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One Year of COVID-19: Venture Capital During Times of Extreme Uncertainty

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Abstract

The purpose of this study is to investigate how Venture Capitalists' activities may have changed due to COVID-19. This is done using a qualitative approach, where eight semi-structured interviews with industry professionals have been conducted. The findings generated from the interviews are analyzed in line with research conducted on previous crises. We find that although the pandemic has caused significant uncertainties in most markets, the activities of the VCs in this study does not seem to have changed drastically. The findings indicate that VC activity has been high during 2020, with similar deal volumes as previous years. The VCs does furthermore not seem to incorporate new parameters when evaluating investment prospects, however there are indications of factors being weighted differently in the assessment of perceived risk and expected return. Furthermore, the VC industry as a whole seems to have moved to a virtual working setting which has enabled investments to be conducted despite the limited abilities of meeting companies physically.

Tutor: Johan Graaf
Keywords: Venture Capital, COVID-19, Venture Capital Activities, Uncertainty, Pandemic

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1. Introduction

1.1. Background

New innovative ventures constitute a disproportionately large source of economic growth and these ventures are often considered important factors and forces in job creation (Amazon and Sapienza 1993; Zider 1998). Venture Capital (VC) has become an increasingly important source of financing for new companies, particularly when such companies are operating on the emerging technologies frontier and within emerging markets. As such, VC plays an important role in the entrepreneurial process (Tyebjee and Bruno, 1984). The United States is the largest recipient of VC investments but China and India as emerging markets for VC are closing in, accounting for more than a quarter of the market in 2015 (Vanham, 2015). During 2019, formal investments in VC portfolio companies were 3.79 billion SEK and the VC investment volumes were almost 20 percent higher in 2019 compared to 2009 (SVCA, 2020).

During the year of 2020, the world was overturned by a powerful and illwilling pandemic which already in its initial phases shut down whole economies as well as all business activities throughout several industries and countries (Simmons, 2020). The World Health Organization declared the coronavirus COVID-19 a pandemic on March 11, 2020 which makes this study almost exactly mark the one year anniversary for the pandemic (Ducharme, 2020). The COVID-19 pandemic did, according to the European Commission (2020), create a huge contraction in the economic activity where output decreased and jobs were lost. At the same time, commentators note that the development has been different from a conventional recession. The clear consensus was that the economic crisis caused by the COVID-19 pandemic would result in a decline in VC activity. According to Simmons (2020), already in April 2020 the National Venture Capital Association warned of an impending capital shortage within VC following significant decreases in investments within the startup ecosystem, which in turn was triggered by investors abandoning highly risky illiquid assets (Simmons, 2020). Hence, it is an interesting topic to investigate how COVID-19 has affected Venture Capital firms and their activities a year after the pandemic declaration.

1.2. Problem Formulation

As far as we know, most previous research on Venture Capital is conducted from the perspective of 'business as usual', however almost nothing has been as usual since February, 2020.

The issue with existing research is that there seems to be limited research undertaking a qualitative approach on this specific research topic about Venture Capital activity during crises. A study has been conducted by Carlson and Henriksson (2020), examining how the COVID-19 crisis affected VC activities during the initial phase of the pandemic. It is however relevant to further investigate its impacts with an extended timeline after the initial outbreak of the pandemic as the interviewees thus are given the ability to have a more reflective approach when analyzing its potential effects. Furthermore, it could have been the case that actors within the VC space not even fully had reacted to the pandemic so early into it as a consequence of potentially still being in shock and not having had the time to fully go through their companies nor implement any major changes yet. Therefore, this study conducted one year later, could contribute with a richer and more comprehensive analysis by crystallizing some of the actual reactions and changes made among VCs in the space. Furthermore, there seems to be few studies examining the impact of COVID-19 on the VC industry and even fewer studies examining COVID-19's impact on Swedish Venture Capital firms with influences from both other European countries as well as the United States.

According to Block and De Vries (2011), VCs make several predictions relating to the supply of funds and exit opportunities in a stable economic context. However, in times of economic crisis, new uncertainties related to such liquidity event conditions arise that overturn all previous assumptions and predictions.

In accordance with a research update published by Roland Berger (2020), the COVID-19 crisis is different from previous crises. It is stated that the 2008 crisis began with a disruption to the US real estate and financial markets and that it later spread to the real economy in the rest of the world. It is further stated that the COVID-19 pandemic has exerted a more radical and abrupt effect where it put the real economy out of action immediately and completely, with simultaneously evaporated supply and demand. However, a similar report by Strauss-Kahn (2020) states that there are clear similarities between the crisis in 2008 and the COVID-19 crisis, where both crises share uncertainty as a key factor. Other similarities are initial downturns in the stock markets of major countries as well as the implementations of fiscal and monetary policies to limit the shocks. Moreover, what clearly defines the

COVID-19 crisis is a sharper albeit shorter ‘V-shaped’ shock which allowed real GDP to return close to its previous trend. With support from the reasoning in Roland Berger (2020), it is reasonable to believe that the world will be navigating in a new reality different to the pre-COVID reality until the pandemic is fully contained. Therefore, as uncertainty is defined by Strauss-Kahn (2020) as a non-quantifiable risk that is difficult to trace with hardly predictable impacts, it is reasonable to believe that there are differences in the types of uncertainty observed within the VC space during the crises. Taken together, it is interesting to investigate whether the COVID-19 uncertainty has changed the way VCs operate or whether the industry is immune or adaptable to the type of uncertainty that the pandemic has imposed.

1.3. Aim and Research Question

The purpose of this study is to investigate how the operations and business activities of Venture Capital firms might have been affected and how they are changing due to the uncertainty imposed by COVID-19, a year after the pandemic was declared. In order to fulfill the intended purpose of the thesis, the following question will be answered:

How has Venture Capitalists' activities changed due to COVID-19?

1.4. Contribution

This study contributes to the existing literature on Venture Capital by deepening the analysis and looking specifically at the impacts and consequences of the ongoing COVID-19 pandemic on Venture Capitalists’ activities. As the COVID-19 crisis resulted in extreme uncertainties in most aspects of society, not just the financial markets and the economy, this study further contributes to research on how VCs act in these challenging and uncertain times. It is therefore interesting to investigate the VCs’ actions and thoughts related to their pre- and post-investment activities as well as how they are reasoning now in comparison to a year ago. This topic is also interesting to study, as it has been more than a year since the pandemic hit, but arguably the crisis is still not over. The study sheds light on crystallized changes and provides richness to the existing knowledge from previous studies conducted during the pandemic’s initial months (Carlson and Henriksson (2020). The findings in this study provide further support for the investment activities described by both Tyebjee and Bruno (1984) and Kaplan and Söderberg (2001), as there were no drastic changes to the activities of the VCs when the pandemi hit. The clear difference was rather that these activities were put in new contexts and the VCs had to work with them in new ways. Furthermore, the findings of this study indicates that the fund cycle stage of each VC impacted their investment strategies, which is somewhat in line with what previous literature suggests (Gompers, 1996). However, the pandemic seems to have expedited the considerations of which portfolio companies to double-down on, for the VCs later in their fund cycle.

1.5. Delimitations

This study will be limited to the Venture Capital industry which therefore implies that the empirical study will be conducted on Venture Capital firms. Further, another limitation is that the research investigates activities and operations performed by the VC, that is, the research is conducted from the perspective of the VC and not from the perspective of the entrepreneurs, founders or the management teams of the portfolio companies. It is interesting to investigate the operations and activities from the perspective of the VC because of the fact that VCs usually are less active in the daily operations and activities of their companies which therefore might have made them act differently in our study due to the prerequisites set by COVID-19. Beyond this, the study is limited in time which will imply that its focus will be on the main activities identified among the VCs in order to capture the most significant impacts of COVID-19 and the responses observed to affect their operations and business activities.

2. Literature Review and Analytical Framework

2.1. Venture Capital

2.1.1. Introduction to Venture Capital

Hayes (2021) defines Venture Capital as a form of private equity and a type of financing that investors provide to startups, small businesses and early ventures that are believed to have a long-term exceptional growth potential or to companies that have grown quickly and appear poised to continued expansion. The capital source in VC generally and mainly comes from wealthy individuals, investment banks and financial institutions. While VC investments are risky, they often generate above average returns (Hayes, 2021). Venture Capital is increasingly important for early stage companies or ventures that have a limited operating history (under two years) as these, due to their high-risk profile, often are unlikely to access capital markets, receive bank loans, credits or other forms of debt (Hayes 2021; SVCA 2019).

A Venture Capital deal is often characterized by large ownership portions of a company being created and sold to investors via the use of independent limited partnerships (LPs) that are established by the VC firm (Hayes, 2021). The capital invested is tied up and locked in until a liquidity event occurs, that is, when the VC sells their equity stake in the portfolio company, for example when it is acquired or taken public, at which point the VCs realize their returns from the initial investment and capital is freed (CB Insights, 2021). A distinction is made between Venture Capital as such and other private equity deals by Hayes (2021). The difference is that VCs focus more on relatively immature, rapidly growing companies whereas private equity companies are investing in more established companies with the intention to improve and scale the already existing operations.

There are several types of Venture Capital fundings available for startups depending on the industry and the interest generated among potential investors (Reiff, 2020). In the early stages of the venture when there usually only is a prototype, the first real funding stage is called seed funding or angel investor funding. This type of funding involves investors who invest their own capital in the startup (SVCA 2019; Reiff 2020). Seed funds are usually characterized by smaller deals, also referred to as smaller ticket sizes, where one VC typically is the only institutional investor investing between 100,000 and 4 million euros (SVCA, 2019). The initial funding rounds can be followed by further start-up VC investments in the company where the investments are arranged in series, ranging from series A-, B- and C-funding rounds. Start-up VC typically becomes an alternative when the company has a product to show and can provide evidence of market traction such as turnover growth. VCs can also make later stage VC investments which are characterized as fewer in volume but larger in ticket sizes, typically exceeding 100 million euros. These become an alternative for newly established companies showing high growth during their first years and that typically have more than 100 employees. Finally, when achieving later stage VC funding, the focus for the company is to grow on an already proven business model (SVCA, 2019).

The VC funds operate with predetermined lifetimes, typically ten years with options to extend the lifetime up to three years (Gompers, 1996). At the end of the fund's lifetime, the investments are liquidated in order to generate returns for the Limited Partners of the fund. Due to the limited lifetime and that the purpose of the fund is to maximize the return to its investors, VC funds typically do not invest four to five years into its lifetime. In order to remain active and optimize the potential returns, the VC performs follow-on investments in selected portfolio companies which they believe have the biggest potential for success (Gompers, 1996).

2.1.2. Venture Capital Activities

Venture Capitalist activities can be divided into two main phases, the pre-investment and the post-investment phase. Kaplan and Söderberg (2001) refer to the main operational activities performed by VCs in terms of three distinct tasks; (1) contracting, (2) screening, and (3) monitoring. Tyebjee and Bruno (1984) more thoroughly conclude that the activities of Venture Capitalists can be described in an orderly process involving five sequential steps; (1) deal origination, (2) deal screening, (3) deal evaluation, (4) deal structuring, and (5) post-investment activities.

2.1.2.1. Deal Origination and Screening

Firstly, VCs engage in the deal origination stage, which is described as the processes by which potential deals enter into consideration as investment prospects (Tyebjee and Bruno, 1984). The authors mention referrals from networks and partners, combined with technology scans to be common ways of exploring new investment opportunities. The importance of referrals and networks in the deal sourcing is also mentioned by Teten and Farmer (2010), where 44 percent of their respondents reported that in-house relationships and networks were their main source for deals. Secondly, the VCs engage in the deal screening phase which

Tyebjee and Bruno (1984) define as a delineation of key policy variables which limit the investment prospects to a manageable few for further in-depth evaluation. According to Kaplan and Söderberg (2001), VCs spend a significant amount of time and effort evaluating and screening the investment opportunities before structuring the term sheets and making an actual investment.

According to Kaplan and Strömberg (2001), VCs explicitly consider the attractiveness of the opportunity in terms of the market size, the business strategy, the technology, the customer adoption, the competition on the market as well as the management team and the deal terms. Specific investment related risks often relate to the same characteristics that the VCs evaluate for attractiveness and these risks are also delineated explicitly (Kaplan and Strömberg, 2001).

The practice of locating co-investors to an investment is called syndication. According to Block and De Vries (2011), VCs might decide to syndicate an investment in order to be able to finance a larger number of startups and thus increase the number of deals per invested dollar and limit their exposure to financial risk while also achieving a greater flexibility in liquidity. Further, syndication might be valuable from a network perspective as it is expected within the VC community that invitations by lead VCs will be reciprocated in the future, implying that syndicates can serve as an important prerequisite for future beneficial deal-flow, reputation and trust between VCs. Thirdly, syndication from a resource based perspective can be used as a platform for the VCs to share their specific knowledge and assets which in a deal may be complementary and hence, they can contribute to creating further value (Block and De Vries, 2011).

2.1.2.2. Deal Evaluation and Structuring

The deal evaluation process is defined as the assessment of perceived risk and expected return on the basis of certain characteristics' weighting - which implies that the decision whether to invest or not is determined by the relative levels of expected return and perceived investment risk. During the deal evaluation process there is a high degree of cross-referrals between Venture Capitalists which is particularly true for the purposes of syndication (Tyebjee and Bruno, 1984).

Tyebjee and Bruno (1984) identified five common underlying dimensions of an attractive deal namely; (1) the market attractiveness in terms of size, growth and access to customers, (2) product differentiation in terms of uniqueness, patents, technical edge and profit margins, (3) managerial capabilities in terms of skills within marketing, management, finance and the entrepreneurs' references, (4) environmental threat resistance in terms of the technology life cycle, barriers to competitive entry, insensitivity to business cycles and down-side risk protection, and (5) cash-out potential in terms of future opportunities to realize capital gains via mergers, acquisitions or public offerings. Deal structuring is defined as the negotiation of the price of the deal, the ticket value, and the price negotiation is namely the relinquished equity to the investor as well as the covenants which limit the risk of the VC as an investor (Tyebjee and Bruno, 1984).

Once the VC has decided that a deal is acceptable and that it wants to proceed with the process, the actual deal will be consummated only if the VC and the entrepreneur are able to structure a mutually acceptable investment agreement (Tyebjee and Bruno, 1984). The particular investment agreement serves several purposes from both parties' perspectives. From the VCs point of view, the agreement establishes the price of the deal which is the equity share that the entrepreneur will give up in exchange for capital. Furthermore, the investment agreement establishes protective covenants which limit capital expenditures and management salaries (Tyebjee and Bruno, 1984). In addition, the covenants also establish the basis under which the VC can intervene or take impactful action even though they might hold a minority position. Such impactful actions might be by taking control of the board, forcing changes in management or liquidating the investment via forced buy-backs, mergers, acquisitions or via public offerings. Covenants may also restrict the power of the ventures' management to dilute the equity of the VC by raising additional capital elsewhere (Tyebjee and Bruno, 1984). Lastly, there is a mechanism known as the earn-out arrangement which can also serve as a purpose for the VC. The earn-out mechanism implies that the entrepreneur's share of equity is determined by meeting certain agreed-upon performance objectives which makes the VC able to assess the entrepreneur's expectations for the venture (Tyebjee and Bruno, 1984).

According to Kaplan and Söderberg (2003), the board rights, voting rights and liquidation rights are allocated such that the VC obtains full control over the company in case that the firm performs poorly. However, the entrepreneur generally obtains or retains more control rights as performance might improve. If the firm appears to perform exceptionally well, the VCs retain their cash flow rights but relinquish most of their control rights as well as their liquidation rights (Kaplan and Söderberg, 2003).

2.1.2.3. Post-Investment Activities

Tyebjee and Bruno (1984) define the post-investment activities as the assistance to the venture within the areas of for example key executive recruitments, strategic planning, locating expansion financing and orchestrating mergers, acquisitions or public offerings. Hence, this section refers to the post-investment, but pre-exit phase of the VC business cycle which also could be described as the period after the VC has made the decision to invest in a particular company.

This stage is characterized by the value-adding interaction between the VC and the entrepreneur rather than any liquidity events such as follow-on funding rounds or exits (De Clerq, 2007). Once the deal has been consummated and an investment has been made, VCs undertake a monitoring approach in order to mitigate risks and reduce the possibility of entrepreneurs appropriating the provided funds for personal interests, rather using them in such a way that is creating the most value in the business (De Clerq, 2007). The venture capitalist's role expands from being an investor to being a collaborator or a business partner and the new role may be via a formal representation on the board of directors, via an informal influence in the market or, in the supplier or creditor networks (Tyebjee and Bruno, 1984).

Empirical evidence indicates that VCs are more involved in their investments than outside investors and owners in public corporations although there is certain evidence that VC involvement can vary from near passivity to deep involvement. There is theoretical controversy regarding the level of importance that VC involvement plays for new ventures, however most studies suggest that VCs in fact do add value by their involvement (Fredriksen and Klofsten, 2001).

According to Tyebjee and Bruno (1984), the intensity of the VCs involvement in the venture's operations vary between different VCs. However, researchers show that it is undesirable for a VC to exert control over the day-to-day operations in a portfolio company. Notably, it is stated that the VC might intervene if a financial or managerial crisis occurs and that such intervention even might imply the installment of a new management team. Even though it is undesirable for the VC to exert detailed control over the daily operations, research examining VCs' activity suggests that they clearly are actively and personally involved in their companies and that such activity is particularly notable when it comes to monitoring and assisting the companies (Fredriksen and Klofsten, 2001). Despite this, there is research examining whether such personal engagement and contact may afford the opportunity to reduce risks or add value since greater governance is not always the most cost efficient. Furthermore, there are studies illustrating trade-offs by concluding that VCs must balance the costs of governing companies against the benefits of it. Moreover, there are studies concluding that VCs seek to maximize their returns on the time put into the ventures (Fredriksen and Klofsten, 2001).

Venture Capitalists' previous experience and specialist knowledge as well as network and syndication with other VC funds allow them to provide valuable mentorship, guidance, knowledge and expertise to the ventures and increase the chances for success (SVCA, 2019). Furthermore, staff and investment professionals working at VC firms are often previously successful entrepreneurs which could be crucial in transforming a good idea to a success (SVCA, 2019). VC investors and staff generally have highly specialized knowledge within certain areas such as life science or tech for example. For instance, tech investors are often former entrepreneurs investing in business models or certain technologies that they have specialist knowledge and competence within which enables the VC to provide concrete and constructive feedback on a product level (SVCA, 2019).

Five to ten years after the initial investment, the VC typically wants to liquidate and cash-out any gains that have been accumulated and generated over the years. The VC plays an important and active role to this end in directing the portfolio company towards any liquidation events such as mergers, acquisitions or public offerings (Tyebjee and Bruno, 1984).

2.2. Venture Capital During Previous Crises

This study is conducted almost exactly a year after the coronavirus COVID-19 was declared a pandemic by the World Health Organization (WHO) (Duchame, 2020) which from one point of view makes it richer than previous studies conducted, however it is still not possible to fully say how the pandemic has affected the economy and the Venture Capital industry. Nonetheless, some clues and guidance can be found in previous studies examining how the industry as such and VC firms previously have reacted to and operated in crises or when hit by shocks. According to Conti et al. (2019), not so much is known about how VCs behave when the VC investment model of pre- and post-investment activities is put under unexpected and severe stress which makes it an interesting topic to evaluate further.

Financial crises introduce shocks that ripple through the whole economy which in turn also change the conditions underpinning the VC investment model. Previous crises that have led to severe slowdowns in VC activity are both the 2000-2001 dot-com crisis as well as the

2008-2009 financial crisis (Block and De Vries, 2011). The bursting of the dot-com bubble in 2000 led, according to Block et al., (2012) to a severe decrease in the number of funding rounds, and during the 2008-2009 crisis, the number of initial funding rounds as well as the amount of funds raised in later funding stages decreased. Furthermore, the effects of the 2008-2009 crisis differed across industries and countries where the United States experienced stronger effects than other countries. The 2008-2009 financial crisis led to a severe funding gap which significantly affected the financing of technological developments and innovations (Block et al., 2012). Ning et al., (2015) consistent with the findings of Block et al., (2012) found evidence of VC investments in the United States being significantly affected by macroeconomic factors and public market signals where VCs responded to the dramatic macroeconomic changes by adjusting their risk preferences and investment strategies. They conclude that this was done by; 1) securing fewer deals with generally smaller ticket sizes, 2) increasing their allocations to the expansion and later stage investments, as well as 3) injecting a lower percentage of cash in the first several financing sequences as opposed to their total committed investments to a portfolio company (Ning et al., 2015). Nonetheless, a study by Cumming et al., (2005) shows that VCs in times of expected illiquidity of exit markets, invest proportionately more in early stage and high-tech ventures in order to postpone exit requirements. Furthermore, they find that when exit markets are liquid VCs rush to exit by investing more in later-stage ventures.

Considering that capital from institutional investors such as insurance companies and banks as well as the access to a functioning market for public offerings are important prerequisites for a functioning VC market, financial crises and economic slowdowns in turn naturally affect the VC market when aforementioned actors are faced with a challenging economic climate resulting in capital scarcity (Block and De Vries, 2011). Hence, during a financial crisis a major risk for VC is that the capital source collapses resulting in a liquidity supply shock curtailing all the VCs opportunities to raise new funds, attract external capital, attract syndication partners and exit prior investments in a successful manner due to the weakened financial markets (Conti et al., 2019). The effects of weaker financial markets are clearly stated in previous research, where the pace of new VC investments after the dot-com crash fell to 50 percent of the normal and they fell to 80 percent of the normal after the Great Recession in 2008. Notably, the pace of new VC investments slowed to 71 percent of normal during the first half of 2020 according to Simmons (2020). By combining the reasoning in Conti et al,. (2019) where VC investment strategies under financial constraints are examined, with the data from previous crises by Simmons (2020), it becomes clear that VCs experienced similar slowdowns in activity during the COVID-19 crisis in 2020 as during the dot-com and financial crises.

Luukkonen and Maunula (2007), define non-financial capital or non-financial value added as all the non-financial benefits that portfolio companies receive from the VC as a result of their investment relationship. Examples of non-financial capital are advice based on experiences and competencies of the VC as well as access to their networks. Certain studies conclude that a distinguishing feature of VCs is the amount of non-financial capital that they can allocate and contribute to their ventures (Berenstein et al., 2016). Furthermore, it is shown that a major share of non-financial capital is specialized and concentrated in the VCs' core sectors (Conti et al., 2019). Conti et al., (2019) conclude that VCs take advantage of certain opportunities outside their core sectors during times when capital and syndicate partners are relatively plentiful and that they avoid such investments in times of liquidity shocks. Conventional wisdom associates periods of active investment either with VCs funding poorly performing ventures, or with better investment opportunities overall on the VC market (Nanda and Rhodes, 2013). Nanda and Rhodes (2013) however, discovered a phenomenon stating that firms funded during hot times face a higher probability of failure while simultaneously creating more value in case of future success. This is mainly due to ventures funded in hot markets having both more patents and receiving more citations in their initial years, as well as receiving a higher valuation on the day of their IPO, than firms funded in cold markets. This phenomenon is described as the funding of generally riskier, earlier and more innovative ventures during hot times when capital is abundant, meaning that the amount of both to-be successful and the to-be bad companies increase (Nanda and Rhodes, 2013). The abundance of capital during good times of the investment cycle might not only be a response to the arrival of new technologies but could also play an important role in driving creation and commercialization in the companies. Hence, the abundance of capital can, according to Nanda and Rhodes (2013), change the type of firms that investors are willing to invest in, making the financial investment cycles create innovation cycles in turn.

The aforementioned tendency to focus on core sector investments during times of liquidity crises as discovered by Conti et al. (2019) could be tied to the phenomenon discovered by Nanda and Rhodes (2013). The concentration could be mirroring a lower risk appetite as well as an increased emphasis on information problems during times when sector expertise and non-financial capital are increasingly important. Therefore, it could explain the explorative actions and more aggressive investment strategies chosen by VCs during good times in hot markets and conversely describe the risk aversion and their relatively more defensive strategies during bad times in cold markets.

The study by Ning et al., (2015) contributes to the existing literature by finding evidence supporting the Macroeconomic Situation Hypothesis. They find evidence that an expanding economy experiencing a higher GDP growth rate, a greater industry production index and a lower unemployment rate has a positive impact on the Venture Capital industry characterized by an increased amount of investments as well as a higher average amount per deal. Furthermore, their research supports the Public Market Hypothesis, assuming that good or superior performance in the stock and bond markets favorably can affect the VC industry and contribute to increased VC activities. Ning et al., (2015) finally found companies becoming more cautious and risk averse after the 2000 dot-com bubble and the financial crisis in 2008-2009, that is, they found the Crisis Hypothesis to be supported. In terms of the Public Market Hypothesis, Ning et al., (2015) found the NASDAQ Composite Index, characterized by being the most widely followed for tech and growth stocks, to be the best predictor of VC activities. When this study is conducted, it has been almost exactly a year since the coronavirus COVID-19 was declared a pandemic (Ducharme, 2020) and the NASDAQ Composite Index has since then increased by around 70 percent (Investing.com, 2021) which in terms of the Public Market Hypothesis, would imply a VC market that currently, one year later, is showing high activity. It is reasonable to believe that the American stock market has a strong influence on the overall global climate on other financial markets, hence also implying that the strong development for the NASDAQ Composite Index might be sufficient guidance for other markets.

2.3. Analytical Framework

The analytical framework presented in Figure 1 will be used to interpret and analyze the empirical material that has been collected and that is presented in depth in section 4. Findings. The material will be analyzed in line with the research conducted by Tyebjee and Bruno (1984) based on how each activity has been affected by COVID-19 according to the interviewees, that is, an analysis will be made on how the initial pre-investment activities of; i) Deal Origination and Screening, and ii) Deal Evaluation and Structuring has been affected by the pandemic. Similarly will the post-investment activities referred to as iii) Portfolio Management in the broadest sense be analyzed based on the same premises, that is, how these activities have been affected by the ongoing COVID-19 pandemic.

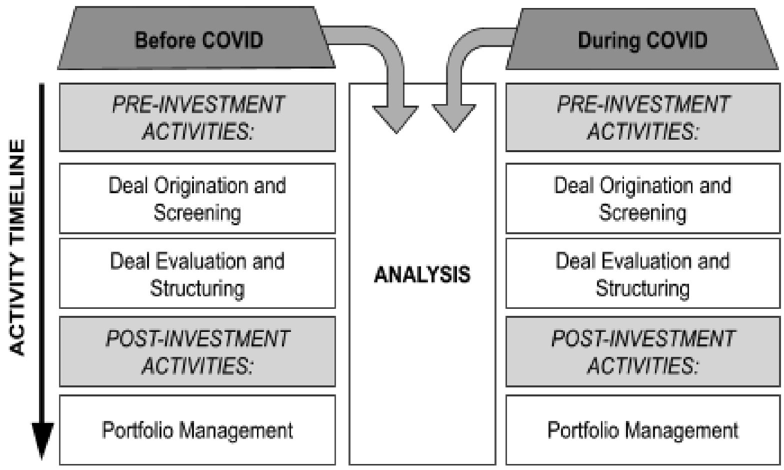

Figure 1: Analytical Framework

2.4. Propositions

Proposition 1

Despite the capital markets' rapid recovery following the initial downturn in March 2020, there still were significant uncertainties to how the situation would develop and affect the VC industry in the near future. Considering the restrictions following the pandemic, the VCs should have experienced decreases in their deal-flow following the inability of physical meetings. Based on the suggestions by Ning et al. (2015) and Block et al. (2012), it is reasonable to believe that VC activities slowed down as a result of VCs adopting more defensive investment strategies in order to cope with the uncertain economic environment still posed by the pandemic. Such changes should thus be expected to have affected the VCs' overall assessments of perceived risks and expected returns during the pre-investment phase (Kaplan and Strömberg 2001; Tyebjee and Bruno 1984).

Proposition 2

De Clerq (2007) defines the post-investment phase as the value adding interactions between the VCs and the founders. They further suggest that VCs undertake a monitoring approach in order to mitigate risks during this phase where it, according to Tyebjee and Bruno (1984), is undesirable for the VCs to exert control over the daily operations. Considering the likelihood of portfolio companies having been faced with new challenges caused by the pandemic, it is reasonable to believe that VCs increased their involvement and intervention in certain portfolio companies that were faced with financial or managerial crises, as suggested by Tyebjee and Bruno (1984).

3. Method

3.1. Research Design

The aim of this thesis is to examine how Venture Capital activities have changed due to COVID-19 using a multiple-case study. In order to investigate these changes, the study is based upon a qualitative research approach, where eight industry professionals were interviewed in order to gain insight into their experiences, observations and reflections regarding how their activities have been affected by the pandemic. The research design of this study is consistent with the study conducted by Carlson and Henriksson (2020), where a qualitative approach was used by conducting semi-structured interviews in order to gain understanding of *how* the COVID-19 crisis has affected the activities among the VCs included in the study rather than *if* they were affected. The desired outcome from the interviews was in accordance with Williams (2007), to obtain a high level of detail and involvement in the interviewees' experiences. Such high involvement was desired in order to purposefully describe, explain and interpret the changes as well as the reasons for them based on individual reflections, observations and experiences of the interviewees.

Many studies on VC have been conducted with a quantitative approach which makes the use of a qualitative approach interesting and contributing, as it provides context and deeper insights compared to what a quantitative approach would do. Moreover, the qualitative design is suitable as it enables an investigation of *how* COVID-19 has affected VC activities. The qualitative research method is a holistic approach involving discovery and it can further be described as an unfolding model occuring in a natural setting. Based on these characteristics of the approach, this study is built on a high level of details due to the possibility of high involvement in the empirical material collected and the actual experiences analyzed.

3.2. Data Collection

Data collection through interviews were selected over other forms of material gathering methods, primarily since the interview format enables follow-up questions and possibilities to adapt the questions depending on the answers given by the interviewees, as opposed to e.g surveys, where there is little possibility to adapt the material gathering process according to the subjects. The interview format also allows the interviewees to ask for clarifications to any potential ambiguities related to the questions.

The interviewees included in this study have been selected using purposive sampling, where competent and experienced industry professionals were selected for the material collection (Bryman and Bell, 2015). As this study aims to investigate the changes in VC activities due to COVID-19, it was important that the interviewees had been active in the industry before, as well as after the pandemic broke out. If subjects were included that had either only been in the industry before, or after the crisis hit, the material collected would be insufficient due to lack of experience within the relevant area.

The empirical data consists of primary data that has been collected through semi-structured interviews with representatives such as General Partners (GP) and Fund Managers from Venture Capital firms focusing on early stage investments (see Appendix 1). Due to the fact that a majority of the interested interview candidates were Swedish VCs focused on early stage investments, it was decided to exclusively focus on the early stage VCs in order to have candidates of similar size and characteristics. The study includes interviews with representatives from eight different VC-funds in order to get a broader sense of the experiences of the industry professionals. Although conducting interviews with several representatives from the same VC potentially would provide increased validation for how each VC-firm reacted and was affected, it was decided to include a greater number of VC-funds in order to receive broader insights from the industry. Furthermore, due to difficulties in getting a sufficient number of Swedish VCs to participate in the study, two international VCs were included in order to analyze a wider set of VCs. The international influence in the material also provides further depth to it, allowing for greater nuance in the conclusions drawn regarding how COVID-19 has affected the VCs' activities.

The format of the interviews were of semi-structured character, where open-ended questions were emphasised with the purpose of investigating the interviewees' individual viewpoints as well as to avoid steering their answers in any direction. Follow-up questions, often of a more direct and specific character, were asked to obtain clarifications and further explanations to answers given by the interviewees, meanwhile trying to get the interviewees to stay on the relevant topic.

Both authors of this study attended all interviews, where one had the primary role of asking questions, whilst the other had a role of observing the interviewee and their answers, asking follow-up questions when needed. The impressions from the interviewees varied where some seemed to have predetermined reflections of how COVID-19 had affected them, while others seemed to reflect upon its impacts during the actual interview. The observed behaviours and tendencies of the interviewees sometimes provided further insights into their thought processes.

Each interview was conducted virtually, via the meeting software Google Meet. The interviews were recorded using the recording function within Google Meet, after the interviewees had given consent to being recorded. The interviews were recorded solely for material handling purposes, as each interview later was transcribed.

3.3. Data Analysis

After the interviews were transcribed, the material was compiled in a single document using the framework analysis, with the purpose of structuring the qualitative data and identifying relationships and differences between the interviewees' answers (Bryman and Bell, 2015). This approach was beneficial in the purpose of highlighting the relevant material, as well as identifying relevant themes to map the quantitative data against. The material was divided into two main themes which followed the structure of the research questions; the pre- and post-investment activities. The main themes were then divided into numerous sub-themes to provide further structure to the analysis and presentation of the material.

Following the structuring of the material, the relevant points were presented in the 'Findings' section as a basis for the analysis. The findings were presented according to the identified themes from the material, which enabled a clear and concise presentation. Furthermore, in section 5, the findings of potential changes in activities were analyzed in accordance with the analytical framework presented in section 2.3. Each investment activity was analyzed considering what previous literature suggests, highlighting indications of similarities and differences.

3.4. Validity and Reliability

As mentioned by Bryman and Bell (2015), there are two main types of validity; internal and external validity. Internal validity refers to how well the findings presented in the study can be identified by outside observers. By recording and transcribing the conducted interviews, the material could be accessed by observers, which is an indication of internal validity. However, since the empirical material has been analyzed subjectively by researchers, there is still a risk of decreased internal validity, due to any potential biases. External validity refers to the degree which the findings in the study can be generalized across social settings. Since this study is a multiple-case study, there might be issues of generalizing the results. Furthermore, due to the included VCs being of similar character, this generalization would be limited only to early stage VCs primarily based in Sweden. Furthermore, the external validity is decreased due to the fact that the material is strictly based on subjective reflections of the interviewees, which may be misrepresentative if the results were to be generalized on a bigger scale.

Furthermore, reliability is by Bryman and Bell (2015) explained as the degree to which the study can be replicated by other researchers. Since the methods used in the study are presented in detail, as well as the characteristics of the interviewees and the questions asked during the interviews (Appendix 2), the study could be argued to be reliable. However, as the sample size included in the study is limited to a relatively small fraction of the VC industry, the findings from a replicated study could potentially vary, depending on which VCs are included.

4. Findings

This study builds on empirical material collected through 8 semi-structured interviews with industry professionals which is presented in this section. The material is structured in chronological order starting with observations on the activities before, respectively after the breakout of COVID-19. The empirics are divided into two main categories of pre- and post investment activities respectively where further categorization is made to shed light on the differences in the pre- and post-COVID-19 states.

4.1. Before COVID-19

In the following section, all material regarding the activities of the VCs before the early spring of 2020 when COVID-19 hit, is presented. This forms a baseline for what the operations in the VC firms generally look like during normal times. This baseline will later in the report be used to identify any changes in activities and operations as a reaction to the pandemic as well as its effects on the industry.

4.1.1. Pre-Investment Phase

After having conducted interviews with industry professionals representing different firms, with different investment strategies, focal sectors and geographical scopes, it has become clear that a majority of the firms operate similarly in their pre-investment phases. Having that said, each firm has developed their own processes and methods of researching, finding and analyzing investment prospects, an activity that in this report is referred to as Deal Origination and Evaluation.

Deal Origination and Deal Screening

There seems to be two main types of deal origination mentioned by the interviewees; inbound and outbound deal sourcing. Inbound deal sourcing includes referrals from networks and entrepreneurs contacting the VCs directly when they are raising new capital. Outbound deal sourcing refers to the VC actively reaching out to companies that they find interesting, given their investment approach. Several interviewees also mentioned various startup events as an important part of their outbound deal sourcing, as they meet a lot of entrepreneurs and expand their network. A majority of the interviewees mentioned the importance of networks in their inbound deal sourcing.

> I’d say that there are kind of two ways of investing generally, there is like thesis driven and personal network driven. So personal networks driven, which is how VC used to operate and there are still plenty of firms that primarily act this way, is just you know, who in your network is investing in what and they'll like ‘whoop’ you into deals or virtue of deals or perhaps a founder that you have backed in the past is now on his or her next venture and raising money for a new company and like that’s where a lot of their deal flow comes from, it's all kind of personal networks. - Interviewee F

All of the VCs seem to follow a similar structure once they are presented with an investment opportunity. Although the focus areas and aspects considered might vary, there seem to be similarities in how the VCs screen the investment cases in order to determine whether they are interested in further evaluating the company. The common denominator seems to be the founders and the team within the company. As early stage companies rarely have extensive historic data on e.g financials and market traction, the team has been mentioned in several interviews to be a key aspect of consideration when screening the companies. Other parameters that have been mentioned in several interviews are the addressable market and the opportunities within it, the product and its technical strength as well as the strategic roadmaps that the founders are focusing on executing on. Given that the VCs are happy with these parameters in the initial screening process, they continue by further evaluating the company to gain a deeper understanding of the organization and what opportunities and risks it might bring.

Deal Evaluation and Due Diligence

During the second part of the pre-investment phase, when the VCs have found a potential interesting investment case, there are a lot of similarities in how they operate when trying to get to know the companies and their founders. Most interviewees mentioned that after the initial contact with a company, they initiate a get-to-know period with the purpose to further understand the investment case in general and learn more about the product, the team, the market and the technology of the venture.

> If we like the idea and the entrepreneurs we have a type of ‘get-to-know’- process which typically takes 3-4 weeks where we meet with the company several times.

> We try to 'dig deep' and do desktop-research from our part, where we look at the competitor aspect, what has been done within the area before, how big the market is, how big it can be, what the quality of the entrepreneurs is, et cetera. - Interviewee G

A majority of the interviewees describe similar processes, where they take a deeper look at the company and focus on getting to know the team and their operation in a more comprehensive way. This can be done in different ways where Interviewee B for example mentioned that due to the small size of their team, they use specialists in areas such as tech, market analysis, HR, et cetera to evaluate the company, while others such as Interviewee C claim that they handle the evaluation process internally. Granted that the VCs still find the investment cases interesting, a formal due diligence (DD) process is initiated, where they dig even deeper into a number of key areas, looking for potential 'red flags', i.e., signs of potential problems that need attention. Several interviewees also mentioned that the structuring of term sheets and shareholder agreements are formed during the DD process.

When compiling the material from the interviews it is quite clear that there is a general theme regarding key areas of focus during the due diligence phase. In a majority of the interviews conducted, four main DD areas were mentioned; financial, team or HR, technical and legal. Some interviewees (mainly D, E and H) also mentioned the commercial DD as an important part of the evaluation. The purpose of the DD, as described by Interviewee G, is to expose any potential risks or red flags that were not discovered in the first phase but might be deal breakers for the VC. Some of the firms conduct the DD in parallel with the evaluation mentioned in the previous section (Deal Origination and Deal Screening), and others have a more clear distinction between the two phases. It is also clear that the DD is conducted in different ways, with different focuses between the VCs. Interviewee H uttered that even though they have five different key areas of their DD, the most important factor which is emphasized the most is the team. The explanation to this was that in early stage investments, the DD might not always give much useful information, since the company is young and might lack financial or commercial data, for example.

4.1.2. Post-Investment Phase

Portfolio Management

Regarding the post-investment phase, there seems to be variation in how the VCs operate as investors where some have a stated requirement to always take board seats in the portfolio companies (often lead investors) while others are more flexible. Whether the VCs have board seats in a given portfolio company seems to affect the scope of their involvement. If the VC does not have a board seat, they tend to have more of an advisory role to the founders while they have a more hands-on, supportive role if they take active board seats. Interviewee D described their role on a similar note as essentially being an ever-present sounding board for the founders to at all times discuss whatever strategic, expansion, recruitment, fundraising, go-to-market or product issues. They further clarified that they do not intend to be operational nor to get in and execute on tasks. As a sounding board, they should always be there for the companies to discuss and bounce thoughts of. Several interviewees similarly described how they as a VC follow and support the company, involving everything from helping them with key-recruitments, future fundraising, overarching strategic management and crisis management for example. On the same topic, Interviewee G mentioned that they try to be active in their companies but that the level of involvement is based on the wishes of the founders in each company where some seem to rely more on their investors than others, which translates into how involved the VC is.

4.2. During COVID-19

In the following section, information will be presented on the VCs' initial reactions as well as ongoing measures and changes in their activities following the outbreak of the coronavirus COVID-19.

4.2.1. Initial Reactions and Responses to COVID-19

From the material generated in the interviews, the initial reactions and responses to the pandemic seem to vary even if there are similarities. Several of the interviewees mentioned that they took a step back and reflected upon the shocking situation, which in some cases even was characterized by real panic.

> There were quite some different reactions from our side. It was both from a personal finance perspective which is a really important part for us since we are not a fund but we invest with our private capital. This led me to one day having

> real panic and wanting to pause all investments since I felt that I couldn't handle it. - Interviewee A

Other interviewees had a seemingly more balanced approach to the situation and did not experience panic or extreme shock in the same way as others. Interviewee D mentioned that their initial response to the pandemic was to harness the knowledge and experiences of their investors in the fund who have been through a few cycles before. This reaction is somewhat similar but yet not as dramatic as the one mentioned by Interviewee H, who described that they called for an internal general meeting with a more serious attitude.

> Now it is serious. This is going to be deep and it is going to be tough and we don't at all know how long this will last so we will have to act as if it is going to be really deep and as if it will last really long. [...] It led to us establishing internal control functions where we on a weekly basis went through the whole portfolio but also out in our companies we made sure that new financial plans were created, looked through the yearly forecasts and in many cases we had to lay off staff. - Interviewee H

Another immediate response that a majority of the VCs mentioned they did during the initial time of the pandemic was to try understanding and materializing what effects the pandemic could have on their individual portfolio companies even though there was extreme uncertainty. Interviewee D described that they first off all acknowledged the spaces in the market that had either disappeared immediately or that might carry more inherent risk following the pandemic. Furthermore, Interviewee E described that one of their initial reactions was meeting and discussing with the companies how the pandemic might affect them as well as starting to work on a crisis plan regarding how their business models, products and solutions potentially could be affected by the initial lockdowns and halts of several markets.

4.2.2. Pre-Investment Phase

In the following section, information will be presented on any potential changes in the VCs' pre- investment activities during COVID-19. Due to similarities in how the the activities referred to as the Deal Origination and Screening as well as the Deal Evaluation and

Structuring have been affected by COVID-19, these will be presented in a combined section below.

Deal Origination, Screening and Evaluation

Regarding the investments conducted by the VCs, there seem to be no indications of active decisions to invest in any specific markets that might have experienced momentum following the pandemic. Rather, there seems to be certain sectors that the VCs are actively avoiding investing in. For instance, Interviewee D mentioned that they were cautious about investing in capital intensive businesses since they were unsure how later stage funds would respond, thus taking on inherent risk not knowing if they would be able to make a profitable exit. Specific sectors that were brought up in several interviews as ‘no-go’-zones were travel and events, due to the current state of the world.

Furthermore, there seems to be a general consensus among the interviewees that their in- and outbound deal sourcing activities were not subject to fundamental changes in volume, meaning that the deal origination activities generated similar amounts of investment opportunities as previous years. A majority of the interviewees claim that the number of investment prospects that enter their screening process have been at similar levels as previous years, indicating that the pandemic has not affected their deal flow significantly. Contrarily, in some instances the pandemic has in fact presented investors with opportunities that they likely would not have been given otherwise.

> There are instances where there are companies with bigger capital needs than previously. Some of these companies have now opened up for actors like us, who did not think that there was a chance for us to invest. - Interviewee A

Regarding the VCs’ screening and evaluation processes, several interviewees reported that they have not been looking at new parameters when analyzing investment prospects as an effect of COVID-19. Rather, many of them have changed the way they look at certain aspects when evaluating investment cases. The founders of the companies seem to be emphasized, more specifically how they will be able to maneuver the new landscape. Further, understanding the market and how it is likely to be affected by the pandemic is also an increasingly important factor when evaluating new investment opportunities, as mentioned by several interviewees. Interviewee E claimed that they look at the same parameters as before, but with a greater emphasis on how well the venture fits their idea of ‘the world after

COVID-19'. This has explicitly meant that they would likely not invest in certain sectors and they still have a strong focus on how the company creates value, which has become even more important for them following the pandemic. The general consensus seems to be that the VCs have had a relatively 'COVID-19-proof' investment approach, where a lot of emphasis has been put on evaluating the founders and the teams, since companies in the early stages often lack financial and commercial history. Several interviewees claim to have a value-focused investment strategy which has enabled them to continue operating somewhat in line with 'business-as-usual', i.e., not needing to change the parameters they focus on. Furthermore, there are no indications of any changes in the key areas evaluated during the DD process. Rather, the only clear difference in how the DD is conducted is that the VCs now have been forced to perform the DD's virtually, instead of in-person as they did before COVID-19. Moreover, there have been no specific mentions of any noticeable changes in neither the structuring of agreements and term sheets nor in their syndication activities, indicating that COVID-19 has had no remarkable effect on these parts of the investment process.

The Digital Workflow

An important point that was brought up in a majority of the interviews was the digital nature of work during the pandemic and its effects on finding and meeting new companies. Several interviewees mentioned that a significant part of their deal sourcing is generated by visiting various events across Sweden, such as pitching events and fairs. These have now been carried out digitally, which from a productivity and efficiency perspective has been beneficial due to the travel times being avoided. Several interviewees expressed excitement regarding the fact that they could increase the efficiency in their work, avoiding 'unnecessary in-person visits'. However, there were concerns raised that the digital nature of working could inhibit the nurturing and development of their network, which still acts as an important part of their deal sourcing.

Not all interviewees expressed the same level of enthusiasm for the virtual meetings with new companies. Several interviewees mentioned that an important part of their investment analysis revolves around getting to know the founders and understanding how the team works internally and that the digital nature of meetings have complicated this process.

> It is a little bit harder to see how people interact, I think it is very good to meet the teams many times and meet a lot of different people from the companies you

> invest in. Sometimes the founding teams are small, they might be two people, sometimes they are bigger, and sometimes it is not just the founders, there can be other key people within the company that are relevant and ideally I would like to meet them many times and meet them in different constellations, because then you learn a great deal about how things work within the company. That is of course harder when you do it digitally and people sit in different locations or in different rooms and you only see their screen popping in and out. - Interviewee G

Conversely, Interviewee C mentioned positive aspects of meeting companies virtually.

> I actually think it is good. There are so many biases that kick in when you meet a team in person; do you like the city, do you like the smell in the office, do you like the way they walk, I mean I think there are so many unconscious biases and they all do not really play a role in whether that is a good investment, so I think I am sometimes a better decision maker now than I was before. - Interviewee C

Investment Scope

In regards to investment scope, i.e the number of deals and the ticket sizes, no significant changes were mentioned. Interviewee G mentioned that they have moved slightly towards relatively later stage investments (series A rather than seed), but they followed up by explaining that it was likely more of a coincidence rather than an active decision. Other interviewees reported that ticket sizes in general have been increasing during the last couple of years, which shows signs of the VC industry maturing. Thus, if they had increased ticket sizes during 2020 it would likely be due to the current climate in the market, rather than as a direct effect of COVID-19. Both interviewees B and E claimed that they have not changed their investment scopes at all and that both the number of deals and the ticket sizes have been at pre-COVID levels.

Fund Cycle

After having conducted a few interviews it quickly became clear that an important factor that played into VCs' investment activity was where in the fund cycle each VC was at the time of the outbreak of the pandemic. The VCs who were relatively early in their fund cycle, only had a few portfolio companies to support during the challenging period of many uncertainties. The VCs that were rather late in their fund cycles however, had a significantly bigger task in merely supporting and helping their companies to maneuver and survive the pandemic. Thus, the fund cycle stage of each VC affected their investment rate dramatically, where VCs that were early in their cycle could focus more heavily on investing in new ventures. Interviewee B also mentioned that they had observed a hesitation to make new investments from the VCs that were in the later stages of their fund cycle. They explained that they were more cautious about investing in new companies since they wanted to reserve capital to their current ones, as they expected them to experience difficulties raising new funds from new investors, due to the uncertain financial climate.

4.2.3. Post-Investment Phase

It is during the post-investment phase that there seems to have been the most significant alterations in how the VCs work. Several interviewees reported that their portfolio companies faced new types of challenges, which in turn resulted in different types of questions that had to be handled by the VC representatives in their respective companies. Some interviewees claimed to be quite 'hands-on' investors, helping with operational tasks, while others had a more strategic and advisory role. For instance, Interviewee E described a situation with one of their companies which had developed a useful product for healthcare providers during the pandemic. In that instance, one of the VC representatives realized the importance of early market traction and supported the company with their sales by contacting healthcare providers and using their network to get the product out to the market. Interviewee E continued by reasoning that their hands-on approach as investors might be a result of their founders having been entrepreneurs previously, which have given them a prominent solution-oriented approach to handling challenges, while using their experience and knowledge to provide support and guidance to their portfolio companies. Conversely, Interviewee C stated that they mostly had board meetings as usual and that the challenges their companies faced were more technical rather than strategic, which they trusted the founders to handle by themselves.

Furthermore, it seems like the challenges that the portfolio companies faced varied in significance, ranging from minor issues in sales cycles, to significant challenges which required fundamental changes to their products and solutions. It seems like the severity of the challenges presented to the portfolio companies was a determining factor to the degree of involvement from the VCs, regardless if they had a hands-on or advisory role as investors.

Re-Allocation of Funds for Portfolio Companies

Interviewee H, who represents a VC which was in the later stage of their fund cycle at the beginning of 2020, mentioned that as part of their initial response to the pandemic, they reviewed their portfolio companies based on the new premises of the markets. This review included analyses of which companies had good abilities to adapt and show that they could survive during this time. They pointed out that things do never play out as one has planned, implying that the most important aspects of successful entrepreneurs is the ability to handle different types of extreme events and find paths through them.This, combined with the rise of new opportunities that the VC was interested in capitalizing on, resulted in them choosing to "double down" on some of their investments, while not "throwing the others off a cliff". This meant that the VC re-allocated their planned funds for their companies in order to capitalize on new opportunities presented to certain other companies, while still trying to support the other companies that might be struggling, and limit the damages. These kinds of discussions in the investment teams were also mentioned by Interviewee F regarding whether or not they would continue to support some of their companies or if they should put them into a winding down process and sell them for whatever they could get.

They continued by saying that this process was repeated for a few of their companies that did not have the traction and that did not manage the difficulties of continued operations.

> I think that probably would have happened regardless of COVID, but COVID accelerated that decision making. And for other ones it was kind of a forcing function that says; "We have a conviction of this company, let us double-down, we will support them and put a little more money in even if we were not planning on it originally…". So I think it forced investors to just really think through their portfolio in more detail and think through who are the winners and where do you want to be putting your money? - Interviewee F

The Stock Market

One question that the interviewees were asked was their view on the stock market and its impacts on their specific VC as well as on the VC industry in general. According to several interviewees, the stock market has an effect on their ability to raise capital for new funds. Most LPs are exposed to the public markets, resulting in them potentially becoming hesitant towards tying up their capital in VC funds during recessions, which in turn leads to VCs potentially experiencing issues raising new funds. This was specifically pointed out by

Interviewee C, who observed that capital providers became hesitant to invest in their new fund due to the uncertain financial climate in the spring of 2020. Interviewee C continued by stating that over the course of the year, as interest rates were kept at low levels, everyone was looking for yield which made Venture Capital an interesting asset class again. The interest in VC was further confirmed by several other interviewees who reported that they actually managed to close new funds during the year.

The Future of VC

The interviewees seem to agree that the VC industry will keep working virtually to a larger extent than they did before COVID-19, mainly because they have been forced to adapt and during the year have realized the benefits. VCs that typically have rather narrow geographical scopes to their investments are expected to be more comfortable conducting investments in new regions than before as they now are used to meeting founders and teams virtually and as they are getting comfortable with covering markets remotely.

Several interviewees also mentioned that a possible expansion of their geographical investment scopes is likely to result in more capital being invested outside of typical innovation hubs such as Silicon Valley, London, Berlin and Stockholm which in turn might imply these outside regions becoming more attractive for VC investments. It was further mentioned by Interviewee D, on the same note that such transitions and changes are naturally following that VC broadly speaking is about investing in change and new innovation thus also justifying a potential thrive in this setting if it was not in position to do so before.

5. Analysis

In the following section, the research question: '*How has Venture Capitalist's activities changed due to COVID-19'* will be answered. This will be done by analyzing the empirical material in relation to previous research conducted by using the analytical framework presented in section 2.3.

5.1. Investment Activities

After having conducted the interviews with industry professionals regarding what impact COVID-19 has had on VCs' pre- and post investment activities, it has become clear that there is no universal answer to how the VC industry and individual firms have been affected. When using the analytical framework described in section 2.3, there are no indications of drastic changes in the investment activities of the included VC-funds. The different activities performed are similar to before COVID-19, rather it is *how* the VCs are working and performing each activity that might have been altered during the past year.

5.1.1. Pre-Investment

Deal Origination and Deal Screening

In accordance with Kaplan and Söderberg (2001), VCs still seem to spend a significant amount of time and effort on evaluating and screening investment opportunities during the pre-investment processes of deal origination and screening. There does not seem to be any significant differences in which parameters they consider in their deal screening when considering the attractiveness of a deal, i.e parameters such as market size, business strategies, technologies, customer adoption, competition, management teams and the deal terms still seem to be important aspects that are varying with the focus and investment approach by the individual VC. Moreover, investment related risks also seem to relate to the same VC specific characteristics evaluated for deal attractiveness as before COVID-19. Nonetheless, since a majority of the interviewees incorporate the uncertainty imposed by the pandemic in their origination and screening activities, it does not seem to have significantly affected how they in general discover and screen investment cases. A clear difference in their operation seems to be how they meet and interact with new companies. Due to the circumstances of COVID-19, these meetings have been held virtually instead of in person, which some interviewees find to be challenging. However, the findings indicate that the VCs experience similar volumes in their deal flow, meaning that they screen and evaluate similar amounts of investment prospects as previous years. Furthermore, the interviewees claim to have invested at similar rates, both in terms of number of deals as well as ticket sizes.

In accordance with previous literature (Tyebjee and Bruno, 1984; Teten and Farmer, 2010), several interviewees report that they are still heavily dependent on their networks in their deal sourcing, similar to how it was before COVID-19. An important part in the management and development of these networks was mentioned as attending different types of startup events, such as pitching events, innovation fairs and competitions. Due to the new digital format of these types of events, several interviewees were worried that their networks and relationship management would suffer as they were not able to meet in person. Due to the importance of networks and referrals, this could potentially have negative effects on VCs' deal sourcing long-term (Tyebjee and Bruno 1984; Teten and Farmer 2010). However, several interviewees expressed excitement regarding the increased efficiency in shifting to a virtual environment, as time spent travelling has been reduced significantly.

Deal Evaluation and Structuring

The definition of the deal evaluation process as suggested by Tyebjee and Bruno (1984) seems to be aligned with the general processes presented by the interviewees. Each VC included in the study seems to utilize their own interpretation of the definition, adapted to their individual organizations as well as their strategies and investment approaches, to evaluate the perceived investment risks and expected returns. There are indications of patterns and themes in the VCs' investment evaluations where emphasis is put on markets, products, founders and teams as well as growth and return potential. Despite the fact that they are specialized within different sectors such as healthcare, deep-tech or sustainability, they all invest in businesses that they believe have potential for long-term growth. Thus, they all invest in ventures with attractive and unique technologies and solutions, excellent and ambitious management teams and founders that are credible and trustworthy. After COVID-19 broke out, there seems to be an even greater focus put on the founders and their ability to adapt to the new landscape presented by the pandemic, as well as an increased emphasis on trying to understand the market and how it may be affected by the pandemic.

Furthermore, several interviewees reported that they have actively avoided investing in numerous sectors that they defined as too hazardous and uncertain, which further indicates an increased focus on evaluating risk in certain investment cases (Tyebjee and Bruno, 1984). The active decisions to avoid certain sectors provide evidence of a tendency among the VCs of trying to avoid unnecessary risk, while also focusing on investing in sectors within their speciality where they might have felt in relatively more control and comfort - in the otherwise highly uncertain environment.

Proposition

When analyzing the findings, there does not seem to be any tendencies of decreased deal flow following the inability of physical meetings. An explanation to this seems to be that the use of virtual meetings in different aspects actually have enabled the VCs to sustain their deal origination activities, albeit in different shapes and forms. Furthermore, there are no indications of the VCs adopting increasingly defensive investment strategies, as previously proposed neither are there any obvious indications of overall decreased pre-investment activity. It seems like the VCs quickly returned to the business-as-usual when they asserted that the needs for any fundamental transformations were not as severe as initially expected. Rather than including completely new parameters when evaluating investment prospects, an increased emphasis on already existing parameters such as the founders' competence as well as the future outlooks of the market is observed. Therefore, in line with the proposition, more weight seems to have been given to the perceived investment risk as well as in some cases, to the perceived return potential following arising opportunities (Tyebjee and Bruno, 1984).

5.1.2. Post-Investment

Portfolio Management

The post-investment activities performed after the investment decision has been made, as defined by Tyebjee and Bruno (1984), still seem to be important and there are no indications of radical changes to these activities. During this phase, the non-financial value-adding interactions as defined by De Clerq (2007) and Luukkonen and Maunula (2007), between the interviewed VCs and their portfolio companies remain; however it could be argued that this particular phase has experienced an increased emphasis. The material indicates that there has been a combination of helping companies survive the challenging period, as well as capitalizing on potential new opportunities. Due to the challenges presented to the portfolio companies, both managerial and financial as defined by Tyebjee and Bruno (1984), the VCs have been forced to support them on new issues. In addition, as suggested by Fredriksten and Klofsten (2001), there are clear indications that the VCs' involvement in their companies vary between the VCs, where some seem to have had deeper involvement whilst others reportedly have had more of an advisory role, avoiding undertaking operational tasks. According to Fredriksen and Klofsten (2001), it is undesirable for VCs to exert control over the daily operations, however as illustrated in the measures taken by Interviewee H there were clear examples of such drastic controlling measures. Increased VC control was partly explained by companies having been faced with completely new challenges and uncertainties, where the VCs oftentimes with their accumulated experience might have been a valuable lifeline and sounding board.

The type of involvement seems to be based on a combination of the type of investor profile that the VCs are claiming to have and the wants and needs of their portfolio companies. As confirmed by previous research, the Venture Capitalists' accumulated experiences and specialist knowledge together with their access to networks, still seem to be highly important aspects when involving in the companies (SVCA, 2019). Several interviewees reported that they view their relationship with the portfolio companies as a partnership, meaning that they intend to do more than just provide the company with capital.

Fund Cycle

Another aspect that was mentioned by several interviewees to have significantly impacted the VCs investment strategies was what phase in the fund cycle they were. In line with previous literature (Gompers, 1996), funds that were rather early in their cycle had generally invested in fewer companies, which naturally allowed them to support their existing portfolio companies, meanwhile continuing to source new deals. Conversely, the funds that were later in their fund cycles where they no longer invest in new companies, spent more time and resources solely supporting them. There were also points raised about VCs in the later stages of their fund cycles being hesitant to invest in new companies. This tendency followed that they wanted to reserve capital for their current companies in case they would experience difficulties in the near future with raising additional capital due to uncertainties in the capital markets.

The differences between VCs depending on their stage in the fund cycle is also aligned with the fact that several VCs in the later stages of their fund cycle reacted to the COVID-19 outbreak by reviewing their portfolio companies. The revision was done in order to identify which companies to double-down on and which ones that might have faced more serious long-term challenges. This is connected to the process of conducting follow-on investments during the second half of the fund cycle, as mentioned by Gompers (1996). Arguably, this could be seens as a response similar to the behavior presented by Conti et al.

(2019) and Nanda and Rhodes (2013), where VCs in times of uncertainty act to minimize risk. In this instance, VCs that were in the later stage of their fund cycles might have responded to the uncertainties generated by the pandemic by evaluating which companies were at risk of being significantly affected by COVID-19. Following this, they might have allocated available capital to the companies that were considered to have the most prominent outlooks following the pandemic, while trying to exit the positions with more inherent risk.

Stock Market

The observed high activity during the pre- as well as post-investment phases could potentially be explained by the findings by Ning et al., (2015) stating that the development of the NASDAQ Composite Index might act as an adequate measure of VC activity. The findings by Ning et al., (2015) seem to be consistent with the findings in this study as several interviewees confirm a relationship between their fundraising abilities and the stock market and in a broader sense. Moreover, this finding could to an extent be in line with some interviewees stating that they managed to close new funds during the year of 2020, potentially indicating high VC activity while the markets have shown a strong recovery and development. However, it seems like no further analysis can be made in this study to significantly attribute the stock market's development to the interviewees' investment activities.

Proposition

The proposition of increased VC involvement and activity in their portfolio companies throughout the year seems to be confirmed and in line with Tyebjee and Bruno (1984). Furthermore, it seems like such involvement activities varied between passive supportive involvement, and drastic operational interventions. The types of issues that the VCs supported their portfolio companies with seem to be connected to the challenges presented to the companies. However, the type of involvement of the VCs (operational or passive supportive) does not seem to be affected by the challenges of the portfolio companies, rather it seems to be the investor role of the VC that affected their type of involvement.

The Future of VC

Several interviewees seem to believe that the way VCs in general operate will never return to how it was before COVID-19. As a majority of VCs have been forced to work virtually to a much wider extent than before COVID-19, they have reportedly become more comfortable conducting investments in companies and people that they have never met in person. As COVID-19 forced the shift to virtual meetings, several interviewees mentioned that more VCs are starting to realize the benefits of implementing an increased share of virtual meetings, as it for instance increases time efficiency and productivity. According to numerous interviewees, the increased adoption of digital work will likely result in VCs broadening their currently rather narrow geographical investment scope, as they are becoming more comfortable evaluating investment cases virtually. This in turn is expected to increase the capital invested in companies located outside of the conventional innovation ‘hubs’, such as Silicon Valley, London, Berlin and Stockholm.

6. Conclusions

During the first quarter of 2020, the world as we previously knew it got turned upside down when the coronavirus COVID-19 rapidly spread across the globe and it quickly became apparent that we were on the verge of an uncertain and challenging crisis. As all other industries, Venture Capital was affected by the pandemic forcing all actors to quickly adapt to the new state of the world when their previous assumptions and predictions were overturned. The COVID-19 crisis is arguably one of the most severe crises in modern history, where apart from personal tragedies, it exerted a radical and abrupt effect putting the real economy out of action immediately and completely. Even though uncertainty as a non-quantifiable risk is shared with previous crises, the unexpected pandemic by much differs in its initial sharp shock of evaporated supply and demand followed by a forceful rebound.

Considering that the crisis is incomparable to previous global crises in modern history as well as considering it as still ongoing, it is interesting to examine the impact it has had on Venture Capital. The aim of this study is therefore to investigate how the operations and business activities of Venture Capital firms might have been affected by the uncertainties imposed by COVID-19 with the research question: *How has Venture Capitalists' activities changed due to COVID-19?*

In general, the findings of this study suggest that the activities themselves have not changed significantly, as the VCs seem to operate close to normal. The main changes seem to have been more in a practical sense, shifting to virtual meetings and gatherings. The shift to digital work has not had significant impacts on the perceived quality of their work, despite some interviewees mentioning that they prefer to conduct most meetings and interactions in person. During the pre-investment phase, the interviewees report that they are looking at the same factors as before COVID-19, when evaluating investment cases. What has changed slightly is the way in which they view these factors, putting more emphasis on competent founders, product-market fit and adaptability to changing environments. Similarly, the post-investment activities have not been subject to significant change either. The VCs have similar ownership roles as previously and their activities in their portfolios have only changed in the sense that the portfolio companies might have faced new types of challenges with varying severity. What seems to be a defining factor to how the VCs have managed their portfolios is how far into the fund cycle that they were when the pandemic broke out. The VCs that were early in their fund cycle could fairly quickly continue sourcing new deals, while the VCs further into their fund cycles spent more time supporting their companies, assessing which positions to allocate additional capital to, while trying to keep the other ones 'alive' in order to make profitable returns in upcoming exits.

Propositions

Based on previous literature presented in the Literature Review, two propositions to the research question were formulated regarding 1) the pre-investment activities and 2) the post-investment activities. Regarding the pre-investment activities, the proposition was that due to the significant uncertainties regarding how the situation would develop, it was based on previous literature reasonable to expect that VCs should have experienced a decreased deal flow. The reasons being due to the limited ability to conduct physical meetings as well as slow-downs in pre-investment activity, which were expected to affect the overall assessment of perceived risks and expected returns.

After analyzing the findings it became apparent that these propositions were partially in line with the reflections of the interviewees, specifically regarding the indications of an increased focus on evaluating the perceived investment risk. However, the propositions regarding slow-downs in pre-investment activity and decreased deal flow does not seem to be supported by the findings.

The proposition regarding the post-investment activities was that based on previous literature it was reasonable to believe that VCs increased their involvement and intervention in the portfolio companies that were faced with financial or managerial crises. The findings seem to support this proposition as there were indications of increased involvement in certain portfolio companies when needed.

Contributions

The major share of previous research on Venture Capital is conducted from the perspective of a business-as-usual perspective - however, almost nothing has been as usual since February 2020. This study contributes to the relatively small body of existing qualitative research on Venture Capital during crises and more specifically to the even smaller body of qualitative research on COVID-19's impact on the VC industry. The findings in this study provides further support to the suggestions from studies such as Kaplan and Söderberg (2001) and Tyebjee and Bruno (1984), as they seem to act as a good foundation to explain the VC activities even during times of extreme uncertainty. Furthermore, this study supports the suggestions of the connection between the stock market and VCs' ability to raise capital, described by Ning et al. (2015). The COVID-19 crisis has altered all predictions that VCs have had regarding the future and it has completely reshaped the assumptions within the VC arena, making this study shed light on changes and differences as well as provide insight into how VCs have handled this uncertainty. The uncertainty in this crisis differs substantially from the type of uncertainty VCs historically have evaluated since previous crises mentioned have been rooted in systematic failures and pure illiquidity rather than in shocks to global supply and demand stemming from the spread of a virus that actually has not completely halted and paralyzed the VCs' operations. Furthermore, this study contributes to research conducted in the beginning of the pandemic, with insights gained over the course of the first year of the pandemic, highlighting the development of the changed activities over an extended period of time.

Limitations

This study has been limited to the Venture Capital industry implying that the empirical study has been conducted on Venture Capital firms. With that said, the research is conducted from the perspective of VC representatives and not from the perspective of the entrepreneurs, founders or the management teams of the respective portfolio companies who might have experienced this crisis differently from the VCs. Beyond this, the empirical material consists exclusively of VCs investing in early stage companies, which potentially could indicate a rather homogenous sample. Similarly, the majority of the interviewees are Swedish VC representatives which potentially could limit the study's applicability to other parts of the VC industry as there could be differences between the Scandinavian, European and American VC industry that have not been discovered or discussed in this thesis. Lastly, this study only includes one representative per VC-fund, which poses a risk of subjective observations being considered truths for each VC.

Suggestions for Future Research

For future research it would be relevant to replicate this study and include an even wider sample size of VCs, in order to get a more reliable data set to analyze how the VC industry has been affected by COVID-19. Furthermore, it would be interesting to evaluate how the fund cycle stages of VCs affect their actions and activities in crises such as the pandemic, to further investigate the impacts of timing in regards to fund cycle. Lastly, it would be interesting to further study how the VC industry as a whole has been affected by COVID-19 long-term, combining qualitative and quantitative data in order to retrospectively understand the implications that the pandemic has had on the industry.

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Appendix

Appendix 1: Interviewees included in the study

Interviewee	Investment Focus	Fund Cycle Stage	Industry Focus	Country of Operations
Interviewee A	Early Stage	Early	Sustainability, Health, SportsTech	Sweden
Interviewee B	Early Stage	Early	DeepTech, Life Sciences, Sustainability	Sweden
Interviewee C	Early Stage	Early	Healthcare, Life Sciences	Germany
Interviewee D	Early Stage	Early	Sector Agnostic (mainly B2B, Software)	Sweden
Interviewee E	Early Stage	Mid-Way	Sector Agnostic	Sweden
Interviewee F	Early Stage	Late	Healthcare, AdTech	USA
Interviewee G	Early Stage	Mid-Way	Sector Agnostic	Sweden
Interviewee H	Early Stage	Mid/Late	Tech	Sweden

Appendix 2: Interview Guide

1. Can you tell us a bit more about the company you are working at and your role?
    a. Do you focus your investments on any particular stages of the venture life-cycle?
    b. Do you focus on any specific industries?
2. What trends within VC do you look at or see at the moment?
3. Where in the fund cycle were you when COVID-19 broke out?
4. Can you briefly describe how your process generally looks like, going from finding a prospect to exiting the position?
5. Jumping back to spring 2020 when the pandemic first hit, what were your first reactions and responses? How did you reason and what did you do when there was extreme uncertainty?
6. How has COVID-19 affected your investment approach in general?
    a. Portfolio composition and investment strategies (hot/cold markets and core sector investments vs explorative)? Has your risk strategy been altered due to COVID-19?
    b. Investment scope (ticket size and number of deals) changed this past year due to COVID-19?
    c. How long does the investment process normally take?
        i. Have you experienced any changes due to COVID-19?
    d. Biggest challenges when adapting to the pandemic?
7. How has COVID-19 affected your screening process?
    a. Reasons for change?
    b. New factors that play in?
    c. Industry focus?
8. Have you made any changes in your due diligence process due to COVID-19?
    a. How do you utilize syndication in your investment strategy now compared to pre COVID-19?
9. How has COVID-19 affected the management of your portfolio companies; that is your post-investment processes?
    a. What challenges have you been put through?
    b. How have you tackled these challenges?
    c. Has the pandemic affected your investment horizons. If so, in what

way/why?

10. Have you changed your level of involvement in the portfolio companies due to COVID-19?
    a. Re-investing?
    b. Most significant problems for the portfolio companies during this year?
    c. How have you helped solve these problems in the companies?
    d. Have you been forced to exercise any redemption rights this year due to bad or low performances in any portfolio companies?
11. What are your main learnings related to how you believed COVID-19 would affect your processes a year ago, compared to the actual outcome?
12. How have you utilized knowledge from previous crises when maneuvering the past year?
13. Could you elaborate a bit on your view on COVID-19? How long do you anticipate or believe that we will be affected?
14. How do you think that the last year’s development on the financial markets has affected your operations?
    a. In case of an economic downturn, how would your operations be affected?
15. How do you think the VC industry will change in the future following COVID-19?
16. Is there something we haven't asked but you feel that you want to answer?
17. Can you recommend anyone who we should talk to?