Expertise
and insight
for the future

Alina Robbers

Equity Financing of Start-Ups

an Analysis of Sources with a Focus on Crowdfunding

Metropolia University of Applied Sciences

European Business Programme

Degree Programme

Thesis

29.07.2020

Table of Contents

List of Abbreviations

UK...United Kingdom

SME...Small and Medium-Sized Enterprise

IPO..Initial Public Offering

US...United States

EUR...Euro

USD...US-Dollar

DSM...German Startup Monitor

List of Figures

List of Tables

1 Introduction

This paper addresses the question if crowdfunding is a suitable tool to equity finance start-ups. The entire alternative finance market is growing. Especially Europe is a big market containing 38 percent of the world's alternative finance industry. Within this industry, crowdfunding is its most significant segment with a global turnover of US-Dollar (USD) 5.8 billion as of 2019 (Statista, 2020a, p. 4).
During the last couple of years, crowdfunding has experienced a remarkable development and grew into a worldwide highly recognized several billion-dollar-market. Websites and portals offering finance through crowdfunding identified the funding gap for small businesses in terms of classical bank finance and directly stepped up to fill in this market niche (Cumming & Hornuf, 2018a, pp. 1-2).

Finding an appropriate funding source that aligns with the strategic goals of companies is of tremendous importance (Volkmann et al., 2010, p. 289). In literature, experts say that, especially for start-ups in early phases, crowdfunding can be a great option since they are typically the companies having a hard time receiving funding. The funding gap is still present, and because banks are mostly not willing to take the risks of funding start-ups, most of them are only left with equity funding options (Cunningham, 2016, p. 38).
Because suitable equity funding often depends on the development phase of a start-up and additionally requires an excellent business network, the classical sources are often difficult to receive (Berger & Udell, 1998).

Even though crowdfunding has a growing popularity, the market is still rather small compared to classical sources. Nevertheless, there is enormous growth potential and especially start-ups are considering crowdfunding as a suitable alternative (Baumann & Bracht, 2020).

The objective of this paper is to determine if equity-based crowdfunding is an appropriate alternative for start-up finance. Additionally, it is supposed to clarify in which situations crowdfunding can be a better financing tool than classical sources. Therefore, an analysis of both traditional equity capital funding sources as well as crowdfunding is conducted through a comparison.

This paper is structured into five different chapters. The textual starting point forms chapter two. It begins with defining the term “start-up” and the way it is used in this paper. Additionally, a focus is set on particular features that distinguish start-ups from any general company foundation and point out differences between start-ups, small and medium-sized enterprises (SMEs) and large companies. Another important aspect of this chapter is the current situation for start-ups in terms of funding.

Chapter three concentrates on possible ways of financing start-ups. It begins with explaining debt finance for start-ups, then merges towards the classical equity finance tools, and closes by introducing the issues of financing start-ups.

Chapter four is the central part of this paper. It analyzes the different funding methods with regard to the special needs of start-ups. Thereby, it starts with clarifying the goals of start-up founders. This is followed by an assessment of classical funding methods that are used to raise equity capital based on the most critical aspects of entrepreneurs. Afterward, the study examines the possible role of crowdfunding as a suitable tool to provide equity capital for start-ups.

Finally, chapter five completes this paper as it details how crowdfunding can be used as a suitable funding method for start-ups and gives insight into its further development in terms of start-up finance.

2 Start-Ups

This chapter focuses on the characteristics of start-ups and, thus, begins with its definition. Afterward, it illumes the special features that characterize start-ups. In order to classify start-ups, this chapter presents aspects that differentiate start-ups from other companies. Additionally, it describes the current funding situation of start-ups.

2.1 Definition

There is not just one single definition but rather several characteristics that identify start-ups. In the following, a broadly accepted definition consists of four main aspects. Generally, start-ups are younger than ten years and have a plan regarding revenue and employee growth. Additionally, they are highly innovative within their field of business in terms of their products, services, business models, or technologies (Kollmann et al., 2019, pp. 14-15).

Most start-ups are established in the digital sector. Thus, this sector is profoundly influencing the funding of start-ups, especially when it comes to innovative ideas within key technologies such as artificial intelligence (Kollmann et al., 2019, p. 15). Due to their highly innovative products, services, and business models, start-ups can support economic and social progress. Furthermore, start-ups can influence well-established industries or even develop entirely new business models and, thus, are essential drivers of national economies. After this phase, companies are not considered to be a start-up anymore and will be classified into SMEs or even larger businesses (Klonowski, 2010, p. 1).

Additionally, start-ups can be differentiated by the stage of their development. First, there is the seed stage, which means the company has already come up with a business concept but has not yet received any revenues. The second stage is called the start-up stage and says that the start-up is working on finishing their market-ready products or services but already generates some revenue. The third phase is the growth stage, which is identified by a significant income or customer growth. The last period is called the steady stage and means that the start-up is already established in the market (Kollmann et al., 2019, p. 25).

2.2 Special Features

Based on the distinguishing factor of innovativeness, it has to be differentiated between the founding of start-ups and founding companies in general since not every business foundation is innovative. Typical examples for the latter include restaurants, artisans, or retail. Start-ups are innovative per definition, whereas other newly founded companies just are any type of operational independence (Kollmann et al., 2019, p. 22).

About 77.7 percent of German start-up founders assess their company to be innovative with regards to their products or services, 59.3 percent think their processes are innovative, and 48.9 percent rate their business model to be highly innovative. Compared to these numbers, within the general foundation activities, only 10.6 percent of the companies founded are considered to be innovative (Metzger, 2019, p. 2; Kollmann et al., 2019, p. 22).

Another aspect that distinguishes start-ups form regular newly founded companies is the level of digitalization. Whereas 81.6 percent of founders of start-ups assess the influence of digitalization on their business model as enormous (Kollmann et al., 2019, p. 22), only 22.3 percent of the classical founders think that digitalization influences their business model (Metzger, 2019, p. 2). A view at the industries in which start-ups operate also confirms this as about 30 percent can be found in the sector of information and communication technology (Kollmann et al., 2019, p. 27). Start-ups can also be differentiated by the number of employees. As of 2019, start-ups in all development phases had 13.3 employees on average, whereas other newly founded companies only employ 7.9 people (Kollmann et al., 2019, p. 29; Metzger, 2019, p. 6).

Another exciting aspect of differences between start-ups and other founded companies is finance. In the German Startup Monitor (DSM) survey, 55.3 percent of the participants stated they use external funding sources (Kollmann et al., 2019, p. 46), but only 23 percent of the general founders do so (Metzger, 2019, p. 7).

2.3 What Distinguishes Start-Ups from Other Companies

The main differences between SMEs and start-ups consist in terms of age, size, and business model. Where typical characters of start-ups are to be younger than ten years and to have an innovative business model, SMEs are only defined by the number of employees (≤ 500) and their annual turnover (≤ EUR 50 million). The type of business model does not affect a company's SME-status. Thus, a start-up can also be an SME (IfM Bonn, 2016; Kollmann et al., 2019, p. 22).

The finance of SMEs overall differs a lot compared to funding methods of start-ups. SMEs usually finance through debt capital, which they receive by banks. This is because SMEs often do not have direct access to capital markets to issue bonds or shares or are unable to pay for the fixed costs that this would entail (Ferrando & Mavrakis, 2017, pp. 3-4). Start-ups regularly are not able to finance via bank loans since banks are often not willing to take the risk (Cunningham, 2016, p. 38).

According to the 21st round of the survey on the "Access to Finance of Enterprises", access to finance is the least obstacle of the 11,204 enterprises throughout Europe (European Central Bank, 2019, p. 3). A study by Deloitte asking 244 German SMEs to assess their financial situation also reflects that most SMEs are in an excellent liquidity situation. 72 percent of the participants stated that they are financing internally, half of the SMEs took out bank loans, and only 20 percent answered that they had issues financing due to a lack of funding options (Thiele et al., 2018, p. 3).

When comparing start-ups to larger firms with a focus on finance, it strikes that, first of all, start-ups usually do not issue traded securities. This closes an entire market of financing possibilities for start-ups. Moreover, business information and contracts of start-ups are typically kept private and are not publicly visible or even reported in the press. On the one hand, that enables start-ups to keep planned investments or other projects hidden for as long as needed. On the other hand, though, it makes it more challenging to build a good reputation regarding their financial situation, which is of importance when it comes to overcoming an informational opacity (Berger & Udell, 1998, p. 616).

As a result, start-ups often have to rely on initial insider finance, bank loans, or funding by business angels (see chapter 3.2.4). Initial insider finance means that funds for founding the start-up are provided by family or friends. As they grow, start-ups will be able to receive equity finance with the help of financial intermediaries, such as venture capital on the equity side and bank loans on the debt side (Cotei & Farhat, 2017, p. 13).

2.4 Current Situation of Start-Up Financing

When it comes to financing a business, many different aspects need to be taken into consideration. One main factor affecting any kind of business that is planning on funding externally is selecting the most suitable form of finance. It is crucial to critically assess the preferred way of financing before signing any contract in order to be able to successfully develop the organization (Volkmann et al., 2010, p. 289).

According to Allan Berger and Gregory Udell, the most suitable form of finance of start-ups depends on their capital structures as well as on their position within the so-called growth cycle paradigm. This framework considers a correlation between firm size, age, and information availability and, therefore, a relationship between the available sources of finance and the development phases of small businesses. The financial growth cycle paradigm characterizes the different funding opportunities in terms of their ability to handle information opaqueness and moral hazard as well as their scope of funding with regards to size. A simplified version is shown below in Figure 1 (Berger & Udell, 1998, p. 622).

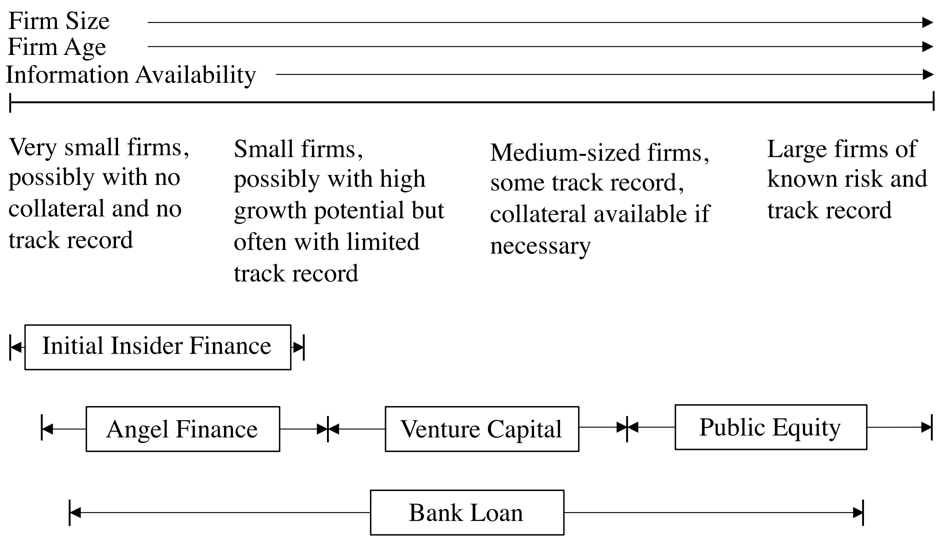

Figure 1: Correlation between Development Stages and Funding Opportunities (Berger & Udell, 1998, p. 623) (adapted)

Currently, there still are many difficulties for a start-up trying to receive funding. Many of these struggles occur from information asymmetries. However, an additional issue is agency costs, especially when it comes to equity financing (Leboeuf & Schwienbacher, 2018, p. 11).

For many start-ups, receiving a suitable form of finance is one of the most critical issues (Kollmann et al., 2019, p. 53).
Due to the increasing amount of regulation in banks, the necessity to decrease risks mostly hits small and medium-sized enterprises and particularly start-ups (Cunningham, 2016, p. 38). Small firms often have issues receiving bank loans because they are not as proficient at negotiating with the bank, exhibit a lack of collateral provision or a risker business model since they are not yet fully established (Beck et al., 2005, p. 170). Incomprehensibly, on the one hand, banks deny financing small businesses justified by the request of reducing risk. On the other hand, they still are involved in risky, unethical activities (Cunningham, 2016, p. 38).

Nevertheless, most of the classic start-ups still choose bank finance as their preferred way of funding (Robb & Robinson, 2014, p. 154).

Digitalization influences the development of new opportunities in funding for businesses, which was additionally enhanced by the rise of platforms offering intermediary services to connect entrepreneurs and investors (Belleflamme et al., 2015, p. 12).
Additionally, the opportunity of financing via crowdfunding through the internet enables both investors and borrowers to raise and provide capital relatively cheap since costs for those platforms compared to real agencies might be lower and spread across many different customers (Leboeuf & Schwienbacher, 2018, p. 14).

Especially in countries that do not offer funding opportunities for start-ups such as funding through business angels, crowdfunding can be able to support filling the funding gap meaning a higher demand than supply for funding. An important factor here is that it enables the participation of each and everyone in financing business instead of leaving this opportunity to banks and venture capital companies (Hornuf & Schwienbacher, 2018, p. 385).

The DSM survey of 2019 shows that there is a high discrepancy between the preferred methods and the used sources of funding a start-up. According to DSM, German start-ups especially prefer funding by business angels and venture capital (Kollmann et al., 2019, p. 46). Reality instead is that most founders of start-ups use their personal savings (80.3 percent) or money from friends and family (29.3 percent). However, only about 40 percent prefer using their own savings and the number of founders wanting to use their friends' and families' money is even lower with only 13.3 percent (Kollmann et al., 2019, p. 46).
Instead, the majority of start-up founders would prefer to use financing methods such as governmental development funds (51.6 percent), business angel finance (38.5 percent) and venture capital (39.7 percent). The actual usage of these tools differs a lot, with 39.2 percent, 23.1 percent, and 14.6

percent, respectively. Even though the number of start-ups using (4.3 percent) and preferring (12.3 percent) crowdfunding is rather low, the relative discrepancy of usage and demand is the highest. There are almost three times more entrepreneurs wishing to use crowdfunding than those who actually finance through crowdfunding (Kollmann et al., 2019, p. 46). Figure 2 below additionally illustrates these numbers.

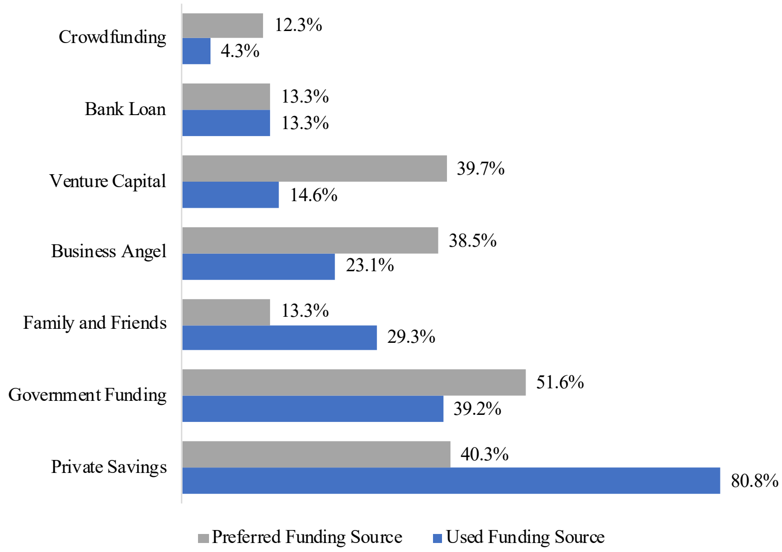

Figure 2: Used vs. Preferred Methods of Start-up Funding (Kollmann et al., 2019, p. 47) (adapted)

Overall, the results of this survey seem to show a lack of capital for start-up financing. Especially the segments of business angel finance and venture capital demonstrate that the demand exceeds the availability by far. This funding gap can be dangerous since there is a massive challenge for start-up founders and, thus, it might influence the development of the national economy as start-ups contribute much towards new technologies and services (Kollmann et al., 2019, p. 46).

3 Financing Start-Ups

Chapter three’s intention is to explain the most common tools used for start-up funding. On the one hand, there is debt; on the other side, there is equity-based funding. Both options are introduced via a short definition. This chapter limits debt finance to traditional bank loans. In terms of equity finance, this chapter introduces the classical funding methods initial public offering, venture capital investments, and business angel funding. Additionally, it presents equity-based crowdfunding as a form of alternative finance.

3.1 Debt

Historically, there is a difference in funding, especially between Europe and the Anglo-American region that was established after World War Two. Whereas banks have dominated Europe for many years, the US developed great attention towards equity funding. This difference in financing culture is still visible today. In France, Germany, or even Japan, a high extend of financing is done via debt compared to the US, where funding to a high amount is done via equity (Volkmann et al., 2010). Debt finance provided by banks still is the most important funding source for start-ups (Robb & Robinson, 2014, p. 154).

Debt finance, in general, can be categorized in multiple different ways. The most common criterion is the maturity of a loan. As opposed to equity, debt has a maturity which can be divided into short, medium, or long-term. Short-term finance usually has a length of up to one year, medium-term finance typically lasts from one until ten years, and everything longer than ten years is called long term-debt (Banks, 2010, pp. 312, 327, 469).

Financing a start-up with debt typically means taking out a loan. In the situation in which start-ups are, those loans are often provided either by family, close friends, or third parties such as a bank (Ballesteros-Ruiz & Cardenas-del Castillo, 2019, pp. 200-201). Since friends or relatives normally have different objectives when giving out loans and the amounts are usually smaller, this paper will only focus on commercial lenders such as banks.

No matter who the loan is from, the debtor has to repay the borrowed amount and, additionally, pay an interest rate. These interest payments are compensation for the lender who provides the capital and, therefore, has to renounce his or her capital during the period of repayments (Harris, 2019, p. 74).

Before the loan is disbursed, banks will perform a credit assessment in order to minimize the risk of credit default. Thus, companies usually turn in information about their financial situation, such as their latest balance sheets. On the one hand, the bank assesses the creditworthiness based on financial indicators. On the other hand, it considers the value of the financing object. In cases where a company is long-established, this process is relatively easy and quickly done (Federal Financial Supervisory Authority, 2017, pp. 43-46).
When assessing the creditworthiness of a start-up, however, there tend to be no financial statements (depending on the start-up phase), and it is difficult to determine the probability of success. This is partly due to missing comparable companies with the same or similar business models but also since there is no information on how the management sticks to its strategy and will handle difficulties (Coleman et al., 2016, p. 108).

In case the credit assessment was successful, the details of the contract have to be arranged. The specifics regarding maturity, the point when the money will be disbursed, how repayment is organized, and the interest rate are stated in the loan contract. This contract can also determine which collaterals have to be provided by the borrower (Harris, 2019, p. 73).

In cases where loans for start-ups are provided by a bank, collaterals are a vital factor. When banks give out loans to any company, they usually demand credit securities. The collaterals not only impact the interest rate but might also be a limiting factor regarding whether or not the bank disburses the loan to the company. To banks, collaterals affect the creditworthiness of their customers to a large proportion (Kiisel, 2013, pp. 41-42). Providing collaterals can be difficult for start-ups, especially for founders in the digital sector who, for example, offer something like artificial intelligence or a smartphone application. Programming and developing those applications take up a long time, and specialists in programming and support, as well as servers are needed. This produces high costs, but there are not necessarily any assets that could be provided as collaterals (Coleman et al., 2016, pp. 108-109).

In some countries, founding new companies is supported by selected banks or programs which are promoted by the government. To give an example, the German KfW bank offers three different debt financing options for start-up businesses. Depending on their situation and needs, start-ups can receive up to EUR 25 million. Those loans have subsidized interest rates, up to three repayment-free years, or have less strict requirements regarding collaterals than regular banks do (as of July 2020). This is primarily to support start-ups that have a lack of equity and, therefore, would have a hard time receiving debt finance from regular banks (KfW, n.d.).

One main benefit of debt finance, in general, is that debt usually costs less than equity. Additionally, there is no watering effect for investors compared to equity financing. Moreover, debt finance often does not take as many necessary negotiations as equity finance does since investors and lenders only have to agree on the interest rate, repayment option, and collaterals (Ballesteros-Ruiz & Cardenas-del Castillo, 2019, p. 201).

If it comes to the disadvantages of debt financing, one crucial aspect is the limiting factor in the company’s cash flow since it has to provide interest rate and loan repayments. If the company is unable to fulfill the payments as agreed on in the contract, this will harm its credit reputation and, as a consequence, it might lead to penalty payments. Generally, the costs of debt finance depend on a company’s overall economic situation as well as its credit ranking and reputation. The worse the company is ranked, the more the costs for debt finance will increase (Ballesteros-Ruiz & Cardenas-del Castillo, 2019, p. 201).

Since especially start-ups are difficult to rate and assess, debt finance will either be expensive due to increasing interest rates or will not be provided at all due to difficulties in anticipating the further business development (Schramm & Carstens, 2014, p. 45).
Additionally, a company that owns equity and also delivers information regarding risks is usually perceived as more trustworthy and less risky, which is why banks often prefer to finance businesses with a strong equity background (Ahlers et al., 2015, p. 970).

3.2 Equity

3.2.1 Definition

The general idea of equity financing commonly contains the distribution and growth of equity capital through entrepreneurs or owners of the organization or via retained earnings that were previously earned by the company. This means that either investors will bring in new money into the company or the company makes profits and does not distribute all earnings in order to raise its equity capital (Volkmann et al., 2010, p. 295).

Equity typically does not have a maturity and, therefore, is available unlimitedly for the start-up. However, equity capital usually is more expensive than debt capital since the risk of default for the investor of equity is higher than the risk of default for the debt provider. This is due to the regulation that in case of bankruptcy or liquidation, debt will be served before equity provided by investors because equity capital, other than debt, is usually not liable for a repayment (Klonowski, 2010, pp. 19-20).
Since equity investors are linked to partial ownership, depending on the amount of capital an investor owns, he or she might be able to influence

the management on essential strategic decisions. That is a crucial aspect to take into consideration for entrepreneurs when thinking about funding their business via equity finance (Brealey et al., 2011, pp. 385-386).

Technically, equity finance can be differentiated in internal and external financing, but this paper will only focus on external funding. Most start-ups will not have enough free cash flow to use the option of internal equity finance. External equity finance means that investors will bring capital from the outside into the business (Volkmann et al., 2010, p. 295).

Moreover, this paper will only focus on the classical and most commonly used sources of equity finance, which are business angel funding, venture capital, initial public offerings. Additionally, crowdfunding as a relatively new equity funding method will be evaluated.
Those funding sources can be differentiated in terms of capital requirement and the state of development of the company that is fundraising. This differentiation is shown below in Figure 3.

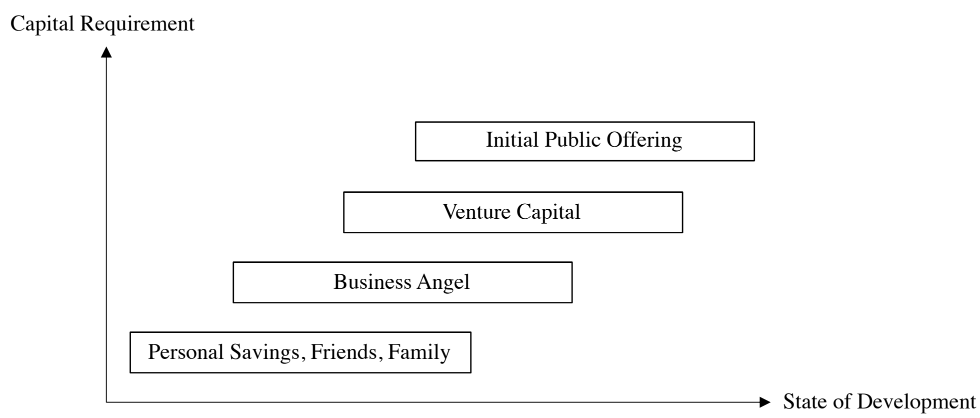

Figure 3: Developments of Equity (Volkmann et al., 2010, p. 295)

3.2.2 Initial Public Offerings

An initial public offering (IPO) is the process of a company that issues parts of its ownership in the form of shares open to external public third parties. IPOs are a common funding source for young businesses offering ownerships for the public for the first time (Berk et al., 2015, p. 462).

Usually, during the IPO, the issuing company is supported by a bank or investment firm regarding, for example, the price and the time of the issue (Cunningham, 2016, p. 33).

The simplified process starts with the company finding one or more banks or brokers that act as a financial intermediary that is also called the underwriter. Together, they discuss the plans and goals that want to be achieved by going public through an IPO as well as decide on the issue price. The underwriters first buy the shares from the company and then try to resell the shares to the public (Brealey et al., 2011, pp. 406-410).

IPOs used to be one of the main funding methods for companies raising high amounts of liquidity in the form of equity capital. Nevertheless, the number of IPOs during the last fifteen years dropped significantly. This may be on the grounds that when an IPO is executed, the bank or broker as the third party also wants to profit, which increases the costs for the company itself as well as the share price. That makes IPOs less attractive than, for example, venture capital. On the other side, banks reduced their IPO activities and shifted the focus toward activities that enable them to make profits easier, such as for instance propriety trading (Cunningham, 2016, p. 41).

3.2.3 Venture Capital

A venture capital business is a limited partnership which is specialized in raising money in order to provide equity capital to young companies and start-ups (Berk et al., 2015, p. 458).

Venture capital is a way to equity finance companies at an early stage of their development. Nevertheless, according to the financial growth cycle paradigm by Berger and Udell, venture capital is not suitable to fund start-ups right from the beginning (see Figure 1). This finance method typically only plays a role after the first products were successfully designed and is mostly used to finance the production of the product as well as the marketing process (Cotei & Farhat, 2017, p. 13).

Even though there are billions of dollars spent each year in venture capital to support the funding of small businesses and start-ups, it is still not enough. The yearbook of the American National Venture Capital Association shows that only about 7 percent of the dollar volume of venture capital is spent during the seed stage. This indicates that venture capitalists in the US barely provide any money towards developing products, enabling market research, or developing a business plan. Only about one-third of the venture capital volume is spent within the first three years after the company was founded (National Venture Capital Association, 2020, p. 25).
However, this means that two-thirds of the total venture capital volume is not spent within the critical phase of founding a company. Furthermore, if bearing in mind that about 93 percent of the financing volume of venture capital is not used for funding companies during the seed stage, this number reveals the difficulty for start-ups trying to finance through venture capital to actually receive venture capital funding in early phases.

Venture capital businesses typically invest in companies that have already received financing from business angels (Berger & Udell, 1998, p. 623).
Funding via venture capital is characteristically designed to support start-ups that have long-term growth potential. Even though this funding method contains a high risk for investors, there is a chance of an above-average rate of return (Ballesteros-Ruiz & Cardenas-del Castillo, 2019, p. 207).
This funding method is an excellent choice for high-potential start-ups in the tech-industry since this is a sector with enormous growth opportunities and capital market imperfections (Chicktay & Barnard, 2019, pp. 23-24; Carpenter & Petersen, 2002, p. 299).

Venture capital finance is a process that contains multiple different steps. A short and simplified overview can be seen in Figure 4 below:

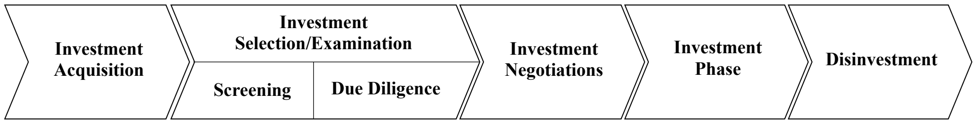

Figure 4: Venture Capital Process (Schefczyk, 2000 cited in Volkmann, et al., 2010, p. 309)

The typical venture capital process starts with an investment acquisition. Venture capitalists first try to scan the market for promising companies to invest in. Thereby, they also have an eye on their market portfolio. They only dive more in-depth into possible investments that match the venture capital business's investment strategy. Particularly the development stage of the start-up, its stage of expansion, as well as the industry it is operating in are of high importance (Lockett & Wright, 2001, pp. 376-377).

The second step is the selection of investments and the examination process. Selecting investments and examining those is a highly complex procedure that contains multiple different steps. It usually begins with a brief analysis of the possible investment called deal screening, which then is followed by additional steps that go more into detail. The deal screening primarily focuses on the start-up's business plan, which contains its strategy, development goals as well as possible markets and niches. (Klonowski, 2010, pp. 31-32).

A due diligence examination follows the successful deal screening. Here, the potential investment is analyzed regarding different criteria, for instance, its financial situation, the economic situation of its industry, legal issues, or its management and staff. Typically, each venture capital business has its own criteria and portfolio objectives when it comes to offering investment opportunities (Volkmann et al., 2010, p. 309).

After the venture capital organization has made a positive decision regarding the investment in a business, the investment negotiations begin. This phase typically starts with an investment offer. Critical aspects are the value assessment of the start-up that the venture capital company wants to invest in, the volume of the planned investment, as well as financial covenants regarding information and rights to control (Volkmann et al., 2010, p. 310).

When negotiations come to a consensus, a contract between the enterprise and the venture capital business declaring the investment, and its components will be signed. During the investment phase, the venture capitalist usually tracks the start-up's business activities and supports it, for instance, via consultation. Typically, a venture capital company stays invested in start-ups for about three to seven years (Volkmann et al., 2010, pp. 310-311).
An investment exit can be done either through an IPO or a sale to a different strategic investor (Klonowski, 2010, pp. 41-42).

3.2.4 Business Angel Funding

Business angel finance was invented in New York City at the beginning of the 20th century when wealthy business people provided capital in order to save the Broadway theaters from bankruptcy (Berk et al., 2015, p. 458). Generally, business angel financing has similar goals as venture capital funding. The main difference is that everything is operated on a much more personal level. Classically, an angel investor is a well-off individual, or a group of people offering equity funding via investments to businesses or start-ups. Business angels may additionally offer debt financing usually through giving out obligations that are exchangeable into equity capital (Cunningham, 2016, p. 44).

Another difference is that business angel finance can start much earlier within the development of a start-up than venture capital. That originates from the fact that business angels can also mentor the founders right from the start as soon as they have an idea and a business plan. They supply the start-up with knowledge, networks, and other possible support such as marketing or a strategy review. Furthermore, angel investors are usually organized in networks. That enables founders to meet potential future investors and to build a network for further business development (Ballesteros-Ruiz & Cardenas-del Castillo, 2019, pp. 202-203).

Business angel funding is a process that contains multiple steps starting with the first contact of a start-up and a business angel until the actual investment is made and ending with the exit of the business angel. A short overview of the process can be seen below in Figure 5.

However, it needs to be taken into consideration, that angel funding is a rather personal approach of funding and, thus, the depicted process is exemplary and might deviate depending on the angel investor.

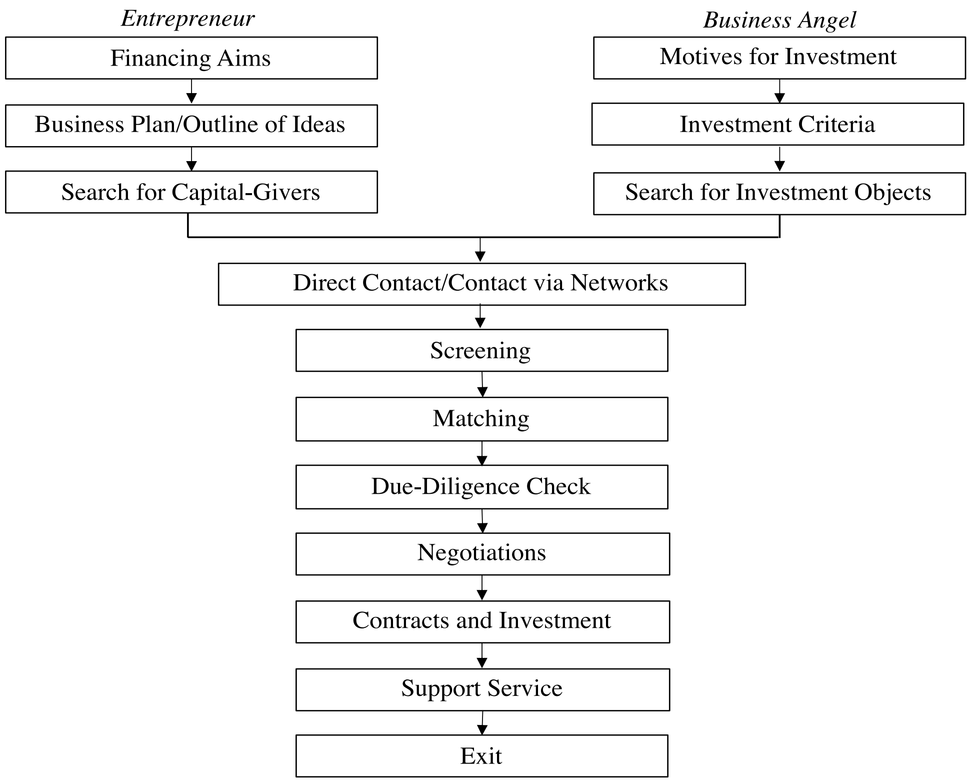

Figure 5: Investment Process of Business Angel Funding (Volkmann et al., 2010, p. 300)

Many business angel networks established different processes that have the objective of connecting business angels with start-ups. Usually, there is a selection process that interested start-ups have to apply for. This can be a classical written or an online application. Typically, there will be a first application hurdle until the angel investor meets the entrepreneur in person. The selection process mainly contains an assessment of the start-up's business plan along with its capital requirement and possibly an outline of further business ideas and their potential (Volkmann et al., 2010, p. 300).

If the start-up’s application is successful, it will be invited to an event to meet and match with business angels personally. Usually, about six to ten start-ups participate in one matching event, present their business within a limited timeframe and try to convince an investor. When an investor is interested, the proceedings start along with a due-diligence procedure regarding, for instance, the market situation, possible risks, the start-up's financial situation, or legal issues. Once the due-diligence process finished with a positive result and the negotiations came to an agreement regarding investment details, the contracts will be signed, and the money will be disbursed. As long as the business angel is invested in the start-up, it will receive support from the angel and be able to connect to the network. An average business angel funding typically is about four to seven years long (Volkmann et al., 2010, pp. 301-303).

3.2.5 Crowdfunding

Crowdfunding is the outcome of a new financial sector focusing on technologies, especially the internet and the phenomena and the power of crowds. In general, crowdfunding is a way of raising money for a specific project, for instance, a product or a business, in which people can invest or donate money. Technically, there are multiple different aspects of crowdfunding, which are distinguished by the various objectives of each form of financing via a crowd (Cunningham, 2016, p. 32).

The goal of this paper is to analyze crowdfunding as a possible form of equity financing start-ups. Thus, it will only focus on crowdfunding in the form of equity-based crowdfunding, also known as crowdinvesting, and will use the term crowdfunding synonymously with the terms equity-based crowdfunding and crowdinvesting.

Crowdfunding describes a wide range of transactions in which numerous investors can participate in order to invest in a company, for example, a start-up. Investors assess the start-up to be successful in the future and continue its growth and profitability, which enables them to participate through financial returns (Statista, 2020a, p. 4).

Seed crowdfunding is used to fund the formation, launch, or establishment of start-ups or projects regarding new products and services. Crowdinvesting is mostly done through crowdfunding platforms. Those platforms operate as financial intermediaries. Their only purpose is to connect investors and start-ups looking for investors together. If a start-up decided to finance through crowdfunding, it first has to decide which platform it wants to use (Schramm & Carstens, 2014, p. 19).

Since every platform works slightly differently, this paper will focus on a simplified process and the steps that most platforms have in common. Some of the most well-known platforms for equity-based crowdfunding in Europe are Seedrs and Crowdcube, both from the UK, Republic in the US, WiSeed in France, as well as Companisto and Seedmatch located Germany (Cumming & Hornuf, 2018b, p. x).

On the platform, the start-up has to represent itself and its business idea by filling out a project or business description, sometimes even by producing videos. Now the investors can inform themselves, compare investments, and invest directly through the platform if they find an interesting investment opportunity. On some platforms, it is even possible for the investors to ask questions in a forum, which can be answered by the founder allowing him or her to explain the business in more detail depending on what the investors are interested in (Companisto, 2020; Seedrs, 2020). The investments can be rather small, which enables especially private investors to invest in a business starting with EUR 250-500 on average and often do not contain an upper limit regarding the investment sum. The payment will be made upfront, and the money will then be managed by the platform until the whole investment sum is reached (Schramm & Carstens, 2014, p. 24).

Since there are so many investors, the start-up is unable to negotiate investment conditions with every single one of them. Thus, the platform rates the campaign, and according to the ranking will determine the investment conditions such as fees, the estimated rate of return, and exit conditions. There sometimes even might be interest rates that are not dependent on the start-up's success. In contrast to debt finance, though, investors will participate in the start-up’s success. Thus, it is difficult to predict the rate of return upfront since it highly depends on the company’s economic situation. It is not possible for the investors to reclaim their money before the planned exit. However, investors can sell their investment if they find someone willing to purchase it. It is possible for both private investors as well as companies to invest in start-ups via crowdfunding (Schramm & Carstens, 2014, pp. 24-32).

For investors, there will not be any payments or fees other than the investment itself. The crowdfunding platform creates turnover through the return of start-ups that have been successfully financed. Additionally, they charge fees which only have to be paid by the start-ups that fruitfully used the crowdfunding platform and found enough investors (Schramm & Carstens, 2014, pp. 31-32; Seedmatch, 2020).

Technically, stakeholders investing in a start-up via crowdfunding would be entitled voting rights. Nonetheless, most platforms either renounce these or bundle the voting rights of all investors. This means that the start-up does not have to deal with a high number of investors and can see the crowd as one single investor represented by the platform (Companisto, 2020). The different steps of the crowdfunding process are shown below in Figure 6.

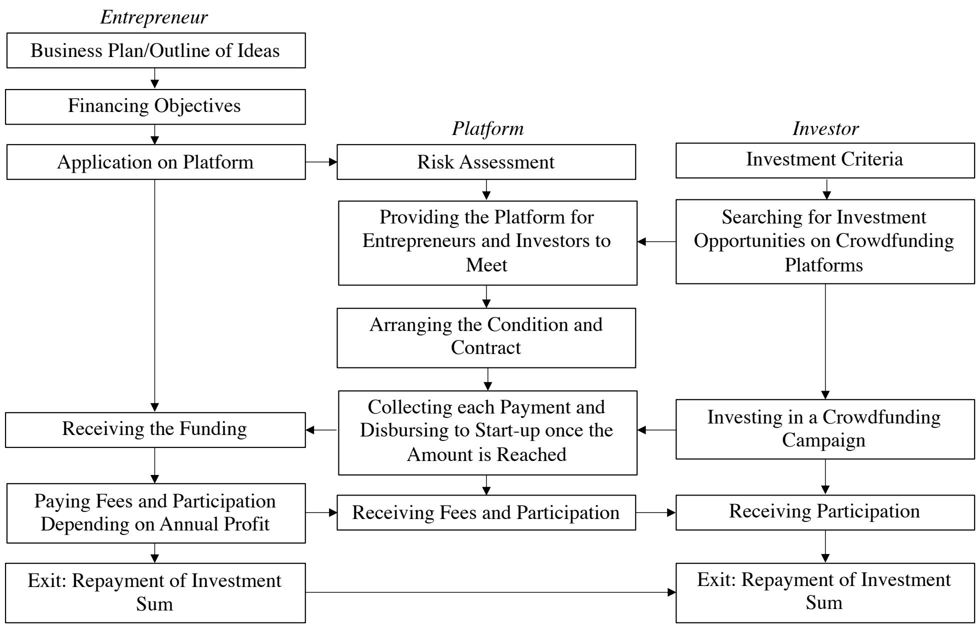

Figure 6: Process of Crowdfunding (own illustration based on Schramm & Carstens, 2014, p. 20; Seedrs, 2020; Seedmatch, 2020; Companisto, 2020)

Within the EU, the UK is by far the largest market for equity-based crowdfunding. With a transaction volume of USD 0.7 billion as of 2019, its volume is ten times bigger than the volume of France, which is ranked number two within Europe (Statista, 2020a, p. 8).

Generally, the transaction volume of crowdinvesting is rising each year. Back in 2017, the total transaction volume reached about EUR 2,670 million. This number increased to EUR 4,241 million in 2019, and Statista estimates the transaction volume in the segment of crowdinvesting to reach EUR 7,343 million by 2024 (2020b).
Moreover, the number of campaigns shows a rising tendency. With 38.2 thousand campaigns in 2017, this number increased up to 46 thousand in 2019 and is estimated to reach about 67 thousand by 2024. Along with the rising trend of campaigns, also the average funding per campaign is rising. As of 2017, an average funding campaign comprised EUR 67,846. This number developed towards EUR 81,490 in 2018, EUR 92,182 in 2019, and eventually will reach almost EUR 110,000 (Statista, 2020b).

The market for crowdinvesting is relatively new since the first crowdfunding platforms were founded starting in 2005 in the US and only established in Europe about ten years ago. Since the start of those platforms, many reports displayed excellent growth opportunities for equity-based crowdfunding when comparing it to other classical equity funding sources like angel investing or venture capital finance (Gierczak et al., 2015, p. 9).

When looking at the German market, it is noticeable that the crowdfunding market continues to grow. Crowdfunding, especially as an alternative form of financing start-ups, entrenches, particularly for start-ups that otherwise might be unable to receive any other form of primary funding (Baumann & Bracht, 2020).

However, financing through equity-based crowdfunding can be quite costly for start-ups. If they have to pay annual interest rates that do not depend on their economic situation, they lose money, which they could otherwise reinvest to strengthen their company and continue the growth. Additionally, they have to earn enough to satisfy both the investors as well as the platform. The cost of equity could be less if there were no financial intermediaries like the crowdfunding platform, which wants to be paid as well without directly participating in the funding (Gierczak et al., 2015, p. 16).

3.3 Issues with Start-Up Finance

In the DSM study of 2019, German start-up founders were also asked to name their main challenges. The external capital procurement was ranked third, and 37.9 percent, more than one-third, considered capital procurement to be an issue (Kollmann et al., 2019, p. 49).

One major challenge regarding the access of external capital that start-up founders name is the difficulty of gaining access to investors and their network. Another concern when looking for investors is the persuasion of investors with regards to the start-up's financial forecast as well as the funding needs (Kollmann et al., 2019, p. 49).

The question that bears in mind after seeing these numbers basically is "how come?". Technically, there are multiple different options for funding via both debt and equity. This question is partly answered, looking at Figure 1 (see Chapter 2.4), which shows that the development stage of a company has a considerable influence on the available funding opportunities. This means, for example, that it will be almost impossible for an entrepreneur who is just starting to form a start-up to fund via an initial public offering (Ballesteros-Ruiz & Cardenas-del Castillo, 2019, p. 202).
For start-ups located in the seed phase, for instance, it is particularly challenging to build a network and find possible investors within this network. In order to begin founding a start-up, the entrepreneur often has to invest his or her savings or receive money from friends and family, as seen in the DSM Survey. This is not always possible, which might harm the foundation of new start-ups. As a result, venture capital finance often only comes into consideration if the start-up is already established in the start-up phase but first needs enough money to be able to develop this far (Berger & Udell, 1998, pp. 623-624; Klonowski, 2010, p. 60).

There are similar issues with business angel finance. Only a few angel investors will be willing to support a start-up, which is still at the beginning of the seed phase. Entrepreneurs often have to present at least a solid business idea and a business plan in order to be invited to a matching event with business angels and where they are given the opportunity an angel investor of the future success of their business idea or product. This might be easier if the entrepreneur can present more than just a brief idea (Volkmann et al., 2010, pp. 301-302).

Furthermore, it is difficult to assess an adequate rate of success for start-ups since many factors have to be taken into consideration. Typically, start-ups begin to operate in a niche market with new technologies, products, or services, which makes it extremely challenging to evaluate the start-up itself as well as the market outlook (Volkmann et al., 2010, p. 302).

The risk which can only be predicted difficultly leads to an increase in the minimum rate of return possible investors might accept. Since banks do not participate in the possible success of start-ups, their income is limited when giving out debt to start-ups. At best, they receive the contracted interest rate and still have to cover the costs and bear the risk of default (Vernimmen et al., 2017, p. 618). As a consequence, many banks are careful with financing start-ups; others completely stopped giving out loans to start-up companies (Cunningham, 2016, p. 38).

Even though in some countries there are nationally subsidized banks that take on the start-up finance, they still do not finance every project, give out limited loan amounts, or may need collaterals since they do not want to bear the entire risk of default. For some start-ups, the necessary provision of collaterals can be difficult or even impossible (Leboeuf & Schwienbacher, 2018, p. 12). For others, the eligible type of loan does not provide enough money. Despite the existence of a couple of years at the beginning of the repayment period that are exempted from repayment, but the interest rate still needs to be paid even though the start-up is not yet able to increase the revenue adequately (KfW, n.d.).

This shows that even though there are many possible funding sources, it still is difficult for start-ups to receive the most suitable form for its business model and financial situation. Classic forms of financing do not close the funding gap, which is still existent.

4 A Possible Role for Crowdfunding

Chapter four is the centerpiece of this study. It analyzes the equity-based funding tools that were introduced in chapter three. It starts with illumining the different objectives of entrepreneurs and their influence on the choice funding. The methodical procedure used is a comparison. It is done by first identifying key aspects that entrepreneurs take into considerations when thinking about financing. The comparison starts with analyzing the classical equity funding methods and then continues examining a possible role for crowdfunding, also assessed by the same criteria. Additionally, this chapter instances some other aspects, which can influence the suitability of crowdfunding.

4.1 Goals of Entrepreneurs

First, in order to be able to receive funding even before starting the fundraising process, the start-up has to have an actual project or business plan. After that, it needs to define objectives that it is aiming to achieve with the money raised, which will validate the fundraising. The third step is to creatively think of possible funding sources that are financing options for this specific start-up and its development plans (Ballesteros-Ruiz & Cardenas-del Castillo, 2019, p. 199).

The main goal of an entrepreneur searching for an excellent financing opportunity for his or her start-up is to raise money to develop the company or to be able to finance a project, product, or service development. After it has been clarified what needs to be funded and how much money will approximately be needed, entrepreneurs will take a closer look at the different financing opportunities as well as the advantages and disadvantages of each method (Volkmann et al., 2010, p. 289).

Not every funding source is suitable for every financing objective. Additionally, an entrepreneur will only bother to apply for a funding method if there is a realistic chance of success. As previously mentioned in chapter three, applying for finance not only requires time and effort but also means that financial data of the start-up will be shared with third parties outside of the company. Choosing the right funding method can influence the future success of a business, and selecting the wrong source of finance could, in the worst case, lead to bankruptcy. Thus, the selection process should be done with suitable precision (Volkmann et al., 2010, p. 289).

Central aspects that will be taken into consideration are the funding costs, the maturity of finance, planning security, and the potential influence of third parties that might go along with the funding.

Debt finance is a popular choice when the company owner wants to know precisely what the company has to pay in the upcoming years and gain stability in planning. The loan contract regulates the loan conditions and obligations of both parties are governed. This means that the entrepreneur accurately knows the amount of each installment and when it is due. The same applies to interest rate payments (Brealey et al., 2011, p. 389). However, those payments influence the start-up's cash flow negatively. Furthermore, stability in planning seems to be rational at first but might be the wrong way for start-ups when it comes to repaying a loan. Since it is not yet established at the market, revenues only start when reaching the start-up phase, and even then, they might start off with comparatively small and volatile turnover rates (Harris, 2019, p. 67).
Banks giving out loans to companies often require collaterals so they will not have to bear the entire risk of default. Even though the start-up will not directly be harmed by any collaterals provided to a bank, there are still issues that might occur. This especially applies to start-ups in the seed phase. They usually do not create any revenue yet, meaning there are not necessarily any items of property. As a consequence, if the entrepreneur cannot provide any collaterals privately, the start-up might be unable to receive a bank loan (Beck et al., 2005, p. 170).
Another aspect is the improvement of the key performance indicator return on equity when the start-up takes out a loan. This indicator evaluates the interest rates that can be earned with equity capital. The higher the return on equity, the better is the assessment of the company. Additionally, a

leverage effect is possible with debt finance. This is the case when the interest rate debt capital is lower than the return on investment, and the debt ratio increases due to the borrowing of debt (Berk et al., 2015, pp. 73-75).
Additionally, the tax shield makes debt finance attractive, since the interest rates can be deducted from the profit and, thus, lower the tax burden (Berk et al., 2015, pp. 432-433).

When it comes to equity finance, on the one hand, a potential loss of decision-making power in the start-up or additional voting rights of investors that influence strategic decisions are important factors to consider. On the other hand, though, equity capital is usually provided for the long-term and often does not have a maturity date. This means that the entrepreneur does typically not have to worry about monthly interest rate payments since investors usually only participate when there was a positive annual result, and the company owners decide to disburse parts or the entire profit (Ou & Haynes, 2006, p. 157).
Additionally, the start-up’s cash flow will not be burdened with repayments because equity capital does not expire, and there are usually no conditions regarding repaying the equity, for instance, in monthly, quarterly, or annual installments like it is common practice with loans. This means that more money can be reinvested in the start-up enabling it to grow and establish (Berk et al., 2015, pp. 64-65). Indeed, investors might want to receive back their invested capital at some point. Thus, there will be negotiations regarding the exit of the investor. If the investor wants to sell before the end of the maturity, the investor can try to transfer his or her participation to someone willing to take on the investment (Seedmatch, 2020).

Funding through external equity capital increases the equity ratio. This improves the start-up's creditworthiness since banks assess a high equity ratio as an indicator of financial stability. As a consequence, raising equity capital can be a proper preparation when planning to take out a loan as follow-up financing (Klonowski, 2010, p. 19).

Those aspects are just the most important ones that start-up owners have to keep in mind when analyzing possible funding opportunities. Depending on the goals, strategic decisions, and priorities, entrepreneurs might evaluate each financing option differently. Nevertheless, since the topic of this paper only is equity funding methods for start-ups, it mainly concentrates on those and does not assess debt financing opportunities.

4.2 Evaluating Classical Sources

The analysis of classical equity funding sources will primarily focus on the aspects of flexibility, the financing amount, costs, exit strategies, contracts, voting rights or other potential influence, support from investors and being able to use their networks, suitability depending on the development stage of the start-up, as well as expectations and goals of the investors.

Raising equity capital is usually split into different phases, which are also called funding rounds or series. Typically, the sequences of funding rounds regarding equity capital of start-ups begin with financial support provided by family and friends. This is followed by angel finance in the second phase. Venture capital investments usually are considered for the first time during the third round, and only when the start-up has already established itself in the market, an IPO is an option (see Figure 1). The funding conditions depend on the chosen method of finance, the start-up stage, and also on the country in which the founder wants to receive funding (Ballesteros-Ruiz & Cardenas-del Castillo, 2019, p. 202).
This indicates that not every funding method is applicable to every start-up.

Starting with the financing tool that comes directly after self-funding or support by friends and family, this paper will now take a closer look at business angel finance. It is the first sequence of external equity.
The first major challenge for entrepreneurs is to find an angel investor. This often depends on the entrepreneur’s local network and capital.

Entrepreneurs who are just starting to launch their first products are not very well connected within their local business community (Berk et al., 2015, p. 458).

An issue is often that most start-ups need more capital than an angel investor is able or willing to provide. This means that either an additional source of funding needs to be obtained or the financing costs have to be reduced. The latter could be done by shrinking the project or the development of a new technology or project which as a consequence might not be as fully developed as originally planned which then again could influence the success of the start-up or its reputation (Berk et al., 2015, p. 458).

Since business angels are often not just interested in increasing their own money and generating a return as high as possible but also in supporting new business ideas and young entrepreneurs, there usually is more flexibility overall. The contracts can be negotiated, and both sides are interested in an ethical and fruitful collaboration. Nevertheless, business angels are not a social institution and, therefore, are highly interested in achieving their own goals. Even though only few research on exit strategies of business angels has been done yet, there is proof that angel investors typically do not already have exit strategies planned by the time they invest in a start-up (Harrison et al., 2016, pp. 673-674). Business angels only earn a financial return on their investment when they sell their participation (Botelho et al., 2019, p. 1). This means that timing is crucial when it comes to generating a high return through selling the ownership. Since the risk of investments in the early stages of start-ups is rather high and there are no other earnings but the return on sale, it indicates that there are no specific exit plans when investing in a start-up. Thus, angel investors are typically more relaxed about exiting the start-up in general (Harrison et al., 2016, pp. 673-674).

However, business angels still want to achieve a return for compensating the high risk they accept when investing in a start-up during the seed or start-up phase. Thus, the average return for angel investors roughly reaches 32-35 percent (Capizzi, 2015, p. 287; Gregson et al., 2017, p. 303). This is mainly due to the early stage of the start-up at the time of investment.

There is a high growth potential but also a high risk of default (Gregson et al., 2017, pp. 303-304).

The second possible method of equity finance coming in the next round after angel finance is venture capital investments.
Venture capital is a relatively expensive way to raise equity capital for a start-up. Most venture capital firms charge about 20 percent of any profits the start-up generates. Depending on the image and success of the venture capital company, the charges can reach 30 percent or more. Some companies charge an additional annual fee of roughly 2 percent (Berk et al., 2015, p. 459).
Furthermore, venture capitalists insist on influence and voting rights in the start-up. They usually use them to protect and strengthen their investments, no matter what the original strategic plans of the entrepreneur were (Berk et al., 2015, p. 459).
If a venture capital company offers an investment to a start-up, there typically is only a limited space for negotiations. It is difficult for the start-up to receive such funding, and thus, it often has to accept the conditions that the venture capitalist offers. Due to the power imbalance between the venture capital firms and the start-ups, the contracts are not really flexible for start-ups since the venture capital firms are in a better position to push through their interests (Bottiglia, 2016, p. 64).

The main goal of venture capitalists is to increase profits as high as possible (Capizzi, 2015, p. 272). On the one hand, this can be the same goal that the entrepreneur has since a high revenue is needed in order to establish a start-up on the market. On the other hand, that means it might be challenging to keep profits within the start-up. This impedes the growth itself but also the development of new technologies, products, or services and, thus, the start-up's long-term success. Additionally, it indicates a clash of short and long-term goals between.
Often, exit plans or strategies are included in the conditions or in the contract itself. A venture capital business is only interested in receiving a high rate of return. As soon as the company has reached a sizable market

share, a strong brand awareness and a promising market outlook, it will start arranging its exit through an IPO or a sale of the investment to another investor (Klonowski, 2010, pp. 235-236).

The last classical option of equity funding in terms of the financing rounds of start-ups is the initial public offering.

Offering shares to the public is another option to raise liquidity for a company. Nonetheless, as every other option does, too, there are advantages and disadvantages regarding this funding method.

It is an opportunity to raise higher amounts of equity capital than, for instance, business angels could provide. An IPO enables companies to diversify their equity capital since it comes from multiple different investors. On the one hand, that is a great advantage, since it is possible to raise more significant amounts of liquidity (Berk et al., 2015, p. 406). On the other hand, though, this factor is also the most significant disadvantage because multiple investors gain voting rights and can influence the company. It is almost impossible to satisfy every single one of them, and for major strategic decisions, the consent of the shareholders' majority is needed. It might take an extra amount of time and effort to convince them (Brealey et al., 2011, pp. 384-385).

The entrepreneur can decide on the amount that will be sold via shares and, therefore, can decide on the influence that is given away. Important limits are 50 percent and 75 percent since those amounts contain voting majorities that are necessary in order to keep control over the firm. However, the fewer parts are being sold, the less equity capital will be gained. All in all, the company owners are relatively flexible regarding the conditions of equity capital that is raised through an IPO. They can discuss their vision and goals with the bank that is engaged for the implementation of the IPO, and as long as the entrepreneur does not lose the voting majorities, he or she can still manage the business relatively flexible. Again, a clash of short and long-term goals between investors and entrepreneurs might exist (Brealey et al., 2011, pp. 385-386).

The costs of equity provided by shares depend on the proportion, which is held externally. There are no interest rate payments, but investors

participate in the company's success either through increasing share prices or through dividend payments. Typically, dividend payments raise the attractiveness of shares to investors, which is why many companies offer to pay dividends. The majority of shareholders will decide on the amount of profit that will be disbursed via dividends. As a consequence, if a company loses majorities to external shareholders, dividend payments are likely to increase because external investors are mostly interested in increasing their returns (Brealey et al., 2011, pp. 384-385).
Typically, there are no intended exit strategies. Nevertheless, if the company wants to decrease the number of shares to lower the influence of the external investors and the cost of external equity capital, it can merely rebuy the desired amount shares (Berk et al., 2015, p. 550).

The evaluation mainly outlines that those three funding sources are difficult to compare when it comes to financing start-ups since they are positioned differently and only fund start-ups in dissimilar development stages. This means, there is no better or worse funding source for a start-up because it typically does not have an actual choice. When it still is at the beginning of its development, for instance in the seed phase, it will most likely only be able to receive funding from an angel investor, but not from a venture capitalist and will certainly not be able to organize an IPO. In contrast, a start-up in the steady stage will probably have capital requirements that exceed the abilities of angel investors and venture capitalists might not be willing to invest since the phase containing the highest risk, and thus, enable the highest returns, is already over.
Table 1 below sums up the main aspects of the comparison.

Category	Business Angels	Venture Capital	IPO
Financing amount	Rather low Depends on amount angel investor is able or willing to provide Might be too low to finance the entire project	Usually provides the amount needed by the start-up to fulfill the project, produce products or enable the desired growth depending on the individual plans	Depends on the number of shares that are provided to external investors Can raise a high amount of liquidity
Costs	Depend on the individual contract On average 32-35 percent	Depend on the contract On average 20-30 percent	Depends on the annual profit and the amount that is paid via dividends Tendentially higher, the more external investors
Accessibility	Depends on the business network of the entrepreneur and the personal interest of the angel investor	Depends on the stage and growth potential of the start-up as well as on the portfolio of the venture capitalist	Only available in late stages of start-up development Bank or broker have to see potential
Phase of start-up development	End of seed phase/start-up phase	Start-up phase/development phase	Only suitable for start-ups that have established in the market
Flexibility	Flexible as long as angel investor and entrepreneur agree on conditions	Less flexible, venture capitalists basically determine conditions	Flexible in terms of amount, time and conditions Capital market regulations have to be followed
Influence of investors	Access to the angel network Support regarding strategic decisions or other business issues	Use influence to reach their own goals which primarily is a high rate of return	Can influence strategic decisions depending on the number of shares that external investors hold
Exit	Individually planned	As soon as profitable	Non Only possible via share buyback

Table 1: Comparison Results of Classical Equity Funding Sources

As additionally visible in the table, each funding method to raise equity capital contains advantages and disadvantages. Thus, none of them seems to be ideal, particularly against the background of the individual needs of start-ups. Every method appears to include high costs, which lower the start-up's cash flow and may harm its further development and growth. The investors might reach tremendous influence regarding strategic business decisions, which could lead to a different corporate direction and development contrary to one initially intended by the entrepreneur.

4.3 Contribution of Crowdfunding

The evaluation of crowdfunding will be done with the same criteria as used for the analysis of classical equity funding sources.

First, the financing amount is somewhat flexible when raising capital through equity-based crowdfunding. This is due to the fact that the start-up is responsible for representing itself as appealing as possible in order to attract a high number of investors. It needs to describe the financing object as well as the amount needed. As long as the desired financing sum is within the range that the platform offers, the amount does not matter. This is an advantage because the start-up can apply for raising the exact amount that is needed, even if, for example, angel investors or venture capitalists would not be willing to provide this much money (Seedmatch, 2020).

Nevertheless, the fact that the start-up is responsible for convincing as many investors as needed until the demanded financing amount is collected can also be a disadvantage. It might take a long time to raise the amount since especially private investors tend to invest lower sums.

According to Ahlers et al., crowdfunding campaigns with a lower financing amount are more likely to be realized (2015, p. 971).

Another disadvantage that results from the fact that raising money might take time is the aspect of publishing a short description of the start-up and the financing object. Mainly when the start-up operates in a fast-changing industry such as application development, it might be dangerous to publish information regarding any plans of products or services (Schramm & Carstens, 2014, p. 48; Seedmatch, 2020).

Additionally, it is not possible to personally negotiate the contract with the investors. On the one hand, there are too many different investors. It would take too much time and, therefore, would be highly inefficient to get in touch with every single one of them. On the other hand, technically, there would be an opportunity to discuss contractual conditions. Crowdfunding platforms, however, are just the intermediary that brings together start-ups and investors. It is focused on being as cost-efficient as possible and, thus, is not interested in negotiating individual contracts. This would also make it more obscure for investors who invest in different start-ups through the same platform since they would have to check out the different conditions for every investment (Companisto, 2020).

The application process is standardized and open to almost every start-up. It will be assessed by the platform in order to evaluate the possible risk for investors and define a risk class. This enables both parties, the start-up itself, and potential investors to see an acceptable rate of return on the provided equity capital. This allows the entrepreneur to have higher planning stability regarding costs for the equity and the expected return of the investors (Companisto, 2020; Seedrs, 2020).
A further benefit is the exit strategies that are typically already agreed on as soon as the start-up and the crowdfunding platform conclude a contract (Companisto, 2020; Seedmatch, 2020). This enables additional planning security for both entrepreneur and investor.

One significant advantage is that the start-up can use the scope of the crowdfunding platform without being dependent on local meetings. Since everything is arranged online, the platform's scope can be a lot bigger than, for example, the network of one single angel investor (Schramm & Carstens, 2014, p. 46; Seedmatch, 2020).

The crowdfunding platform decides on the influence of investors on the start-up. Usually, investors do not have any influence on the start-up (Schramm & Carstens, 2014, p. 7). There are just too many people to which the entrepreneur would have to talk to. However, on some platforms, the platform itself represents the investors regarding strategic decisions and collaborates with the entrepreneur when it comes to controlling the start-up. This might harm the potential growth of the start-up since investors providing equity capital via crowdfunding are usually only interested in earning a maximum return on their investment.
Table 2 below sums up the main aspects of the evaluation.

Category	**Equity-based Crowdfunding**
Financing amount	Depends on the financing object and how high the start-up sets its funding goal on the platform Depends on how many people are willing to invest and the amount they provide
Costs	Depend on the risk category (the result of ranking by the platform) Depends on the profit and the amount of dividend payouts Depend on the costs, the platform demands
Accessibility	Every start-up can apply whenever they want to
Phase of start-up development	Does not matter Business plan and prototype make it easier to convince potential investors
Flexibility	Partly flexible, contracts are fixed, but the start-up can decide on the platform (platforms may have different conditions), the financing amount and the time of application
Influence of investors	No influence by investors themselves Possible influence from the platform as a representative of the group of investors
Exit	Already arranged in the contract at the beginning of the funding process

Table 2: Evaluation of Crowdfunding

To sum it up, start-ups can benefit from crowdfunding since this form of funding is mostly independent of the start-up's stage of development, the entrepreneur's business network in the local area, and any limitations regarding the offer of provided equity capital from angel investors or venture capitalists. The financing amount can be determined by the start-up itself, depending on its demand. Additionally, it might be easier to find many investors who just provide a small amount of equity capital rather than one or two big ones since the risk of investing in start-ups is relatively high.

Contrary, the start-up has to publish information about its business and the financing objects online. This might lead to a disadvantage if other firms that are faster in developing and have a stronger financing structure are able to copy the idea and launch the product or service earlier. There is some inflexibility in terms of the conditions of the contracts. Typically, no individual exit strategies are arranged, which could harm the further development of the start-up. Additionally, the entrepreneur and the investor are not able to agree on specific conditions, which might impede especially more significant investors to invest through into a start-up via crowdfunding.

In order to be a feasible financing method, crowdfunding needs to support closing the existing funding gap for start-ups which is especially incisive in terms of seed capital (Leboeuf & Schwienbacher, 2018, p. 14).
Even though it does have disadvantages, there are many advantages, and especially for start-ups that have difficulties accessing any funding crowdfunding could help to be the first step of external equity funding. Moreover, studies illustrate that a successful crowdfunding process could simplify follow-up finance by enticing venture capitalists (Ahlers et al., 2015, p. 970).
In this role, crowdfunding can help to close the funding gap and enable more start-ups a suitable method of funding.

However, a substantial current issue of crowdfunding is fraud. For investors, there is a risk that the campaign published on a crowdfunding platform does not exist and that its only intention is to steal money from investors. In order for crowdfunding to become more attractive, particularly for investors, more regulation is needed. A stricter regulation leads to more trust, which is essential to convince more investors to provide capital for start-ups (Schwienbacher, 2018, p. 844).

Looking at the latest development of the crowdfunding segment, especially the German market, shows that the alternative funding method is already established. Especially in the segment of start-up funding, it gains popularity since, for some companies, this is the only way to receive external equity finance. Nevertheless, it is not clear yet, if this development will continue and if crowdfunding will be a funding alternative in the long run (Baumann & Bracht, 2020).

Another aspect that deserves some more research is the fact that crowdfunding in general originally established during the financial crisis. It was used as an alternative form to finance during the crisis because banks were not willing to fund. Crowdfunding established because individual investors were keen to provide money instead (Wehinger, 2012, p. 57-77).

Nevertheless, looking at the current numbers of campaigns and capital provided during the coronavirus crisis, it is conspicuous that the transaction volume and the amount per campaign declined (Statista, 2020b). Thus, it should be examined, where this development comes from and if the new dynamics will influence funding in the future.

5 Conclusion

The objective of this paper was to find out whether equity-based crowdfunding is a suitable source of equity funding start-ups. Thereby, it first gave an overview of what start-ups are, took a closer look at their distinctive features as well as what distinguishes them from SMEs and larger companies in terms of funding. Additionally, it presented the current funding situation of start-ups. Afterward, the paper described the possibilities of debt and equity finance and gave a short overview of the classical sources of equity finance and crowdfunding. An interesting aspect here was the issues that start-ups have with funding in general as well as the advantages and disadvantages of each financing method. Within the central analysis, the paper focused on a possible role for crowdfunding in terms of equity funding start-ups. Thereby, it evaluated each source, looked at the entrepreneur's goals, and as a result, examined how crowdfunding can contribute to financing start-ups.

The analysis showed that there is a funding gap for start-ups and that not every source is available for every start-up. Crowdfunding can help to fill this gap due to its better accessibility compared to other funding methods. However, choosing a suitable source of finance is of high importance for any company and can influence its future development. Thus, there are more aspects to consider than just availability.

There is no definite answer to the question if crowdfunding is an appropriate financing tool for start-ups since entrepreneurs might have different plans and objectives for their companies. Depending on the goals they have and the strategic path they intend to take, crowdfunding might be a good option. For some entrepreneurs, however, it might not work as well as other funding sources. Every entrepreneur has to make this decision individually, depending on his or her start-up.

To sum it up, identifying the best suitable form of finance is, to a large part, a context decision.

Additionally, the analysis regarding classical sources as well as crowdinvesting as an option for equity funding of start-ups is limited to certain aspects. There certainly are more factors that have to be taken into consideration when an entrepreneur is looking for the right source of finance for his or her start-up. This research-based comparison is not able to examine strategic goals or individual aspects of different start-ups in different industries. Those are characteristics that could be analyzed in other research regarding strategic goals and development plans of start-ups in specific industries. This would enable a more differentiated view on crowdfunding as it can be used by different kinds of start-ups.

Generally, the crowdfunding sector is a growing market and developing quickly. Each year, the number of crowdfunding projects, as well as the average amount per funding object rises. However, it still is quite small compared to the other funding methods. Therefore, as of today, it is a rather exotic form of finance. Nevertheless, there are signs that crowdfunding is a quickly establishing market, and this form of funding can be a way to at least reduce the funding gap for start-ups.

References

Ahlers, G. K. C., Cumming, D. J., Günther, C. & Schweizer, C., 2015. Signaling in Equity Crowdfunding. *Entrepreneurship: Theory & Practice,* 39(4), pp. 955-980.

Ballesteros-Ruiz, M. & Cardenas-del Castillo, F. F., 2019. Startup Capital. In: M. Corrales-Estrada, ed. *Innovation and Entrepreneurship: A New Mindset for Emerging Markets.* Bingley: Emerald Publishing, pp. 199-230.

Banks, E., 2010. *The Palgrave Macmillan Dictionary of Finance, Investment and Banking.* Basingstoke: Palgrave Macmillan.

Baumann, M. & Bracht, H., 2020. *Deloitte.* [Online] Available at: https://www2.deloitte.com/dl/en/pages/legal/articles/crowdfunding-in-deutschland.html [Accessed 12 July 2020].

Beck, T., Demirgüç-Kunt, A. & Maksimovic, V., 2005. Financial and Legal Constraints to Growth: Does Firm Size Matter?. *The Journal of Finance,* 60(1), pp. 137-177.

Belleflamme, P., Omrani, N. & Peitz, M., 2015. The Economics of Crowdfunding Platforms. *Information Economics and Policy,* 15(1), pp. 11-28.

Berger, A. N. & Udell, G. F., 1998. The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle. *Journal of Banking & Finance,* 22(6-8), pp. 613-673.

Berk, J., DeMarzo, P. & Harford, J., 2015. *Fundamentals of Corporate Finance: Global Edition.* 3 ed. Boston: Pearson Education.

Botelho, T., Harrison, R. T. & Mason, C., 2019. *Business Angel Exits: A Theory of Planned Behaviour Perspective.* [Online] Available at: https://doi.org/10.1007/s11187-019-00292-0 [Accessed 10 July 2019].

Bottiglia, R., 2016. Competitive Frontiers in P2P Lending Crowdfunding. In: *Crowdfunding for SMEs: A European Perspective.* London: Palgrave Macmillan, pp. 61-92.

Brealey, R., Myers, S. & Allen, F., 2011. *Principles of Corporate Finance.* New York: McGraw-Hill Education.

Capizzi, V., 2015. The Returns of Business Angel Investments and Their Major Determinants. *Venture Capital,* 17(4), pp. 271-298.

Carpenter, R. E. & Petersen, C. C., 2002. Is the Growth of Small Firms Constrained by Internal Finance. *The Review of Economics and Statistics,* May, 84(2), pp. 298-309.

Chicktay, W. & Barnard, B., 2019. Venture Capital Process: Opportunity Selection, Monitoring, Capital Rationing, and Deal Flow. *Expert Journal of Finance,* 7(1), pp. 22-38.

Coleman, S., Cotei, C. & Farhat, J., 2016. The Debt-Equity Financing Decisions of U.S. Startup Firms. *Journal of Economics and Finance volume ,* 40(1), pp. 105-126.

Companisto, 2020. *Companisto.* [Online]
Available at: https://www.companisto.com/de/faq#startup-questions
[Accessed 10 July 2020].

Cotei, C. & Farhat, J., 2017. The Evolution of Financing Structure in U.S. Startups. *The Journal of Entrepreneurial Finance,* 19(1), pp. 1-32.

Cumming, D. J. & Hornuf, L., 2018a. Introduction. In: D. Cumming & L. Hornuf, eds. *The Economics of Crowdfunding: Startups, Portals, and Investor Behavior.* Cham: Palgrave Macmillan, pp. 1-8.

Cumming, D. J. & Hornuf, L., 2018b. Preface. In: D. Cumming & L. Hornuf, eds. *The Economics of Crowdfunding: Startups, Portals, and Investor Behavior.* Cham: Palgrave Macmillan, pp. ix-xi.

Cunningham, W. M., 2016. *The JOBS Act: Crowdfunding Guide to Small Businesses and Startups.* Place of publication not identified: Springer Science and Business Media.

European Central Bank, 2019. *Survey on the Access to Finance of Enterprises in the euro area - April to September 2019.* [Online] Available at: https://www.ecb.europa.eu/stats/ecb_surveys/safe/html/index.en.html [Accessed 15 April 2020].

Federal Financial Supervisory Authority, 2007. *BaFin.* [Online] Available at: https://www.bafin.de/SharedDocs/Downloads/DE/Rundschreiben/dl_rs0917_marisk_Endfassung_2017_pdf_ba.pdf?__blob=publicationFile&v=5 [Accessed 12 July 2020].

Ferrando, A. & Mavrakis, E., 2017. Access to Bank Credit and SME Financing. In: *Non-Bank Financing for Euro Area Companies During the Crisis.* s.l.: Palgrave Macmillan, pp. 3-28.

Gierczak, M. M. et al., 2015. Crowdfunding: Outlining the New Era of Fundraising. In: D. Brüntje & O. Gajda, Hrsg. *Crowdfunding in Europe: State of the Art in Theory and Practice.* Cham: Springer, pp. 7-24.

Gregson, G., Bock, A. J. & Harrison, R. T., 2017. A Review and Simulation of Business Angel Investment Returns. *Venture Capital,* 19(4), pp. 285-311.

Harrison, R. T., Botelho, T. & Mason, C., 2016. Patient Capital in Entrepreneurial Finance: a Reassessment of the Role of Business Angel Investors. *Social & Economic Revue,* 01 10, 14(4), pp. 669-689.

Harris, T., 2019. *Start-up: A Practical Guide to Starting and Running a New Business.* 2 ed. Cham: Springer.

Hornuf, L. & Schwienbacher, A., 2018. Crowdinvesting: Angel Investing for the Masses?. In: H. Lanström & C. Mason, eds. *Handbook of Research on Business Angels.* Cheltenham: Edward Elgar Publishing, pp. 381-397.

IfM Bonn, 2016. *SME-definition of IfM Bonn.* [Online] Available at: https://www.ifm-bonn.org/definitionen/kmu-definition-des-ifm-bonn/

KfW, n.d. *Business start-ups and expansions.* [Online] Available at: https://www.kfw.de/inlandsfoerderung/Privatpersonen/Existenzgründung/index-2.html [Accessed 11 July 2020].

Kiisel, T., 2013. *Getting a Business Loan: Financing Your Main Street Business.* Berkeley: Apress.

Klonowski, D., 2010. *The Venture Capital Investment Process.* 1 ed. New York: Palgrave Macmillan.

Kollmann, T., Hensellek, S., Jung, P. B. & Kleine-Stegemann, L., 2019. *Deutscher Startup Monitor 2019,* Berlin: Bundesverband Deutscher Startups e.V..

Leboeuf, G. & Schwienbacher, A., 2018. Crowdfunding as a New Financing Tool. In: D. J. Cumming & L. Hornuf, eds. *The Economics of Crowdfunding: Startups, Portals and Investor Behavior.* Cham: Palgrave Macmillan, pp. 11-28.

Lockett, A. & Wright, M., 2001. The Syndication of Venture Capital Investments. *Omega,* 29(5), pp. 375-390.

Metzger, G., 2019. *KfW.* [Online] Available at: https://www.kfw.de/PDF/Download-Center/Konzernthemen/Research/PDF-Dokumente-Gründungsmonitor/KfW-Gruendungsmonitor-2019.pdf [Accessed 11 July 2020].

National Venture Capital Association, 2020. *NVCA 2020 Yearbook.* [Online] Available at: https://nvca.org/wp-content/uploads/2020/04/NVCA-2020-Yearbook.pdf [Accessed 10 June 2020].

Ou, C. & Haynes, G. W., 2006. Acquisition of Additional Equity Capital by Small Firms – Findings from the National Survey of Small

Business Finances. *Small Business Economics,* 27(2), pp. 157-168.

Robb, A. M. & Robinson, D. T., 2014. The Capital Structure Decisions of New Firms. *Review of Financial Studies,* 27(1), pp. 153-179.

Schramm, D. M. & Carstens, J., 2014. *Startup-Crowdfunding und Crowdinvesting: Ein Guide für Gründer.* Wiesbaden: Springer Gabler.

Schwienbacher, A., 2018. Entrepreneurial Risk-Taking in Crowdfunding Campaigns. *Small Business Economics,* 51(4), pp. 843-859.

Seedmatch, 2020. *Seedmatch.* [Online]
Available at: https://www.seedmatch.de/faq
[Accessed 10 July 2020].

Seedrs, 2020. *Seedrs.* [Online]
Available at: https://www.seedrs.com/raise
[Accessed 10 July 2020].

Statista, 2020a. *Alternative Financing Report 2020.* [Online]
Available at: https://ezproxy.fh-muenster.de:2120/statistik/studie/id/47351/dokument/fintech-report-alternative-financing/
[Accessed 8 June 2020].

Statista, 2020b. *Crowdinvesting - Digital Market Outlook.* [Online]
Available at: https://ezproxy.fh-muenster.de:2120/outlook/377/100/crowdinvesting/weltweit#market-globalRevenue
[Accessed 8 June 2020].

Thiele, F., Koslowski, J., Endres, A. & Rist, A., 2018. *Deloitte.* [Online]
Available at:
https://www2.deloitte.com/content/dam/Deloitte/de/Documents/financial-services/Deloitte_Crowdlending_V2c_safe.pdf
[Accessed June 10 2020].

Vernimmen, P. et al., 2017. *Corporate Finance: Theory and Practice.* 5 ed. Hoboken: Wiley.

Volkmann, C. K., Tokarski, K. O. & Grünhagen, M., 2010. *Entrepreneurship in a European Prospective: Concepts for the Creation and Growth of New Ventures.* 1 ed. Wiesbaden: Gabler.

Wehinger, G. (2012). Bank Deleveraging, the Move from Bank to Market-Based Financing, and SME Financing. *OECD Journal: Financial Market*, Trends *2012*(1), 66-79. Retrieved May 20, 2020, from OECD: https://www.oecd.org/finance/financial-markets/Bank_deleveraging-Wehinger.pdf

Declaration of Authorship

Ich versichere, dass ich diese schriftliche Arbeit selbständig angefertigt, alle Hilfen und Hilfsmittel angegeben und alle wörtlich oder dem Sinne nach aus Veröffentlichungen oder anderen Quellen, insbesondere dem Internet entnommenen Inhalte, kenntlich gemacht habe.

Brake, 29 July 2020