**

5. Holding Phase

During the holding period he is frequently provided with information by the issuer, for instance about the annual and quarterly business development or gets informed if something unplanned happens. After the ending of the holding period, the investor can decide whether to prolong or cancel the investment. Hereby the exit strategy depends on the individual investor and remains unclear, because it is too early to consider any empirical data.

The holding period varies between platforms and projects. In general it would be very hard for startups to calculate on a short-term holding period for re-funding of sold shares. Therefore the most platforms offer a medium term holding periods (between five to ten years). Hereby the platforms using the trust-model and the stock-model have the advantage of providing a higher flexibility in terms of offering a variable holding period resulting from their special business model.

The costs for issuers also vary widely between platforms and depend on the type of investment of the additional services. Generally it is an amount of five to ten percent of the funding in total. All
platforms charge the fee only if the funding is successful. Attention should be paid to the detailed service arrangements: sometimes additional costs for the trustee service, managerial and lawing service as well as certifications, like a prospectus, occur. One platform has been identified that uses a rating service (“Crefo-Auskunft”) to signal the liquidity to investors on the project page which must be paid extra. In the case of another crowdinvestment provider ventures have to prepare a prospectus if they would like to obtain more than a hundred thousand Euros. This is necessary because legal issues but cause additional cost around twenty thousand Euros. Also most platforms want to install a project video or photos, which must also be paid individually.

For shareholder the service is mostly free. One platform is charging an ordering fee with five Euros, which is due to the special stock –model. Another crowdinvestment platform with a trust model charges for services ten percent of the owned shares which is charged related to the performance like preparing performance and tax reportings. In case there would be a negative performance no fee would be charged as well.

6. Exit Phase

For this phase we have almost no information regarding the processes and possibilities, because there was no empirical data about the exit of an investment made by crowdinvesting. This is due to the fact that the holding period of the first investments will only end in 2014. The exit of a crowdinvestment is due with the expiration of the holding period if no automatic prolongation mechanism was agreed in the contract. Otherwise the investor or the company could cancel the contract after the expiration of the holding period. If the venture would have submitted shares with different holding periods and is, by this, planning an incremental exit, the dilution of shares could be possible. The likelihood for it would be greater, the higher the difference between the costs for the new capital and the current crowdinvestment is.

For a sharp exit, it depends on the individual development of a financed company how it would be processed. From this point of view, there are two main ways of pursuing the exit: a) if the issuer has a weak financial basis or is even insolvent, it is likely that only a small part of the shares or less can be repaid, which means that the investment has failed, and b) if the venture is performing well or even better than before the crowdinvestment, it is likely that the shares including the return would be repaid and the venture could do once more crowdinvestment if the costs for it would be lower than for using another financing instrument, like obtaining venture capital, etc.

Empirical data show that the market is still supplying crowdinvestment capital, which allows capital seekers to open new financial rounds on it, even if the first crowdinvesting round would be on-going (see Seedmatch 2012). Here also the investor faces the possibility of the dilution of shares. Thereby it depends on the individual contract with the issuer and the platform if an anti-dilution agreement is arranged. During our analysis we found only a few contracts where this was the case (see Klooß, 2013).
5.3 Herding behaviour and motivation for crowdinvesting

In this chapter, we will investigate in the crowd behavior and the individual motivations for participating in crowdinvestment. There has been almost no research so far that investigates investment decisions, herding behavior and motivation that lead to the use of crowdinvestment, which, according to Burtch, Ghose & Wattal (2012), could be due to the small volume of transactions. Also, the empirical proving of herd-behavior is, in general, very difficult to fulfill, due to the need of a big sample and controversially discussed methods. Besides, most existing studies focus on the problem of herd behavior among institutional investors, but prove equally mass behavior at best and not the cause “herd behavior” (Freiberg, 2004). In general one can say that private investors demonstrate higher probability of herding behavior due to the difficulties in acquiring fast and sufficient market information and the interpretation of the findings (Freiberg, 2004). Additionally diverse personal motivations lead the private investor to draw an investment decision. Nevertheless we have empirical evidence that herding behavior on capital markets can lead to negative welfare-effects, which is shown by the history of the new-economy bubble and the recent financial crisis (see for instance Ofek & Richardson, 2003; Sournette & Zhou, 2000; Miller, Mohanty & Zhang, 2009).

Before we examine a model of social influence, it is useful to also understand the motivations of investors to participate in an offer. Therefore, in chapter 4.1.2 the three different types of motivation by Reichwald & Piller (2005); Reichwald et al. (2004) and Kleemann et al. (2008): extrinsic motivation, intrinsic motivation and social motivation. Regarding crowdfunding, several studies found that intrinsic and social motivation, such as the feeling of being actively involved or the patronage of a project, matter to supporters (Ordanini et al., 2011). In the case of crowdinvesting some hints are given that these factors also matter even if not solely. Moskowitz & Vissing-Jørgensen (2002) found that the return of shares hold in private equity is equal to the return of public market equity index, but with a higher risk, which means that investors would have not only a financial incentive to invest in new ventures but also intrinsic ones, for instance supporting new ideas.

It is obvious that extrinsic motivations play the main role as investors support founders with their money and earn a profit in return. But since the annual revenue sharing is very small, it can be questioned that the revenue per share outweighs the transactional costs of the investor. If this were be true, there must be other factors that lead the investor to participate. On the one hand it can be assumed that investors invest because they expect to gain an additional profit from the exit of the founders, which would be indicative that investors have a minimum experience with their investment and that they would evaluate the business idea more intensively than the speed with which shares are sold out. On the other hand, social factors, like the support of an innovative idea, could have an effect. In a first study by Harms (2007), where investors could decide to invest in a fictional crowdfunding project, the main incentives are based on an economic value the investor perceives as well as the personal utility investors are gaining by the investment. Although this study has been done by using an explicit crowdfunded project, it seems rational that these factors are also transferable to crowdinvesting.

In addition, Ordanini et al. (2011) found that investors are not only attracted by the opportunity to earn profits, but by the novelty of the product, which would also confirm the hypothesis, that not only monetary incentives matter. The possibility to foster an innovative service or product gives the founders the feeling of contribution. Also the opportunity to use the product or service first could
matter. If the investors does not believe in the product or service or at least does not expect others to buy it, why should they invest and risk a total loss? In conclusion, crowdfunding and crowdinvesting must attract a relatively high number of innovators or early adopters (Rogers, 2012). Additionally, also the social motivation plays an important role, as Ordanini et al. (2011) mentioned. According to the authors, the first investors are those who have a strong identification with the founders. So if they want to attract investors they should provide as much information about themselves as they could in order to strongly identify with their investors.

Furthermore small investors have an incentive to use a free-rider strategy in order to avoid own costs. From research in peer-to-peer lending it is known that not only financial aspects matter, but psychological and social aspects are also considered by private investors. Like business angels, crowdinvestors do not only want to make profit with their investment but are also altruistically and hedonically motivated (Oetker, 2003; Tonger, 2000; Small et al., 2011). We experience that a social distance also influences lending decisions quite strongly. These findings are valid for any financial characteristics, for instance riskiness of the loan, amount and duration of the engagement. If the borrower is very similar to the lender in terms of gender and occupation, the social distance is smaller than with other borrowers or in groups with more than one borrower (Small et al., 2011). For the case of crowdinvestment, the potential for social influences may tempt the observer to draw decisions faster; because the observation of others is easier (Burtch, Ghose, & Wattal, 2012).

For our research, it is an interesting question how capital is acquired through crowdinvesting platforms and what processes leads an investor to a positive investment decision. Therefore we use the model of social contagion proposed by Russ (2007), depicted in Figure 11.

![Figure 11: Phases of social contagion process by Russ (2007)](image)

Similar to the concept of the diffusion of innovation and technology adoption (Hippel, 1995; Rogers, 2012) the model by Russ (2007) is based on the number of new affected agents. The concept consists of three phases, while in each phase different user-types are attracted. These types are more or less susceptible to information on contributions made by others when making their own decisions.
(Burtch, Ghose, & Wattal, 2012). In the case of crowdinvestment, the model of the social contagion process can be applied for the development of the platform as well as the investment process:

- **In the initiation phase,** psychological factors or characteristics trigger the start of the process; for example, the attractiveness of a content, and usability and simplicity of a website matter. The focus is on attracting the innovators and first-time (beta) users, which fosters the reputation of the new website. Hereby the mentioned groups are more likely to reinforce to decision of others than for instance repeat users (Shang & Croson, 2009). By attracting more and more users in the other phases the process spills over to other agents and prompts an accelerating social contagion process (Shiller, 2000; Kindleberger et al., 2011). For a successful funding, this degree of excessive demand is needed. The audience is more and more focused on changes in their environment, for instance a displacement in the social or economic world; a process, that is being catalyzed by social influences, for instance, like key media or politics. This situation fosters the participation of other individuals, who step in. Additionally there are some restrictions of the system, for example limited knowledge of the situation or an instability in the social relationships.

- **In the propagation phase,** the psychological phenomena of “other directedness” (point C) causes a self-enforcing chain reaction. By evaluating potential risks through the observation of others (dominant individuals, for instance lead users, core members or opinion leaders), early adopters imitate others rather than considering the facts, because the signal produced by others’ prior decisions overwhelms the importance of any private information (Burtch, Ghose, & Wattal, 2012). In our case, individuals start to take part in new websites by investing in offered projects. The decision of individuals whether to become a member or not depends on the existing members. The same might apply to investment decisions. These “core members” (Russ, 2007) also produce new content, foster trust and support new members in using the new website. In this phase marketing is a critical point since the critical mass is not reached yet.

- **In the amplification phase a critical mass (point B) must be reached in order to offer a stable online platform with an environment that is making a social life possible.** The chain reaction in this phase accumulates to a peak, at which the late majority participates as well. For few of the investment projects, an “engagement moment” appears, which activates a high number of people who want to invest. Those people do no have any original connection to the project but start getting in contact, because they noticed it from others. A race to be in for investing in projects starts, because of the first-come-first-serve principle (see chapter 5.3.3) that platforms are using and a contraint of shares are issued (Ordanini et al., 2011). Especially in this phase social facilitation features, with a technical or social character help to foster the individual attractiveness. The aim is to make the crowd use the platform resp. invest into the project. This phase is capable to enhance the online business dramatically.

- **The process will be terminated** if the trigger factors do not longer exist or if the former euphoria vanishes, which can happen due to saturation, substitution with another service or mistakes by the platform provider. In the case of facebook for instance, several thousand user quit their membership in order to protest against the new privacy regulations (Frickel, 2010).

A first attempt to apply the model to crowdinvesting has been developed by Ordanini et al. (2011). The authors were able to link the different stages of funding in crowdinvesting to the activities of different investor types and distinguished between two phases: the first phase is characterized by a quick and significant flow of investment that reaches almost half of the target capital, which is called
the friend-funding phase, while in the second phase the slow down of investment growth can be observed. Especially in the friend-funding phase the investments of family and friends are very important (Ordanini et al., 2011; Agrawal et al., 2011), because they initiate the funding process and by signaling trustworthiness due to the bearing of uncertainty and risk of the investment. The second phase is a critical phase due to the slowing down of the funding growth. Hereby it is important to trigger the investors’ participation by marketing activities and word-of-mouth communication (Ordanini et al., 2011). Therefore the reputation building of the project and website are important.

All in all, the individual in the crowd plays a vital role in activating the process and influencing the ultimate value of the offerings or results of the process. Crowdinvesting seems to have parallels to social networks since it is important for the crowd to interact with others (Ordanini et al., 2011). To foster this process it is obvious that platform providers should engage more in marketing activities, because the process of social contagion can be used for the community building in order to attract the potential investors.

Also, our experience from the platform analysis supports the previous presented model regarding the importance of the community building for the survival of the website. The more active a community is the better is the performance of the platform in terms of successfully funded project. The empirical data may not be representative considering the small number of offered project among websites. But we found cases where the platform was not able to create a strong community, for instance by offering the customer the possibility to interact and failed. This strengthens but does not validated our assumption that platforms who have no strong community also provide less investment offers and vice versa, which questions the commitment.

However, the community building can be done by internal (for instance the mentioned publishing of community ratings or comments, webinars and live-pitches to interested supporters) and external (for example the newsletters, fan-pages, advertisement etc.) activities. Internal activities foster it through the participation in the evaluation process of investments, where investors can rate, comment and discuss the projects with others. External factors are, for instance, the mentioned road shows, video pitches and forums where investors can contact the issuers. We found examples which can enhance the community building: on two of the analyzed platforms supporters can rate the business idea in a detailed questionnaire and comment on it. These platforms also publish the activities by other community members, which has a positive effect on the community by fostering the social contagion process. Other providers help the investor to ask questions through online live video pitches, which is directly correlated with a greater contribution of the crowd. An expert interview with the founders from Neuronation showed that investors also actively participate with their knowledge and feedback, analogous to Business Angels, in the venturing process (Neuronation, 2012). So investors do not only decide which future products should be sold by investing in the product idea, they also help to further develop the products and services by actively participating (see chapter 4.1.2). Additionally some crowdinvestment providers also arrange shareholder-meetings as a special service. So could a very similar comparator to the particular investor enforce or mitigate the action of the investor by serving as an opinion leader. In addition, crowdinvesting can also attract Business Angels from anywhere, which uses the communication technology to invest in new ventures. In conclusion investors, who are part of the group family and friends, are signalling with their investment that the project is credible to others. By doing so they help to attract other investors that are not related to the group. So the local social network of family and friends becomes important as
a seed. Nevertheless the community building differs from platform to platform which could be an indication for the sustainability and performance of the website.

In conclusion, we agree with Rubinton (2011), who found that the web of reputation is restricting growth of crowdfunding, because this part of the internet is, according to him, still in its infancy. A community fosters the reputation and trust building process. It is built through multilateral channels and relationships of individuals who use the platform or invest in the project first and then introduce others to the process of social contagion. Burtch, Ghose & Wattal (2012) add that the social influence process also can lead to antagonistic behavior, such as anti-herding or anti-mainstreaming, which can be used as a competitive advantage. Surely crowdfinancing itself can be seen as an anti-mainstreaming trend, which is used by a growing number of investors and founders, who follow the process of social contagion and through this become a part of the mainstream.

Due to the high importance of community building and social contagion to the success of the projects and platforms, further research should be done investigating the relationships between anti-herding, social contagion and success of the platforms. For instance it would be interesting to find out whether a strong community prevents the issuers form defaulting more likely as we have experienced it in the social-lending sector (see Karlan, 2007; Woolcock, 2001), because this would be helpful to the investor and founder to reduce their risks. Furthermore, unsuccessful investment offers and crowdinvestment platforms could be explained by the incomplete process of social contagion as well as the termination of whole platforms. We partly considered these aspects in our website analysis, starting to ask whether the platforms provide a community or not and collected different forms of communities.

5.4 Trust and the principal-agency problem in crowdinvesting

As mentioned at the beginning of the chapter 5, additional risks appear when applying crowdfinancing. Since the investor is engaged in high risk and high uncertainty investments, trust and trust building plays a vital role in crowdfinancing. Trust is a source for reducing complexity in incomprehensible situations, where not all information is provided (Endreß, 2002). The more distinct the awareness of people of the uncertainty and unpredictability of events is, the less the ability to act on oneself and the higher the necessity to trust in experts, machines and institutions (Endreß, 2002). According to Luhmann (2001), trust is a solution for specific risk-problems. It reduces complexity, enables stable frame conditions for acting and interacting processes and supports the building and preserving of stable social relations (Endreß, 2002). Furthermore, trust is an important factor for attracting social capital, which is a motive for founders to use crowdinvesting (Zucker, 1986). Investors have to trust the share emitter, who uses the obtained to build a business, to prevent their investment from failing. By saying that an investor trusts the issuer of shares, it implicitly means that for the investor the probability is high enough (he is expecting), that the emitter will perform actions that are beneficial or at least not detrimental for him to consider to invest in the company (Gambetta, 2001). Additionally, the investor can be a customer of the company he invested money in. So the signalling of trustworthiness by the issuer is not only relevant over the holding period of the investment but beyond. According to Simmel trust is at the same time the promise that the reciprocity-transaction both parties are engaged in will persist over time lags (Simmel et al., 1989). Given a great time lag between investment and return under the circumstance of incomplete information, trust must occur.
To gain a better understanding of how trust is built we refer to the principal agency theory. Like in the most situations, where an intermediary is installed, there is a construction of a two-sided or more-sided principal-agency relation. This is the case for crowdfunding platforms as well as for VC financing. In the first instance the investor (emitter) is the principal, while the emitter (platform) can be seen as the agent. In the second instance the intermediary is the principal and the capital acquirer the agent. In the principal-agency-problem the principal cannot fully observe the actions of the agent (information asymmetry) and therefore not ensure a positive fulfillment of the order (moral hazard), which leads to hardly measurably agency-costs: 1) the conscious or unconscious deception regarding the return and risk expectations and the feasibility of the project 2) the needed resources 3) the qualifications and motivation of the agent 4) the use free advantages (Schefczyk, 2006).

Exactly this situation is given in our crowdfunding construct, which is a main condition for desiring trust (Giddens, 1995). Conflicting goals of principal and agent endanger a result that would satisfy both sides. In our case, the issuers want to obtain enough capital for the business to survive. The investor commonly wants to make profit with the investment. To antagonize unprofitable developments, the principal normally sets incentives for the agent to act in the way the principal wants. This is not possible here, where the investor mostly has no voice but has legally guaranteed controlling rights. These rights guarantee the provision of balance sheets, quarterly reportings and the note of unforeseen events in order to allow the investor to act for saving the invested money. In other words: the government provides a legal framework for the interaction between principal and agent, thus facilitating a foundation for trust. Zucker (1986) called this factor “institutional-based” in his trust-building triangle, which is visualized in Figure 12.

![Figure 12: Factors that influence the trust building between investors and issuers referring to the model by Zucker (1986)](image)

Here the information is asymmetric. On the contrary, the investor can quit the contract only after the agreed holding period has ended or during extraordinary events. In this situation, the principal, who is the investor has only little rights and bears a high risk and the uncertainty of totally losing the investment or gaining the maximum of the announced profit. So if the issuer wants to attract investors he has to signal that he is trustworthy in order to foster an investment by the principal (see also Kortleben & Vollmar (2012)). Zucker (1986) nominated this factor in his triangle “process-based”, while Colemann (1990) considered the building of trustworthy relationships as a kind of transferring

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controlling rights in risky and lost situations. The investor would only invest if his costs match the revenue plus a profit. Otherwise the rationality of the investor can be questioned, because the costs of the investment, risks of a total loss and uncertainty which is partly transferred from the founder (agent) to the investor (principal) compared to the profit, is often presumed to be underbalanced. Given a “homo economicus” there must be an additional benefit of the investment that is balancing the costs with the profits. This can be the aforementioned satisfaction in helping others or an exclusive offer. Sometimes agents do not only issue shares but also immaterial and material incentives like in crowdfunding, which helps to build trust.

Last but not least trust building is influenced by individual prepositions, developing through past experiences, expectations and knowledge. Zucker (1986) named it the characteristics-based factors. The trust is positively correlated with expectations (Gambetta, 2001). Trust is high if the past experience with an investment is positive. The expectation of the investor is that the outcome would be ceteris paribus (the same). Knowledge of an investor can foster but also inhibit trust building. If the investor is an expert of the branch the business model of the share-issuer targets at, the investor’s knowledge helps to evaluate the probability of a failure or a gain. Here trust is a weak influencing factor for the investment decision, as the investor relies more on his own knowledge. In case of absence of such knowledge the trust becomes a strong factor for the investment decision. This is highly relevant in cases of time lags which occur inevitably. Even if the investor would be an expert in the branch and is therefore able to evaluate the business model, he can only slightly foresee future developments during the holding period. In cases of absence of knowledge the investor needs to rely on the word of the issuer, he has to trust him. As crowdfunding is accessible for anybody, it can be assumed that not every investor has the knowledge to evaluate any investment offer, which raises the importance of trust. Additionally the longer the holding period of the investment, the higher the possibility of unforeseen events to occur which also raises the need for trust. Therefore issuers and platform providers should put effort into building up trust, starting with signalling credibility to the audience. They should also learn more about the investors using crowdfunding in order to better fulfill their needs. Referring to our crowdfunding study, it would be very interesting to investigate the relationship between trust building activities and the performance of the platform.

6. Implications for entrepreneurship research

The entrepreneurship research is facing a new, very creative market development, which is investigated in a growing number of studies. Crowdfunding is only one example. At this juncture the advantages for founders and investors predominate the usage, because a fast capital acquisition and capital investment for small amounts is provided, while the revenue for the investor remains uncertain. The financing of new ventures proves to be occasionally difficult, especially for small amounts. Therefore crowdfunding is becoming more and more popular.

The method is currently very successful in the market, but for investors no past experience can help to build expectations. Nevertheless many new crowdfunding platforms are starting the business activity, while investors are demanding more new investment opportunities. This reflects the need of the founders for new ways to obtain small amounts of money but also the need for investors to invest in times of low credit rates and high economic uncertainty. It is characteristic of a systemical weakness of the German market- the missing financial support especially for small and medium sized
startups. Based on the presented paper, further basic investigations regarding the financing-behavior and the support of startups should be done.

In the presented paper we investigated the current crowdinvesting websites by analyzing the 11 so far active platforms. Through this, we contributed to recent research by providing a general overview over the different forms, functioning and instruments of crowdinvesting market. To sum up the findings- the market is still young but very fast developing in terms of the business models of the platforms and fast growing in terms of the number of financed projects. How the subscribed shares will develop- which must be held at least three years, if they are losing or winning value- will be shown in 2014, when the first shares are payable. Therefore further research should concentrate on the aspects that will come up with the first investments that have reached their due date: Are the ventures able to pay back the investment? What happens if the company becomes insolvent in the meantime? How could replacements or connected investment be designed?

Hereby the research should pay more attention to the investor-behavior regarding the attraction of them to the platform and new investments. We must learn more about the investor in order to find a good way to support founders and investors in saving their interests. Moreover, studies should focused more on the legal and economic framework. It is still unclear how the legal framework could support the investor and founders and build more certainty for crowdinvestment. It is also questionable if crowdinvesting is able to fulfill the high expectations, if the market got a legal framework like in the U.S.? Which implication has a higher investment limit, like we face it in the U.S., to start-ups, investors the general economic development and other financing methods, like venture capital? Last but not least, the research could pay more attention to the development of crowdinvesting in Europe to provide ways to foster the entrepreneurial development of our neighbor countries. How could the overall economic impact of crowdinvesting especially for countries with less developed financial markets be estimated? Later research therefore should question again the utility of the instrument as well as the promotion of innovation as well as the sustainability of crowdinvesting.
7. References


## II. Appendix - Further information on the analysed websites

<table>
<thead>
<tr>
<th>Platform Name</th>
<th>Bankless 24 <a href="http://www.bankless24.de">www.bankless24.de</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs for Issuers</td>
<td>200 € for Information from credit reference agency (Crefo), variable costs for flyer, success salary for the platform, no information about service provision fee</td>
</tr>
<tr>
<td>Funding System</td>
<td>Threshold-Pledge System with 75 % of the target volumes, Request Model</td>
</tr>
<tr>
<td>Minimum investment limit</td>
<td>100, generally no limit, but depending on Agreement for Profit Participation Right (Genussrechtsvertrag)</td>
</tr>
<tr>
<td>Funding instrument</td>
<td>Equity due to standardized Profit Participation Right, without participation by investors with profit and lost dependent “Grunddividende” and sharing of profit and loss; the right for payback of profit participation rights, no additional contribution needed, selling of participation rights possible</td>
</tr>
<tr>
<td>Holding period</td>
<td>Variable duration</td>
</tr>
<tr>
<td>Platform service</td>
<td>Quick-check on basis of project request, commission of ratings, private speech, institute. Investors, Support for commission, construction, deal and completion (calculation of profits, administrative accompaniment of escrow deposits, certificate for tax purposes)</td>
</tr>
<tr>
<td>Evaluation of Business Ideas/ Value</td>
<td>Rating using information from credit reference agency, Quick-Check using the platform; Detailed finance information after login, general introduction of the company accessible</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Platform Name</th>
<th>BestBC <a href="https://www.bestbc.de/">https://www.bestbc.de/</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs for Issuers</td>
<td>Funding commission in case of success: 10 % of investment volume, facultative output: Investor management (50€ per month), co-working space (from 200€ per month), professional Pitch-Video including script &amp; production (from 2000€), prospectus production for investments (from 20.000 €)</td>
</tr>
<tr>
<td>Funding System</td>
<td>Threshold Pledge System; contract formation while “click on”</td>
</tr>
<tr>
<td>Minimum investment limit</td>
<td>250 € - 10.000 €</td>
</tr>
<tr>
<td>Funding instrument</td>
<td>Silent partnership (participation and right of control) and profit participation right, up to 100.000€ equity</td>
</tr>
<tr>
<td>Holding period</td>
<td>5 years (both projects)</td>
</tr>
<tr>
<td>Platform service</td>
<td>“concept of mentors”, network tasks, individual incubator services (Frankfurt/M and surroundings) examination of funding by selected assembly of experts, individual consulting/ coaching, PR-communication via influencer network, professional investment management, facultative follow-up financing, co-working space, all-round-carefree-package along the supply chain: intermediation of services provider, qualified consultants, lasting relationship to the mentor and other benefits (personality tests and independent quality labels)</td>
</tr>
<tr>
<td>Evaluation of Business Ideas/ Value</td>
<td>Standardised selection procedures and internal advice from experts, business plan analysis, certified personality tests – increases quality of the project and reduces the risk of failure, experts also evaluate applications by project teams at bestBC, including an overall score (average application) an the end of the application phase</td>
</tr>
<tr>
<td>Other</td>
<td>Non-assessable data, clear contract design. Stipulation (the invested capital can only be used for the predetermined Purposes, special right of cancellation for investors</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Platform Name</th>
<th>Fundsters Venture Capital GmbH <a href="http://www.fundsters.de">www.fundsters.de</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs for Issuers</td>
<td>In case of successful funding, FUNDSTERS gets 9 % of the sum of the funding, that will be re-invested in managing the platform and support of customers, cost only arise with success; Cost during and after the participation: 10 % of the gains disbursed; Investment campaign: 9 % of the sum of funding</td>
</tr>
<tr>
<td><strong>Funding System</strong></td>
<td>Threshold Pledge System; contract formation while “click on” via “prospectability” Funding &lt;1 Mio. Euro</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Minimum investment limit</strong></td>
<td>Diverse</td>
</tr>
<tr>
<td><strong>Funding instrument</strong></td>
<td>Mixed financing instrument: investment &amp; sponsoring Fundsters-Emitter-relationship: atypical silent partnership Investor-Fundsters-relationship: typical silent partnership Therefore company does not have to deal with every single stakeholder Fundsters is responsible for administrative work, fiscal support and prospectus liability</td>
</tr>
<tr>
<td><strong>Holding period</strong></td>
<td>5 years, after that the typical silent partnership can be cancelled, as soon as 25% of the capital has been cancelled, Fundsters will start a vote on the cancellation, in case of disposal Fundsters will cancel all stakeholders and calculate the repurchase value</td>
</tr>
<tr>
<td><strong>Platform service</strong></td>
<td>Fundsters offers: crowdfunding and crowdfunding, also supporting greater engagements, which need creating a BaFin-prospectus, Other services: groups for exchange (interests or local areas)- does not exist yet</td>
</tr>
<tr>
<td><strong>Evaluation of Business Ideas/Value</strong></td>
<td>Only Display of the financing plan and profit participation right (after login), public information: Founder and general organizational information, credit reference agency (Bürgel). The company or an external investor can bid and all shareholding investors can discuss it online. If no agreement is reached, the Institut für Wirtschaftsprüfer e.V. (Institute for Auditors) makes the final decision (fair price, to be paid by external investor or company)</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Publication of most relevant data (Business plan) without previous login, additional information from Bürgel possible, benefits: updates about news about the company on Fundsters, and about any kind of progress, questions or polls can be accomplished on the campaign-page. Additional information via email: news, legal instructions, consumer protection rules and transparency over pricing/procedures/legal alliances</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Platform Name</strong></th>
<th>Startkapital-Online <a href="http://www.startkapital-online.de">www.startkapital-online.de</a></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Costs for Issuers</strong></td>
<td>10% of the all-in costs of financing</td>
</tr>
<tr>
<td><strong>Funding System</strong></td>
<td>Threshold-pledge, limit of the funding has to be reaching after 60 days, which can be extended once (for 60 days)</td>
</tr>
<tr>
<td><strong>Minimum investment limit</strong></td>
<td>250 Euros</td>
</tr>
<tr>
<td><strong>Funding instrument</strong></td>
<td>Silent partnership, participation right (not market-listed/quoted), no voiceless reserve liability without benefit of purchase</td>
</tr>
<tr>
<td><strong>Holding period</strong></td>
<td>3/5/7 years-after that cancellation by the end of the year possible</td>
</tr>
<tr>
<td><strong>Platform service</strong></td>
<td>Always have an open eye on customers, guide them with entrepreneurial know-how and good contacts and keep you informed, moreover they see themselves as socially and societal responsible, future-oriented and extraordinarily creative, no hint about risk on the platform, less transparency, no help with making videos (compulsory); marketing for funding, preselection, taking care for complying legally, information on company development/progress on the platform</td>
</tr>
<tr>
<td><strong>Evaluation of Business Ideas/Value</strong></td>
<td>Experienced seniors from economy (Unternehmerforum aus dem Mittelstand e.V.-Entrepreneurs from mid-sized companies) preselect offers- using well known methods: starting with the development potential of the entrepreneur to calculate the investors’ yield expectation (basis for a financing plan that can last 5 years) and will be used to calculate exit income which is due after cancellation of silent partnership = potential of the start-up, used to calculate the participation period &amp; yield expectation &amp; value of the company</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Procedures will be explained clearly, but less concrete, Information Given to investors: short summary on the website</td>
</tr>
<tr>
<td>Platform Name</td>
<td>Berlin Crowd, Initiator Foundervision AG <a href="http://www.berlincrowd.com">www.berlincrowd.com</a></td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td>Costs for Issuers</td>
<td>5 % of overall fund to Berlin Crowd, 3 % Transactional costs for Paypal, 1 % given to trustee, 1 % to legal and economically advice (in case of success)</td>
</tr>
<tr>
<td>Funding System</td>
<td>Threshold-pledge, principle of supply (deadline: 60 days), offer will be accepted by simply pressing the button, no further written form needed</td>
</tr>
<tr>
<td>Minimum investment limit</td>
<td>Minimum contribution: 100 €</td>
</tr>
<tr>
<td>Funding instrument</td>
<td>Participation, service in return or donation, participation as typical silent partnership, cancellation after agreed time at the end of the year, no voice</td>
</tr>
<tr>
<td>Holding period</td>
<td>4-6 years</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Platform service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display of investment for investors and intermediation for financing possibilities for fund-seeking. Start-up can represent themselves as well as their innovative ideas on the platform in order to find investors (via publishing relevant information, documents, prospects and files). However the start-up is responsible for the information being correct and up to date; no investment advice or evaluation of the company, no information about legal, economical or tax-related consequences, involves the risk of total loss, advice against investing money from a loan or money used for own subsistence. Other services: forwarding information on economic situation, financial statement etc.) investor can raise an objection (within agreed period)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evaluation of Business Ideas/ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preselection of ideas via platform, detailed business plan accessible without login, also videos and contact possible, notification of news, the development potential of the start-up and the yield expectation of the investor give rise to the evaluation of the company as basis of crowdfunding, in some cases the evaluation is independent, the foundation is a solid financing plan that lasts many years (based on realistic assumption)- in order to calculate an exit Income, that is due after cancellation of the silent partnership = potential of your start up- the value is used to calculate the participation duration , the yield expectation and the moment in time, the operator only does an restricted examination of the start-up (whether information is correct) but does not embrace it, the start-up itself is responsible for deciding whether the investment is useful or not</td>
</tr>
</tbody>
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<thead>
<tr>
<th>Other</th>
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</thead>
<tbody>
<tr>
<td>Supporters will be named on the project-page</td>
</tr>
<tr>
<td>&quot;If you have chosen the investment type that involves silent partnership, You are obliged to regularly give your investor quarterly Reports but also give short notices about the progress</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Platform Name</th>
<th>United Equity <a href="http://www.united-equity.de">www.united-equity.de</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs for Issuers</td>
<td>Not known</td>
</tr>
<tr>
<td>Funding System</td>
<td>Threshold pledge system, model of request</td>
</tr>
<tr>
<td>Minimum investment limit</td>
<td>100€, but no fees for participating investors</td>
</tr>
<tr>
<td>Funding instrument</td>
<td>Participation right, silent partnership, up to 100.00 € or better 2,5 Mio. € Partnership model</td>
</tr>
<tr>
<td>Holding period</td>
<td>About 5 years</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Platform service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not only investment but also polls about project (giving “stars” and comments)- so you can chose the company you want invest into, the transparency-stars help to find the company that is not only transparent but also considers information wanted by the investor, also: feedback for the business model, provision of equity, partnership model in case of high financial demands, selection of investors, investors as multipliers, crowd-rating increases awareness, selection of financing instruments. Make projects online, fast &amp; easy transaction, customized procedures, no securities</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evaluation of Business Ideas/ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Via crowd; the crowd rates on different perspectives as financial expectations, investment decision yes/no, marketing, market, product idea, usp, etc.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitive information (accessible only after log in)</td>
</tr>
<tr>
<td>As well as information on business, customer, activities ( Business Canvas Model), additional and dependent of fund-seeking person: Information about solvency (Crefo),</td>
</tr>
</tbody>
</table>
### Deutsche Mikroinvest

**Platform Name**: Deutsche Mikroinvest www.deutsche-mikroinvest.de

**Costs for Issuers**: Between 5-10% depends on success, transaction costs, additional costs for shooting a video.

**Funding System**: With or without All or None principle, model of request, temporary (60 days) or not, nationwide.

**Minimum investment limit**: Variable, depended on type of financing.

**Funding instrument**: Type of participation of free choice, public and discrete search for funding, adjusted to the project, share of prices emitted in terms of target group, investment, funding, donation, emission volume unlimited, Equity, Mezzanine Money, minority-/majority-/silent partnership, private placing, expansion financing.

**Holding period**: About 5 years.

**Platform service**: Communication plan, fotoshooting and video, infrastructure for getting money, provision of know-how for participation agreements (equity solicitor), information on silent partnership, participation right, subordinated loan.

**Evaluation of Business Ideas/Value**: Information for investors: Business Model in one sentence, description of the business idea, product offering, motivation behind launch, problem that will be solved, customer needs and customer benefits, status quo, USP (Unique selling proposition). Model of proceeds, growth potential, future plans, SWOT analysis, Milestones (asking questions, conferences web-seminars), NO evaluation on the platform, customers should rely on financial information.

### Seedmatch

**Platform Name**: Seedmatch Seedmatch.de

**Costs for Issuers**: 5-10% of the funded sum, plus transaction costs, need presentation video (3 minutes)- costs vary depending on video.

**Funding System**: Threshold pledge system, normally 60 days but can be extended up to another 60 days.

**Minimum investment limit**: 250 Euros.

**Funding instrument**: Now: equal subordinated loan, for the investor: from now on bigger investment periods are possible, Seedmatch can collect more than 100,000 € per start up, your position during Exit (= when one investor has more than half of the shares) depends on the agreement, moreover your shares decline from period to period (eg. 0.1% during round 1, and 0.09% during round 2)- but it does not change the value of your participation. The subordinated loan brings 1% interest, the yield potential arises from participation in the success of the start-up or after completion of minimum contract duration or through investment at exit.

**Holding period**: 5-7 years.

**Platform service**: Information only accessible after login: Business plan, press review, road shows, possibility to get in touch with the company, ask questions (that will be published on the page), intermediation of loans, news.

**Evaluation of Business Ideas/Value**: Preselection: internal evaluation of the start-ups (by Seedmatch & Experts), criteria. Innovativeness and sustainability of the idea, thoughtfulness of the financing plan, a strong team of entrepreneurs. Important for start-ups: they need to publish a good company evaluation: 1. calculate company value, 2. Use this to calculate timing of funding.

**Other**: 01.08.2012: 525 people invested in more than 1 start-up, 745 invested in 1 start-up, 228 in 2 start-ups, 42 in 5 start ups: 55,8% invested 250 €, 22,6% : 250-500€ 14,4%: 500-1000€. The rest: more than 1000€; Average age: 37 years; Most common first name: Michael; On average 164 investors per start-up.
<table>
<thead>
<tr>
<th>Platform Name</th>
<th>Companisto <a href="http://www.companisto.de">www.companisto.de</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs for Issuers</td>
<td>9%- depending on success</td>
</tr>
<tr>
<td>Funding System</td>
<td>Threshold-pledge system, with temporary investment (see example: 2 months duration but can be extended for another 2 months), on-request model</td>
</tr>
<tr>
<td>Minimum investment limit</td>
<td>Between 5 and 10.000 €, 5 €= 1 share= xx percent of overall profit</td>
</tr>
<tr>
<td>Funding instrument</td>
<td>Incentives, equal subordinated loan, silent partnership (without reserve liability/voice/right to vote but right to control and confide/disclose) not only share of profit but also having a share of company value and proceeds of sales by the start-up, payment transactions and acquisition of shares will be done via the platform. No administration effort for the start-up, service by companisto: clustering investors and main contact person for start-ups</td>
</tr>
<tr>
<td>Holding period</td>
<td>Various, see example: 8 years</td>
</tr>
<tr>
<td>Platform service</td>
<td>Free access: possibility to rate (“stars”) and comment on things by network users, publication of investor-names, the amount they were investing and their origin, updates on development of the business, detailed information about the company (break-even, shareholder structure) the standardized Companisto-contracts were adjusted by holding companies (Venture Capitalists) and therefore facilitates follow-up financing</td>
</tr>
<tr>
<td>Evaluation of Business Ideas/ Value</td>
<td>No information</td>
</tr>
<tr>
<td>Other</td>
<td>Equal loan has to be repaid within one year (4 instalments), respite in the event of non-payment will be charged with 6% of interest- can be contracted out (typical for this type of financing). Start-up is responsible for transferring the investors’ flat rate withholding tax to the finance authority, issue the certificate/voucher</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Platform Name</th>
<th>Innovestment Innovestment.de</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs for Issuers</td>
<td>Depending of success, 8 % of sum of funding</td>
</tr>
<tr>
<td>Funding System</td>
<td>System of auction, conclusion of contract via platform</td>
</tr>
<tr>
<td>Minimum investment limit</td>
<td>Depending on starting price, at least 1000 €, companies will determine a minimum price as well as the amount of shares that should be sold by auction. After the auction has started, investors can bit (starting price: 2000 €), successful bidders will conclude a contract with the start-up (silent partnership) &gt; RWTH Aachen Spin-off</td>
</tr>
<tr>
<td>Funding instrument</td>
<td>Atypical silent partnership (only right to control and limit up to 100.000 €), auction procedure brought forward (towards company evaluation)- therefore not more than 100.000 € (= absorption of funds)</td>
</tr>
<tr>
<td>Holding period</td>
<td>Investors: 3 years, start-ups (emitters): 7 years at minimum</td>
</tr>
<tr>
<td>Platform service</td>
<td>Coordination of contracts of shares, allocating the procedure of the auction, standardized investment contracts ensure legal certainty &amp; avoid notarization</td>
</tr>
<tr>
<td>Evaluation of Business Ideas/ Value</td>
<td>Value of the company is depending on supply and demand by investors, no active valuation by the platform</td>
</tr>
<tr>
<td>Other</td>
<td>Phase 1: every investor can bid 1000€ (per share) until all 50 shares received offers, the minimal capital needs will be calculated- in this case 50.000 €, which means that this investment project was successful</td>
</tr>
<tr>
<td></td>
<td>Phase 2: if all 50 shares came in, one investors who invested 1000 € will not be successful anymore (because everyone else also invested 1000 €) so in order to be successful, he needs to invest more, for instance 1200 €. He will now be on a rank between 1 and 50 and displace rank 50 &gt; new and higher bids gradually replace lower ones. If the bid on rank 50 now counts 1200 €, the start-up gets a fund of 60.000 for 50 shares. This process keeps going until the maximum capital requirements are reached. In the following example, 50 shares should be 2000 € or more to reach a maximum requirement of 100.000 €</td>
</tr>
</tbody>
</table>
Phase 3: If the bids increase even more, the start-up might only be asked to give out 49 shares (instead of 50) to reach the 100,000 € (Rank 49: 2,040 €). This will continue as long as investors are willing to spend more money. For instance: 20 shares with at least 5000 € per share means that the start-up needs 20 shares to reach the 100,000 €.

<table>
<thead>
<tr>
<th>Platform Name</th>
<th>Mashup-Finance mashup-finance.de</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs for Issuers</td>
<td>No information</td>
</tr>
<tr>
<td>Funding System</td>
<td>Threshold-Pledge-System, On-Request-Model</td>
</tr>
<tr>
<td>Minimum investment limit</td>
<td>100 Euros</td>
</tr>
<tr>
<td>Funding instrument</td>
<td>Mezzanine Financing: Crowdfunding for start-ups and already established companies; also at one's disposal: competency of foundation and network. Participation right (membership-alike law of property, no right of participation and control under company law), concrete organization/structure of contracts</td>
</tr>
<tr>
<td>Holding period</td>
<td>No limit, earliest cancellation after 8 years (active project); earliest cancellation by emitter: after 14 years</td>
</tr>
<tr>
<td>Platform service</td>
<td>No, only display of financing plan &amp; contract of participation right (after login). Free information: founder and general information about the company (who, where, why and so on), executive summary, conditions (participation right), informative prospectus, advice by platform: to look for other sources of financial help</td>
</tr>
<tr>
<td>Evaluation of Business Ideas/Value</td>
<td>No information</td>
</tr>
<tr>
<td>Other</td>
<td>Focus of business activities until 2015: more awareness on the market (investment &amp; financing solutions in the Bavarian area) Platform criteria for financing: local alignment in Bavaria or Munich. Innovative &amp; enthusiastic ideas, lasting entrepreneurship (identification with company), ongoing (at least 5 years), engagement within the company</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Platform Name</th>
<th>Bergfürst Bergfuerst.de</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs for Issuers</td>
<td>8% of the subscribed capital stock, percentage will be stated precisely in the emission prospect/statement, when the company is listed successful on the Bergfürst trading center, Bergfürst will ask the emitter for a fee for administering the share registry, for communication between shareholder and company and publishing on the website. The shareholder pays 5 € for his/her command</td>
</tr>
<tr>
<td>Funding System</td>
<td>Pre-paid system, account in credit for buying shares</td>
</tr>
<tr>
<td>Minimum investment limit</td>
<td>250 Euros for one share</td>
</tr>
<tr>
<td>Funding instrument</td>
<td>Share (with voting power): investors are coparceners of the company, Bergfürst only places registered shares with restricted transferability: there is a register which lists name and address of investors, so shareholder can be included in social marketing strategies, since shares are equity they cannot charge interest that might be a burden in the period of growth. Fast growing companies also pay no dividends. They re-invest their profit into the business model to increase the value that will be reflected in the price of shares. This rise can be constantly achieved by the shareholder when he/she sells the share at Bergfürst, the investor can benefit from the later stock market launch or Trade Sale,</td>
</tr>
<tr>
<td>Holding period</td>
<td>Changing but no lock-up period</td>
</tr>
</tbody>
</table>
| Platform service | Bergfürst is a trading centre, where private investors can buy shares of start-ups (premarket) and then trade it like they do on the stock market, they can submit a tender within the subscription deadline, in order to receive shares. During the emission phase they are given all relevant information by Bergfürst. During the book building-range (the amount of money they want to invest and the maximum price they want to bid per share) – they have the chance to determine the company value actively. Bergfürst allocates them (regarding the highest price of the range to which all offered shares can be placed); only at Berfürst you are able to receive an impression of
the Management team (before the emission, via live web-pitch) and ask questions, if you have no chance to do it at that time, you can always watch the recording. Questions can also be asked after the emission (question & answer forum) to inform yourself in a personal and public manner. At the shareholders’ meeting (centrally organized by Bergfürst for all companies) you will be informed about the business performance. Electronic trading centre, release & ranking of shares, execution of shareholders’ meeting.

### Evaluation of Business Ideas/Value

No, management team & original shareholder don’t have a knowledge margin. You receive notification via the security selling prospect (Wertpapierverkaufsprospekt), the “Equity-Story” and a video-conference with the management team. After the ranking you will be given all information about the emitters on the website, in reports (quarterly, mid-year, annual), blog entries and question & answer-forum/board. Bergfürst is more than an electronic trading centre; you can exchange opinions with other investors and discuss ideas. Other perspectives of the companies give a comprehensive picture to be able to make personal decisions. You can also become part of the discussion even if you are just interested - you only need to be registered and logged in. How will the value of the company and the share be presented? Before the Emission: on basis of the balance sheet, ratings compared to other similar companies, discounting future earnings or other methods, since there is no price yet on the market. Before the emission, the price of the share will be determined using “Bookbuilding”: the bottom lines of the range are taken as the financing demand of the business plan, only when these requirements are covered, the emission can be conducted. The upper line follows from the investors’ demand- the higher it is, the more it can be pulled. However, according to Bergfürst with due care: even after the emission, there should still be a little gap to the top.

### Other

Focus of business activities until 2015: more awareness on the market (investment & financing solutions in the Bavarian area)
Platform criteria for financing: local alignment in Bavaria or Munich. Innovative & enthusiastic ideas, lasting entrepreneurship (identification with company), ongoing (at least 5 years), engagement within the company.

<table>
<thead>
<tr>
<th>Platform Name</th>
<th>Group Capital group-capital.de</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs for Issuers</td>
<td>No information</td>
</tr>
<tr>
<td>Funding System</td>
<td>No information</td>
</tr>
<tr>
<td>Minimum investment limit</td>
<td>No information</td>
</tr>
<tr>
<td>Funding instrument</td>
<td>Silent partnership and equal subordinated loan, but not yet possible</td>
</tr>
<tr>
<td>Holding period</td>
<td>No information</td>
</tr>
<tr>
<td>Platform service</td>
<td>2 project phases: rating phase &amp; funding phase; rating phase by use of traffic light system- includes variety of partial aspects being rated, for instance: “I would choose to use it/ buy it”; “I personally wouldn’t but others probably use it”; “completely unappealing product/service”, “very innovative, I’ve never seen/ bought something like this before”, “already exists, made by competitor”, “market already big and profitable”, “only profitable as brand leader (high prices enforceable)”, “of no interest. Closing rating: “yes I would invest money”, “no I would not invest money”, rating regarding yield expectation: “at least 5%”, “at least 8%”, at least 10%”. Comment feature: advertising material kit for rating and funding processes, messenger system, and email campaign and so on. Professional marketing package for announcement of rating &amp; funding processes restricted information without login in (eg. Business plan only accessible after login). For investors: additional information package, that explains crowdfunding and so on in greater detail</td>
</tr>
<tr>
<td>Evaluation of Business Ideas/Value</td>
<td>No information</td>
</tr>
</tbody>
</table>