COVID Calling - Capturing Investment Opportunities Within the Private Equity Market During the Pandemic

---

A case study on the joint venture Cinder Invest, initiated by SEB & AMF

ASTRID LINDQUIST

CARL JEDVALL

Master's Thesis

Department of Finance

Stockholm School of Economics

May 2021

Abstract:
The paper builds on a single case study on Cinder Invest, a joint venture (JV) investment company backed by five prominent financial institutions in Sweden during the pandemic. The case study contributes to the scarce prior research regarding the investment opportunities that the economic disruption caused by COVID-19 has given rise to within the private equity (PE) market and how actors within the market have adapted their investment strategies to take advantage of them. We find that a negative demand shock caused by the pandemic gave rise to new investment opportunities- a previously inaccessible segment of well-managed Swedish companies with a positive long-term outlook became accessible at comparatively low valuations. In designing an investment strategy to take advantage of these investment opportunities, Cinder Invest did not only have to consider how they could capture the full return potential of the investments and how to ensure healthy risk-adjusted returns. The strategy also had to be adapted to the financial needs that the targeted companies had as a result of the pandemic and the reluctance of the targeted segment to give up ownership and control. A comparison of the designed investment strategy to that of the traditional investment strategies within the PE market highlights that all of the traditional strategies lack at least one component essential to exploit the investment opportunities described in the paper. The paper thus sheds light on the fact that although the traditional investment strategies within the PE market have been used in the bulk of the deals historically, they have not been well-suited to exhaust the investment opportunities that the pandemic has given rise to. Instead, we find that the pandemic has given rise to investment opportunities calling for an investment strategy that differs from the traditional ones within the market.

Keywords: Private equity, COVID-19, pandemic, investment strategies, Svenska Enskilda Banken (SEB), AMF, Sweden
Tutor: Per Strömberg, Professor, Department of Finance, Stockholm School of Economics
Authors: Astrid Lindquist* and Carl Jedvall**

We would like to thank our tutor Per Strömberg for his support throughout the process of writing this thesis. We would also like to extend our gratitude to all the people that enabled the case study by participating in our interviews, especially Kent Hansson & Nicholas Macneil who generously dedicated time and effort to contribute with guidance throughout the process.

*24006@student.hhs.se
**23450@student.hhs.se

Table of Contents

Abbreviations and definitions

PE= Private Equity

VC= Venture Capital

Board= Board of Directors

SEK= Swedish Kronor

Cinder = Cinder Invest

JV= Joint Venture

SEB= Svenska Enskilda Banken

AP4= The fourth Swedish National Pension Fund

AFA= AFA Insurance

CAGR= Compound Annual Growth Rate

PIK= Pay-in-kind

EOY= End of year

In the thesis, the *private equity market* is defined as investments in unlisted firms by professional investors.

The expression *traditional models within the private equity* market refers to the investment strategies of buyout funds, growth funds, venture capital funds, mezzanine funds and distressed investors as outlined in the demarcation and the literature review.

The *pandemic* refers only to the COVID-19 pandemic unless otherwise stated.

1. Introduction

As COVID-19 spread rapidly across the world and precipitated a global economic disruption, many companies experienced a negative demand shock that had a considerable impact on their performance. In Sweden, concerns regarding the solvency and liquidity of Swedish firms were raised as many firms faced a deterioration of their profitability and cash flows. Public companies were able to turn to liquid capital markets to raise the capital necessary in order to overbridge the pandemic- an alternative that was not viable for private companies. Given the capital needs that the economic implications of the pandemic have given rise to within the PE market, it is interesting to study what investment opportunities that actors within the market have identified in companies negatively affected by the pandemic and how they have adapted their investment strategies to take advantage of these opportunities. Moreover, it would be interesting to obtain an understanding of whether the traditional investment strategies within the PE market have been well-suited to exhaust these investment opportunities or whether it is the case that the pandemic has given rise to investment opportunities requiring investment strategies that differ from the traditional ones.

The purpose of the paper is threefold. The first purpose is to provide real-world insights into the investment opportunities identified in companies negatively affected by the pandemic within the Swedish PE market and the factors that had to be taken into consideration in designing an investment strategy to take advantage of the identified opportunities. The second purpose is to analyse whether the traditional investment strategies within the PE market have been well-suited to exhaust the investment opportunities that have arised or whether the pandemic has given rise to investment opportunities calling for an investment strategy that differs from the traditional ones. The third purpose of the paper is to generate material for the Department of Finance that could be used to develop a case for teaching purposes in the Private Equity course at the Stockholm School of Economics.

In defining the PE market, the definition of Döskeland & Strömberg (2018), who define the PE market as "*investments in unlisted firms by professional investors*", is used. Although there are various categories of investors within the market, the bulk of investments are made by PE funds (Döskeland & Strömberg, 2018). Consequently, the outline of the traditional strategies within the PE market is focused on the strategies of PE funds. The strategies of other actors that *can* invest in the PE market, such as hedge funds and family offices, will thus not be covered. The segmentation of PE funds outlined by Döskeland & Strömberg (2018) entailing buyout funds, balanced funds, venture capital funds and distressed funds is used in the paper. However, unlike Döskeland & Strömberg (2018), investment strategies that involve indirect investments in private equity are also included in the outline of the traditional investment strategies within the PE market. As such, the strategies of mezzanine funds that involve the investment in preferred equity or financial instruments with an equity component are included. So are the strategies of distressed debt funds that involve the acquisition of debt with the ultimate aim of acquiring equity.

There is a plethora of existing research regarding the PE market- including research about the traditional investment strategies and the performance of PE funds. The COVID-19 pandemic represents an historical event that has had a tremendous impact on private companies. But because the pandemic is a recent phenomenon, there is however scarce prior research regarding the investment opportunities that have been identified within the PE market in the light of the economic disruption caused by the pandemic and how actors within the market have adapted their strategies to take advantage of the identified investment opportunities. This also raises the question of whether the traditional investment strategies, which have been used in the bulk of the deals within the market historically, have been well-suited to exhaust the investment opportunities that the pandemic has given rise to. This paper contributes to fill this gap in the research.

This is done by making use of a single case study on Cinder Invest (Cinder)- a JV investment company. Backed by Svenska Enskilda Banken (SEB), AMF, The fourth Swedish National Pension Fund (AP4), AFA Insurance (AFA) and FAM, Cinder was founded during 2020 with the primary aim of investing in private companies negatively affected by the pandemic. The case study, which is mainly based on eleven interviews with dependent as well as independent stakeholders, is used to answer the following three research questions:

(1) "What investment opportunities did Cinder identify among companies negatively affected by the pandemic?" Among the companies negatively affected by the pandemic, Cinder's founders recognized the possibility to access the previously inaccessible segment of well-managed, medium-sized, family-owned or owner-led companies with a positive long-term outlook. A limited competition for deals within the segment, a downturn in their operating performance as well as an uncertainty regarding how the pandemic would affect their performance going forward, allowed for comparatively low entry valuations. Nonetheless, Cinder recognized that the targeted companies had the potential to recover and become worth at least as much as they were prior to the pandemic if they were provided with the capital necessary to overbridge their negative demand shock. As the economic effects of the pandemic abated and the demand of the targeted companies returned to a normal state, an improvement

of the operating performance of the targeted companies as well as a decreased uncertainty regarding their future performance was expected to give rise to higher exit valuations than the entry valuations.

(2) How can an investment strategy be designed to take advantage of the identified investment opportunities and how does the strategy designed by Cinder compare to the traditional investment strategies within the PE market? We find that three categories of considerations had to be incorporated in order to design an investment strategy to take advantage of the identified investment opportunities. First, it had to be considered what investment strategy that was viable and suitable given the financial needs that the targeted companies had as a result of the pandemic. Secondly, it had to be taken into account that the targeted companies were reluctant to give up control and ownership. Thirdly, it had to be considered how the investment strategy could be designed to capture the full return potential of the identified investment opportunities and to ensure healthy risk-adjusted returns. While the designed strategy shared similarities with the traditional investment strategies, notable differences were uncovered. Important differences between the traditional investment strategies and that designed by Cinder included the use of controlling investments as opposed to non-controlling investments, the inclusion of a limited upside participation as opposed to a full upside participation as well as the use of an exit through a sale to an external party as opposed to an exit allowing for the possibility for the current owners to reclaim full ownership of their firm post the holding period.

(3) "Did the identified investment opportunities require an investment strategy that differs from the traditional strategies within the PE market?" It is found that each one of the traditional strategies lacked one or several of the components necessary to take advantage of the investment opportunities identified by Cinder. Many of the traditional strategies within the PE market would have been inappropriate given the financial needs of the targeted companies or would not enable the access to the targeted companies that had owners that were reluctant to give up control and long-term ownership. The only traditional investment strategy that would have been appropriate given the financial needs of the targeted companies *and* their reluctance to give up control and ownership was that of mezzanine funds involving the investment in preferred equity. This strategy also had one apparent shortcoming however- the strategy did not allow for the combination of the ability to capture the full return potential of the investment opportunities and the ability to access the targeted segment of companies that were reluctant to give up ownership. All in all, it is found that none of the traditional investment strategies within the PE market were well-suited to exploit the identified investment opportunities. Thus, the

paper sheds light on the fact that although the traditional investment strategies have been used to make the bulk of investments within the PE market, times of economic disruption such as the one caused by the pandemic, can give rise to investment opportunities requiring an investment strategy that differs from the traditional ones within the market.

There are some limitations to the findings of the case study. Firstly, the possibilities to generalize the findings could be considered to be hindered by the fact that the paper builds on a single case study. The description of the investment opportunities that have arisen are for instance exclusively derived from interviews with representatives from Swedish financial institutions. Thus, it cannot be concluded from the paper that similar investment opportunities have arisen in other geographic markets. Secondly, it should be noted that the paper provides an example of investment opportunities that the pandemic has given rise to in Sweden rather than an exhaustive description of the investment opportunities that the pandemic has given rise to. Thirdly, while the paper sheds light on the shortcomings of the traditional investment strategies with respect to their ability to take advantage of the investment opportunities identified by Cinder, the paper does not provide an answer to the question of whether the traditional investment strategies have been well-suited to take advantage of investment opportunities that the pandemic has given rise to more broadly.

The remainder of the papers is structured in the following way. An outline of the traditional investment strategies within the PE market follows in section two. In section three, the case study methodology is outlined. Contextual information necessary to the understanding of the case is presented in section four, including a brief summary of the impact of the pandemic on the Swedish economy, an overview of Cinder as well as background information about Cinder’s first portfolio company- MAFI Group AB (MAFI). The case follows in section five that outlines the investment opportunities identified by Cinder, how Cinder adapted their strategy to take advantage of the identified investment opportunities as well as their first investment case. In section six, the three research questions are answered and discussed. Finally, in section seven, concluding remarks and suggestions for further research are outlined.

2. Literature review

In the following section, prior research regarding the traditional investment strategies within the PE market is outlined. It is described what type of companies that the strategies involve targeting, the length of the holding period or investment period used, the type of financial instruments included, the exit strategies involved as well as the value creating measures used (see table 1 for brief summary). What all of the actors have in common is that the investments are made through similar fund structures (see appendix 11 for description of traditional private equity fund structure). The literature review should be interpreted as a description of the strategies typically undertaken by the different actors rather than an exhaustive description of all the different strategies that they *can* undertake.

2.1 The investment strategy of buyout funds

The name "buyout" stems from the fact that the investments that buyout funds make in their portfolio companies are used to acquire a majority of the shares from existing owners- i.e. to buy them out. In other words, capital is invested into existing shares, although buyout funds can inject additional capital in their portfolio companies. The buyout segment of the market is usually not about making unprofitable companies profitable but rather about improving the profitability and accelerating the growth of already profitable and mature companies (Döskeland & Strömberg, 2018). For buyouts made between 1970-2007 with an exit observed before the end of 2007, PE firms held their investments for an average of 49 months and the most common exit types included IPOs, strategic sales and financial sales (Gompers & Dore, 2014). The condition of capital markets and whether the buyout funds had achieved the operational plan that they had set out to achieve were found to be important factors in determining when and how to exit a certain investment (Gompers et al, 2016; Jenkinson & Sousa, 2015).

Gompers et al. (2016) find that the majority of the deals that buyout funds make are self-generated or investment bank generated. While the same study suggests that approximately half of the deals made by buyout funds are proprietary, Döskeland & Strömberg (2018) suggest that competitive auctions are becoming increasingly common. Nonetheless, Gompers et al. (2016) shows that the majority of buyout funds considered that they could create a meaningful amount of value by buying low and selling high. Post-investment actions are however also important return drivers for buyout funds and three types of engineering measures are commonly applied to portfolio companies to increase the value of their investments- financial engineering, operational engineering and governance engineering (Döskeland & Strömberg, 2018; Kaplan & Strömberg, 2009).

Financial Engineering: Financial engineering entails the capital structure that PE investors implement in their portfolio companies (Döskeland & Strömberg, 2018). Buyout funds often make use of high leverage levels to amplify the returns on their investments

(Megally et al., 2015) and a majority of buyout funds consider leverage an important return driver (Gompers et al., 2016). To highly lever the portfolio company gives two main advantages. First, it allows for corporate tax deductions. Second, it provides incentives to the management to run their firm more efficiently (Jensen, 2010; Döskeland & Strömberg 2018). The notion that leverage makes management run their firm more efficiently is also supported by Kaplan & Strömberg (2009) and Jensen (1989) who argue that leverage creates a pressure on managers not to waste money since they must make interest and principal payments. This is also a core proposition of the *free cash flow hypothesis* stating that wasteful spending is more likely to occur when firms have cash in excess of what is needed to exhaust positive NPV-investments and payments to debt-holders (Berk & Demarzo, 2017). The benefits of high leverage levels are however traded against the expected costs of financial distress such as the inability to invest in positive-NPV projects (Gompers et al., 2016).

Governance Engineering: The controlling stake that buyout funds often have in their portfolio companies allow them to design their corporate governance structure. A common way in which buyout funds create value through governance engineering is to strengthen the incentives to management and other key employees (Kaplan & Strömberg, 2009; Döskeland & Strömberg 2018; Acharaya et al., 2009; Gompers et al, 2016). This is done by requiring that the management team invest their own money so that the management not only has a significant upside, but also a significant downside (Kaplan & Strömberg, 2009; Gompers et al., 2016). To allow the management to acquire a meaningful stake in the common equity, buyout funds invest a majority of their capital through preferred equity or shareholder loans with cumulative pay-in-kind (PIK) dividends or interest. That way, a very thin common equity tranche is created of just a few percent of the company's capitalization- allowing the management to acquire a meaningful stake despite limited financial resources. In total, the management team holds 15% of the common equity on average (Döskeland & Strömberg, 2018).

Another way in which buyout funds generate value in their portfolio companies through governance engineering is to take seats on the board of their portfolio companies. Buyout funds tend to reduce the board size and replace outside directors to take seats on the boards themselves (Cornelli & Karakas, 2012; Gompers et al., 2016). Moreover, the boards of companies backed by buyout funds tend to meet more regularly (Acharya et al., 2009; Gertner & Kaplan, 1996), to monitor progress much more actively and be quicker to address underperformance than the boards of public companies (Acharaya et al., 2009).

Operational Engineering: Döskeland & Strömberg (2018) defines operational engineering as the industry and operating expertise that PE investors use to add value to their investments. Common operational engineering measures include boosting revenues and cutting costs (Baker et al., 2015). According to a survey conducted by Gompers et al. (2016), operational improvements was considered to be the second most important return driver and that the ability of the buyout fund to add value through operational engineering was among the top three factors in choosing their investments. According to the same study, buyout funds expected to create value by redefining or changing the company's strategy or business model in roughly a third of their investments. Add-on acquisitions are also an important tool used to generate value (Döskeland & Strömberg, 2018; Gompers et al., 2016). Yet another aspect of operational engineering is the recruitment and development of the portfolio companies' management teams. Buyout investors have been found to regularly replace management members (Gompers et al., 2016; Acharaya et al., 2009) and Gompers et al. (2016) find that buyout investors expect the replacement of senior management members to generate value in roughly a third of their investments.

It is argued that operational engineering capabilities has become an important differentiator for buyout funds due to the increasingly competitive buyout landscape (Döskeland & Strömberg, 2018; Gompers et al., 2016). Döskeland & Strömberg (2018) argues that this is because operational engineering capabilities are more difficult to copy compared to governance and financial engineering capabilities. It is further suggested that financial and governance engineering capabilities have been commoditized and that it is therefore likely that their value-added benefits are incorporated into the acquisition price in competitive auctions. That operational engineering capabilities are an important determinant of success is also supported by Acharaya et al. (2009) who suggest that the most successful buyout funds find ways to improve the operating performance of the companies that they invest in.

2.1.2 Taking a smaller piece- minority transactions

As outlined, buyout funds are typically associated with the acquisition of majority positions in companies. Although this model continues to constitute the majority of the investments made by buyout funds, minority investments have increased in popularity. The fraction of minority deals made by seven of the largest international buyout funds included in a survey made by Boston Consulting Group was 13% between 2004 and 2007 and 27% between 2008 and 2015 (Boston Consulting Group, 2015). Common motives found for the use of minority investments are the opportunity for lower-risk investments or diversification of risk, to become attractive to targets resisting a control investment and to increase the pool of potential investment targets (Dechert, 2020).

2.2 The investment strategy of venture capital funds

Venture capital (VC) funds differ from buyout funds in that they invest in young and less mature companies than buyout funds do and that they invest in new equity to fund growth as opposed to buying out existing owners. The type of investments that VC funds make range from very early-stage investments in companies without any revenues to later-stage investments in companies that almost have positive cash flows and need capital to expand or accelerate their growth (Döskeland & Strömberg, 2018). Unlike buyout funds, VC funds commonly acquire minority stakes (Ramsighani, 2014). Acquiring a small stake in a large number of companies is a way for the VC investors to diversify their risk since many of the investments made by VC funds fail to meet the return targets of the VC funds (Caselli, 2018, Bergemann & Hege, 1988).

VC funds typically hold their companies for 3-6 years until they exit their investments through an IPO or through an M&A transaction (Ramsinghani, 2014; Gompers et al., 2020, Metrick & Yasuda 2010). To be able to exit their portfolio companies when the VC funds consider it suitable, VC funds commonly include a drag-along clause[1] in their contracts (Gilles et al., 2007; Metrick & Yasuda, 2011). Nonetheless, an IPO or the sale to an external party often has to be approved by the board of directors (Metrick & Yasuda, 2011).

VC funds primarily invest in preferred equity with features that allow them to participate in the increase in firm value of their portfolio companies during their holding period (Sahlman, 1990; Kaplan & Strömberg, 2003; Kaplan & Strömberg, 2001; Metrick & Yasuda, 2011). The most common financial instrument used to achieve this is convertible preferred shares (Kaplan & Strömberg, 2001, Metrick & Yasuda, 2011) which often includes a cumulative PIK dividend (Metrick & Yasuda, 2011). Convertible preferred shares allow the VC funds to convert the preferred shares into common shares which is usually done in connection to the exit in the form of an IPO or sale to an external party. If VC funds do not wish to convert their shares, they commonly have the right to demand a redemption of their preferred shares after a certain period of time, allowing them to demand the company to repay their investment plus any accumulated dividends (Metrick & Yasuda, 2011; Ramsinghani, 2014).

[1] A *drag-along clause* provides an investor with the ability to force an exit by providing the investor with the ability to force other shareholders to sell their stake at the same price (Metrick & Yasuda, 2011)

The majority of VC-investments are self-generated or generated from the professional network of the VC funds (Gompers et al., 2017). In comparison to buyout deals, VC deals are much more likely to be proprietary (Döskeland & Strömberg, 2018). While prior research has suggested that the deal flow and deal selection represent important return drivers for VC funds (Kaplan & Schoar, 2005; Sörensen, 2007), post-investment actions have also been found to be important (Sörensen, 2007; Gompers et al., 2017). The actions taken by VC funds to add value to their portfolio companies can, like that of buyout funds, be divided into three categories (Döskeland & Strömberg, 2018).

Financial engineering: The preferred shares that VC funds make use of are structured to incentivize the founders and enable themselves to take control of the portfolio company if the portfolio company underperforms (Metrick & Yasuda, 2011; Kaplan & Strömberg, 2001). Moreover, cash flow rights, i.e. the fraction of the portfolio companies' equity value that the VC fund and management have a claim on, is commonly performance contingent (Kaplan & Strömberg, 2003; Sahlman, 1990). If performance milestones are met, the conversion price of the preferred stock that VC funds own increases, leaving the management team less diluted. Performance contingent cash flow rights discourages the management team from overstating their projections and encourages them to create value (Sahlman, 1990). Moreover, the investments made by VC funds are often made in stages, where the VC fund commits additional capital post the initial investment only if the portfolio company is successful and meets the performance targets (Metrick & Yasuda, 2011). Last but not least, VC funds commonly set up option pools and give management members call options on common stock to incentivize and retain key employees (Gompers et al., 2020; Metrick & Yasuda, 2011).

Governance engineering: VC managers meet frequently with the management team and commonly replace underperforming management members (Bergemann & Hege, 1988; Gompers et al., 2017). To be able to monitor the management teams, VC funds demand board seats and are influential in structuring the board of directors (Ramsinghani, 2014; Amornsiripanitch et al., 2019; Lerner, 1995). In fact, VC funds often take control of the board altogether (Sahlman, 1990; Ramsinghani, 2014). Moreover, as VC funds acquire minority stakes, they often make use of minority protections[2] to prevent the portfolio companies from pursuing actions that are not in their interest (Metrick & Yasuda, 2011).

---

[2] *Minority protections* are clauses included in the contract that protect the minority shareholders from expropriation from majority shareholders. Examples include consent requirements for any issue of new shares, consent requirement for changes in the size of the board of directors and consent requirements for mergers or liquidations (Metrick & Yasuda, 2011)

Operational engineering: VC managers are active in the management of their portfolio companies and play an important role in their strategic decisions (Gompers et al. 2017). VC managers often have a superior industry expertise (Chemmanur et al., 2014) that they use to assist the management in operational activities such as growing sales and improving profit margins (Ramsinghani, 2014). This is done by providing assistance in forming the strategy of the portfolio companies, sharing their network with the portfolio companies and connecting the portfolio companies with new customers (Ramsinghani, 2014; Gompers et al., 2017). Although VC funds commonly invest in companies where they believe in the existing management team, they are active in the recruitment and replacement of management members (Metrick & Yasuda, 2011; Gompers et al. 2020; Hellman & Puri, 2002).

2.3 The investment strategy of growth funds

It can be difficult to draw the line between buyout funds, growth funds and VC funds as there are balanced funds that make buyout, venture *and* growth investments (Döskeland & Strömberg, 2018). However, there are an increasing number of funds raised specifically for growth capital investments (Pitchbook, 2020). Although it is not entirely easy to separate growth funds from other sorts of funds, the strategy of growth funds has some key characteristics. Growth funds typically invest in established and profitable companies with high growth potential (Demaria, 2013; Döskeland & Strömberg, 2018). Although the targeted companies are usually profitable, they have unstable cash flows and can consequently not fund their growth with debt (Demaria 2013). In other words, growth funds invest in more mature firms than VC funds do but less mature firms than traditional buyout funds do (Döskeland & Strömberg, 2018). However, just like buyout funds and VC funds, growth funds commonly exit their investments through an IPO, a sale to a strategic buyer or a sale to a financial buyer and the holding period is similar in length to that of buyout funds (Gompers et al., 2016). To be able to exit their investments, growth funds commonly include a drag-along and a redemption right in their contracts, just like VC funds (Stewart, 2012). Moreover, the deals made by growth funds are commonly either self-generated or investment bank-generated and contain a mix of proprietary deals and competitive auctions, similar to buyout funds (Gompers et al., 2016).

Growth funds commonly make minority investments as opposed to majority investments (Döskeland & Strömberg, 2018; Demaria, 2013). To finance the growth of their companies, growth funds invest in newly issued equity (Demaria, 2013, Ritter, 2015). In other words, the investment is used to finance growth as opposed to buying out current owners

(Döskeland & Strömberg, 2018; Demaria, 2013). Convertible preferred equity has been found to be the most common financial instrument used and can include a cumulative preferred dividend (Contazino & Bagdol, 2020; Botticelli, 1998; Ritter 2015).

There is scarce prior research regarding the value adding activities performed by growth funds specifically but being minority investors, growth funds have less opportunity to impact their portfolio companies post their investment than buyout funds have (Puche & Lotz, 2015). In comparison to buyout funds and VC funds, it is not as common for growth funds to take positions on the board of their portfolio companies but they commonly make use of minority protections to limit their risk and prevent the portfolio companies from pursuing actions that could reduce the value of their investments (Stewart, 2012; Pitchbook, 2020).

2.4 The investment strategies of distressed funds

There are several strategies used by distressed funds. Common for all strategies is that they involve investments in distressed or unprofitable companies and that they involve an exit through an IPO, sale to a financial buyer or sale to a strategic buyer. Similar to buyout funds and VC funds, distressed funds usually have a holding period of five years (Baker et al., 2015; Moyer et al., 2012).

The first strategy, *the turnaround strategy*, entails a *direct* investment in the equity of an unprofitable but mature company with turnaround potential with the aim of reducing their leverage and strengthening their profitability (Döskeland & Strömberg, 2018; Baker et al., 2015). The investment is made in newly issued equity and is usually done at a very low valuation. As such, the existing shareholders are substantially diluted and the turnaround investor often receives a controlling stake (Baker et al., 2015). Because the turnaround strategy involves direct investments in equity, companies with high leverage are unlikely targets as the new equity investment could be lost if the operations of the companies would not improve sufficiently to service their high leverage (Baker et al., 2015). Turnaround investors have been found to view operational improvements as a core competence and rely on this competence to turn around the company and make their investment successful (Cuny & Talmor, 2007; Baker et al., 2015).

Another form of distressed investing is *distressed debt investing*. Distressed debt investors invest in companies under financial distress[3] (Allen, 2018). Baker et al. (2015) divide

[3] *Financial distress* refers to a situation in which a company has difficulties with meeting its debt obligations (Berk & Demarzo, 2017)

the strategies of distressed investors into three broad categories- *distressed for control*, *loan-to-own* and *special situation distressed investing* (Baker et al., 2015). The first two strategies have the ultimate goal of receiving equity in the restructuring of a firm (Baker et al., 2015) through the acquisition of existing debt or the provision of new debt that can be converted into common equity during the restructuring (Allen, 2018, DePonte, 2009). These distressed debt transactions can take place both in and out of court restructurings (Bagaria, 2016). Regardless, the ultimate aim of the strategies is to gain control of the distressed firm (Baker et al., 2015; Allen, 2018). The third strategy entails pure debt investments (Baker et al., 2015) and does not involve the ultimate aim of receiving equity. It is thus outside the scope of this paper.

The first strategy, *distressed-for-control*, involves the investment in existing debt with the aim of converting the debt into a controlling equity stake in the firm post the restructuring process. The strategy of acquiring existing debt involves the identification of the so-called fulcrum security- the security which will be converted into equity in the restructuring (Moyer et al., 2012). In the restructuring, the most senior debt will be repaid first. If an investor acquires senior debt, there is a risk of only receiving cash or other assets. If junior debt would be acquired on the other hand, there is a risk that it would be written off which would happen if the firm value determined in the restructuring is too low (Allen, 2018; Moyer et al., 2012). The second strategy, *loan-to-own*, involves the investment in new debt, typically with very expensive terms. The interest payments that the distressed fund requires can be PIK but because the debt is typically very expensive, the company has to be in severe distress to accept the deal. If the company fails to repay the loan, the distressed debt investor can force the borrowing entity into a restructuring and take control of the company (Baker et al., 2015; Allen, 2018).

The return achieved by distressed funds comes from receiving an equity stake at a value that is lower than its fundamental value (Moyer et al., 2012; DePonte, 2009) and steering the company through the restructuring or turnaround (Moyer et al., 2012; Demaria, 2013; Baker et al., 2015). Distressed funds have an active role in the restructuring or turnaround process (Gilson, 2012) and the actions that they pursue could be divided into the same categories described in earlier sections- financial engineering, governance engineering and operational engineering. Distressed debt funds can carry out a financial restructuring to reduce the required interest payments (Liou & Smith, 2007) and change the capital structure of the company to increase its value (Moyer et al., 2012). Moreover, distressed funds commonly seek board representation to improve governance (Wang, 2016) and require that the management team invest in the portfolio company to improve their incentives (Cuny & Talmor, 2007). Distressed investors can also replace management members (Cuny & Talmore, 2007) and using their operational knowledge, distressed funds can reform the business model of their portfolio companies in order to turn around the distressed company and later sell their equity stake at a profit (Baker et al., 2015; Gilson, 2012).

2.5 The investment strategies of mezzanine funds

The capital provided by mezzanine funds is used by companies to obtain additional financing beyond what senior lenders are willing to extend, without having to issue common equity (Vasilescu, 2010; Carr et al., 2020). When mezzanine financing is provided to private companies, the companies are often anticipating an IPO or a sale to an external party in the near future (Ritter, 2015). Nevertheless, mezzanine funds can target a broad range of companies (Nijs, 2014).

The financing provided by mezzanine funds is typically more expensive than senior debt. This is because mezzanine financing is junior to senior debt and is thus more risky for the lender (Czajkowska, 2015; Nijs, 2014). However, a benefit of mezzanine financing is that the borrowers are allowed to retain the financing for a longer period of time as mezzanine instruments typically have a longer term until its final maturity than senior debt (Nijs, 2014, Carr et al., 2020). In 2008, the average maturity date for all mezzanine instruments in Europe was 9.5 years (De Ruijter Korver & Ongena, 2008). Nijs (2014) divides the financial instruments that mezzanine funds invest in into six categories: subordinated debt with warrants, convertible loans, preferred shares, subordinated debt with step-up rates, subordinated debt with PIK interest and subordinated debt with profit participation. The last three categories do not involve the possibility to ultimately acquire equity. Subordinated debt with PIK interest and subordinated debt with step-up rates simply entitles the lender to interest payments on their debt. Similarly, subordinated debt with profit participation entitles the lender to a share of the current earnings of the borrower. Nonetheless, none of these three instruments entitle the holder to an equity stake (Nijs, 2014). As they do not involve investments in equity, they are outside of the scope of the essay and will not be covered.

The first category, *subordinated debt with warrants*, is a form of hybrid debt that entitles the mezzanine fund to acquire newly issued underlying stock at a fixed exercise price until or at expiration of the warrants (Vasilescu, 2010; Bagaria, 2016; Nijs, 2014). The interest charged on the subordinated debt can either take the form of cash payments or be PIK (Nijs, 2014). The second category, *convertible debt*, is another form of hybrid debt that allows the investor to convert the debt into equity at a prespecified conversion price. As such, the mezzanine fund has the option to receive shares in the company instead of receiving repayment of their principal (Vasilescu, 2010; Nijs, 2014). The convertible debt can come with interest payments or be zero-coupon bonds (Nijs, 2014). The third category, *preferred shares*, are junior to all forms of hybrid debt mentioned above. Preferred shares come in many forms, but usually have a fixed preferred dividend, which can either be PIK and cumulative or non-cumulative (Nijs, 2014). Any form of additional element can be added- the preferred shares can be convertible, include warrants or be participating[4] (Nijs, 2014). One major difference to loan instruments is that loan instruments have a contractually defined repayment date while preferred shares, in theory, have an infinite life. To set a limit on their investment period, mezzanine funds can add a redemption feature to their preferred shares that allow them to demand repayment at a fixed redemption price after a certain amount of time has passed since the investment was made, if the company can afford it (Nijs, 2014; Heller, 2012).

Even if mezzanine funds can ultimately become common equity holders by triggering their equity components, they do not acquire controlling stakes in the companies that they finance (Vasilescu, 2010; Nijs, 2014). Neither do they have any intentions of becoming long-term shareholders (Nijs, 2014). Instead, mezzanine funds commonly seek to sell their equity stake immediately after the equity component has been triggered (Nijs, 2016).

Mezzanine funds that hold warrants or convertible securities in private companies are dependent on a liquidity moment that allows them to (1) determine the value of their implicit common equity stake and (2) monetize their common equity stake once they have triggered their equity component (Nijs, 2014). Such a liquidity moment can either be natural or artificially created. A *natural liquidity moment* occurs when the company is sold to an external party or through an IPO. An *artificial liquidity moment* is contractually defined and is commonly created in one of two ways. First, it can take the form of a drag-along right that allows the mezzanine fund to drag the majority shareholders along to sell their shares once the mezzanine fund has identified an exit opportunity (Nijs, 2014). Second, a put option can be written into the contract which would allow the mezzanine fund to sell their common equity shares back to the company at a pre-specified price within a certain period or at a certain date (Nijs, 2014; Torpey & Viscione, 1987).

Mezzanine funds perform governance and commonly require the right to appoint a board observer. They usually receive monthly and quarterly financial statements and board of director materials that allow them to monitor the companies that they invest in (Casperson &

[4]Participating preferred equity entitles the holder to a share in any dividends after the preferred dividend has been paid during their holding period/investment period (Nijs, 2014)

Table 1

Brief summary of traditional investment strategies within the PE market

	Buyout funds	VC funds	Growth funds	Distressed funds: Turnaround
Targeted companies	Mature & profitable	Young firms, sometimes w/o revenues	Established & profitable with high growth potential	Mature and unprofitable with turnaround potential
Holding period	~ 4 years on average	Typically 3-6 years	Similar to buyout funds	Typically 5 years
Controlling investments?	Commonly controlling	Non-controlling	Non-controlling	Controlling
Inject new capital?	Usually invest in existing shares	Yes	Yes	Yes
Exit strategy	IPO or sale to external party	IPO or sale to external party	IPO or sale to external party	IPO or sale to external party
Securities invested in	Common and preferred equity (or shareholder loan)	Convertible preferred equity	Convertible preferred equity	Common equity
Involved in operations?	Yes	Yes	Yes	Yes
	Distressed funds: Loan-to-own	**Distressed funds: Distressed-for-control**	**Mezzanine funds: Debt**	**Mezzanine funds: Preferred equity**
Targeted companies	Financially distressed	Financially distressed	Companies that have an anticipated IPO or sale in near future	Companies that have an anticipated IPO or sale in near future
Holding period	Typically 5 years	Typically 5 years	9.5 years on average	9.5 years on average
Controlling investments?	Controlling	Controlling	Non-controlling	Non-controlling
Inject new capital?	Yes	No	Yes	Yes
Exit strategy	IPO or sale to external party	IPO or sale to external party	Natural or artificial liquidity moment	Natural or artificial liquidity moment
Securities invested in	Debt that can be exchanged for equity	Debt that can be exchanged for equity	Debt w. warrants or convertible debt	Preferred equity (can be convertible, include warrants or be participating)
Involved in operations?	Yes	Yes	No	No

Source: Information summarized from literature review

Makam, 2016; Robinson et al., 2013). Moreover, they commonly include covenants or minority protections in their contracts. Mezzanine funds can act if covenants are breached, but besides that, they have a limited degree of involvement in the companies that they invest in (Nijs, 2014). Because mezzanine funds are not commonly involved with the operational aspects of the companies that they invest in, they have to agree with the majority shareholders' operational and personnel decisions (Sazonow et al., 2016).

3. Case Study Methodology

3.1 Empirical Methodology & Data collection

The empirical method used to answer the three research questions is a single case study on Cinder. There are both benefits and drawbacks with the case study method. Critics of the case study method argues that case study findings are not generalizable, that it creates massive amounts of information that is difficult to comprehend and that potential biases can influence the direction of conclusions and findings (Yin, 2014). The case study can however be beneficial when the research question relates to a new phenomenon or topics of which there is scarce prior research (Eisenhardt, 1989). Moreover, Yin (2014) argues that the case study method is to prefer when the research question is a *how* question. Because the research questions of this paper relate to the pandemic which is undoubtedly a recent topic and includes a *how* question, the use of a case study method was found appropriate. A single case study was chosen since it has been argued that they create more high-quality theory and that they can provide a deeper understanding of the explored subject than multiple case studies (Gustafsson, 2017).

Interviews were the primary source of data for the case study. All interviews were guided by an interview template with a list of questions to make sure that all relevant topics were covered during the interviews. To enable the access to insights and perspectives of the interviewees that was not considered in the design of the interview template, all interviewees were encouraged to talk freely about the topics of interest. As such, the interviews were conducted using a semi-structured approach as described by Merriam (1994). In line with what Yin (2014) and Brinkmann & Kvale (2015) suggests, all interviews were transcribed word-by-word. The transcripts allowed for the incorporation of new insights and information in subsequent interviews.

In order to broaden and nuance our insights from the case study, different stakeholders were interviewed along with three independent interviewees. The interviewees were chosen based on their knowledgeability of the case at hand. In other words, interviewees were chosen based on their knowledge about the founding of Cinder, the investment strategy of Cinder, Cinder's investment in MAFI, the competition that Cinder faced, how the pandemic had affected the target segment of Cinder and/or the capital needs and preferences of the segment that Cinder targeted. In total, eleven interviews were carried out with an average length of 50 minutes (see appendix 1 for list of interviews as well as topics covered).

Nine interviewees were interviewed (see table 2). The interviewees included the chief executive officer (CEO) as well as an investment director from Cinder. Moreover, representatives from the three out of five JV partners behind Cinder were interviewed- the chief of investments (CIO) at AMF, the head of corporate advisory at SEB as well as the head of alternative investments at AP4. From MAFI, the chairman, which was also one of the three current owners of MAFI, was interviewed. All of these interviewees were considered dependent as they were employees at Cinder, represented a company that had invested in Cinder or represented one of Cinder's portfolio companies at the time of the interviews. The independent interviewees included the CEO and a managing director at P Capital Partners (PCP) as well as a partner at a Swedish Asset Management firm[5].

Table 2

List of interviewees

Name of Interviewee	Role at the time of the case	Dependence
Jan Amethier	CEO at Cinder	Dependent
Nicholas Macneil	Investment Director at Cinder	Dependent
Tomas Flodén	CIO at AMF & Board member at Cinder	Dependent
Jenny Askfelt Ruud	Head of alternative investments at AP4 & Board member at Cinder	Dependent
Kent Hansson	Chairman at MAFI and one of the three owners of MAFI	Dependent
Albin Wihlborg	Head of Corporate Advisory at SEB	Dependent
Anonymous	Partner at Swedish Asset Management Firm and Experienced Private Equity Investor	Independent
Daniel Sachs	CEO at PCP	Independent
Anders Thelin	Managing Director at PCP	Independent

Source: Information obtained from interviews conducted by the thesis authors

[5] At the request of the interviewee, neither the name of the interviewee nor the name of the represented company has been disclosed

The interviews were carried out at the earliest date that the interviewees were available to ensure that the interviews took place as close in time to the events covered in the case as possible. All interviews were carried out within a year from the founding of Cinder, within four months from Cinder's investment in MAFI and within 18 months from the onset of the pandemic. The intention was that this would allow the interviewees to recollect the underlying factors of their decisions better than if the interviews had been carried out at a later point in time. To ensure that the interviewees could express themselves with the greatest possible accuracy, all interviews were conducted using the first language of the interviewee. In all interviews, this language was Swedish. All quotes used in the thesis have been translated by the thesis authors and the translation has been approved by the relevant interviewee. Furthermore, the original Swedish quotes can be found in appendix 2.

All interviews were carried out in Stockholm, Sweden. Due to the restrictions and recommendations issued by the Public Health Agency of Sweden regarding the pandemic, it was decided that no interviews would be carried out in person. However, all interviews were carried out face-to-face using video telephony software. The information obtained in the interviews was complemented by secondary data sources including material provided by MAFI and Cinder, the Finbas database as well as publicly available material from Statistics Sweden, Folkhälsomyndigheten, Vinge, Konjunkturinstitutet, Arbetsförmedlingen, Svenskt Näringsliv, UC Allabolag and Dagens Nyheter.

3.2 Research quality

The research quality is affected by the choice of answering the research question using a case study methodology. There are four tests that are commonly used to establish the quality of case study research (Yin, 2014).

The *construct validity test* aims to ensure that the case study procedure leads to an accurate observation of reality. The *internal validity test* on the other hand, concerns the ability to draw causal conclusions from a case study (Yin, 2014). Using multiple sources of evidence can strengthen the construct validity (Yin, 2014) and the internal validity (Merriam, 1994). Merriam (1994) refers to this method as triangulation and defines it as the use of several information sources and methods to corroborate the same finding. In our case study, information was collected from both dependent and independent interviewees and the information in the case was not only obtained using interviews but was also complemented by publicly available material as well as material provided by Cinder and MAFI.

The *external validity* test aims to determine whether the findings of a study is possible to generalize beyond the study. According to Yin (2014), the form of questions can either hinder or enable the researchers to achieve external validity. It is argued that *why* or *how* research questions better enable generalizations than research questions that do not contain a *why* or *how* (ibid). As such, the second research question better enables generalizations than the first and the third research question. The possibilities to generalize the findings in this paper can however be considered to be hindered by the fact that it builds on a single case study.

The last test is the *reliability test*. The objective of the test is to ensure that a later investigator makes the same findings and reaches the same conclusions, given that the later investigator repeatedly conducts the same case study and follows the same procedures as the earlier researcher (Yin, 2014). It has been argued that the reliability can be improved by enhancing the transparency and replicability of the case study procedure (Gibbert et al., 2008). In line with what Yin (2014) and suggests, we have documented all the interviews conducted as well as the topics covered during each interview to allow a later researcher to replicate the study (see appendix 2). However, the answers provided by the interviewees can be assumed to be influenced by the interaction between the interviewers and interviewees, the setting in which the interviews were conducted as well as the proximity in time to the events covered in the interviews. Consequently, it cannot be concluded that a later researcher following the same procedures would end up with the exact same results.

4. Case Background

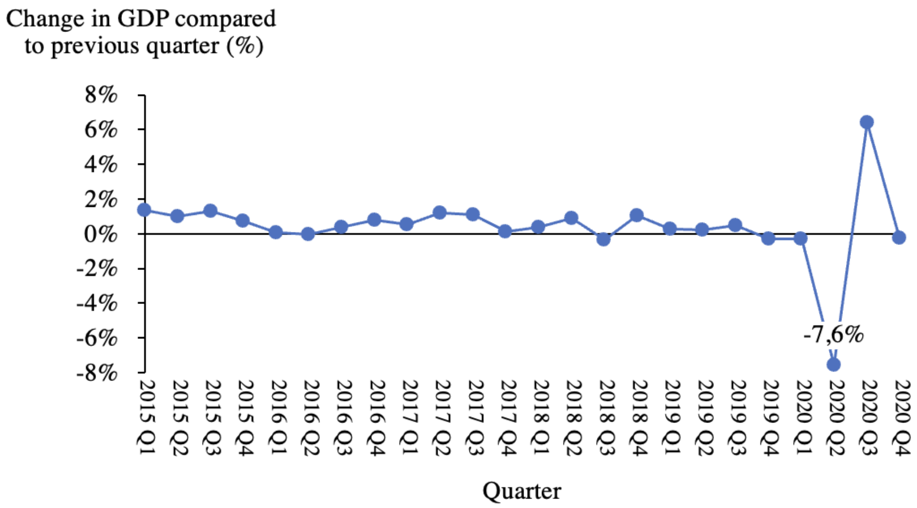
4.1 The impact of the pandemic on the Swedish Economy

In March 2020, the World Health Organisation declared the outbreak of COVID-19 a pandemic (World Health Organization, 2020). Within a short period of time, it became clear that the outbreak posed a destabilizing threat to the global economy. Swedish authorities issued a number of restrictions and recommendations aimed at reducing the transmission of the virus (Folkhälsomyndigheten, 2020). Employees were recommended to work from home, public gatherings were limited to a maximum of 50 people and unnecessary travels were advised against (Folkhälsomyndigheten, 2020). Supply chain interruptions prevailed as many countries closed their borders, imposed quarantine periods or entry bans for vessels or cargos from countries in which an outbreak of the COVID-19 virus had been recorded (Vinge, 2020).

By the end of the second quarter of 2020, the effects of the pandemic on the Swedish economy were apparent. With a 7.6% drop in GDP compared to the first quarter of 2020 (see figure 1), Sweden experienced their largest quarterly percentage drop of the 21st century (Statistics Sweden, 2021a). While the situation improved during the third quarter, the Swedish annual GDP ended up 2.8% lower in 2020 compared to 2019 (Statistics Sweden, 2021b).

Figure 1:

Y-axis: Percentage change in seasonally adjusted Swedish GDP[6] compared to previous quarter, X-axis: Quarter



Source: Authors' own calculations based on data obtained from statistics Sweden

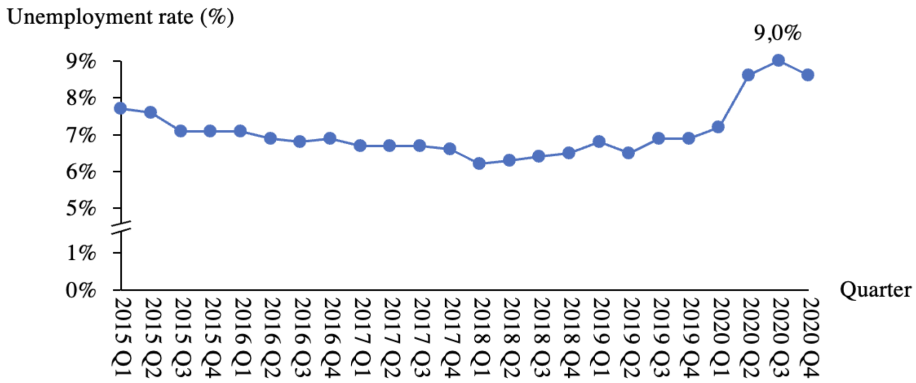
During the year of 2020, the number terminations in Sweden amounted to more than 123,000- corresponding to an almost 150% increase compared to the number of terminations in 2019 (Arbetsförmedlingen, 2020). Following the onset of the pandemic, the unemployment rate increased to peak at 9% in the third quarter of 2020 before the situation improved in the last quarter (See figure 2) (Statistics Sweden, 2021c).

Following the outbreak of the pandemic, a negative demand shock prevailed and the consumption of Swedish households fell dramatically during the first half of 2020 to improve slightly during the second half of the year (see figure 3). The decrease in consumption was mainly driven by a reduced spending on clothing and footwear, transport as well as restaurants and hotels (Statistics Sweden, 2021d).

[6] Constant prices, reference year 2019

Figure 2

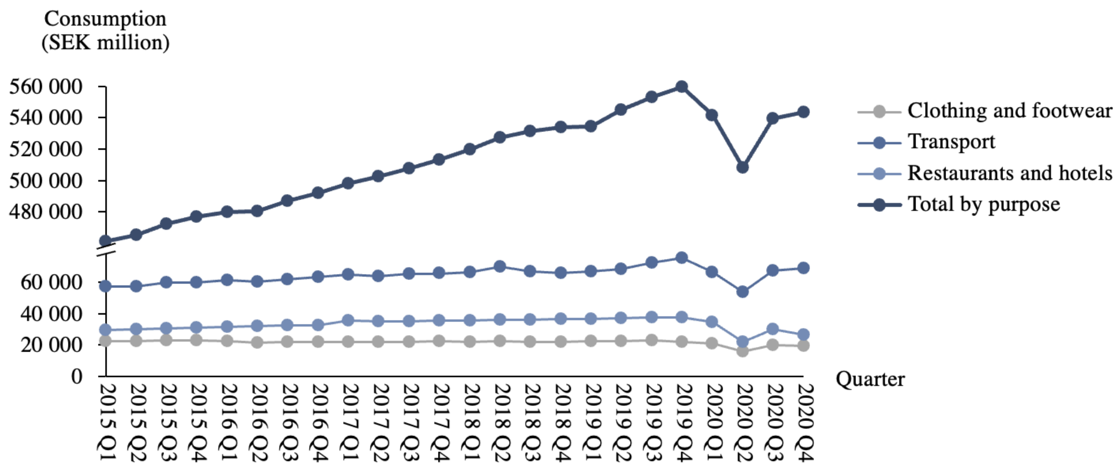
Y-axis: Seasonally adjusted quarterly unemployment rate (%) in Sweden, X-axis: Quarter



Source: Data obtained from statistics Sweden

Figure 3:

Y-axis: Seasonally adjusted Swedish household consumption by purpose in current prices (million SEK); X-axis: Quarter



Source: Data obtained from Statistics Sweden

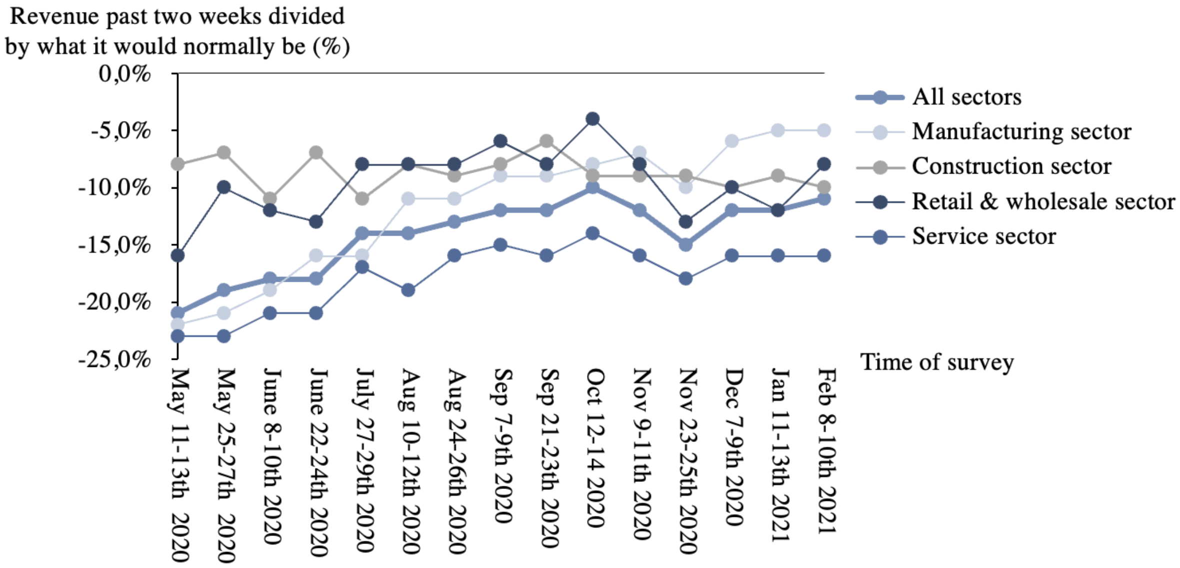
Starting in May 2020, Konjunkturinstitutet surveyed more than 2500 Swedish companies with at least 100 employees (Konjunkturinstitutet, 2020) regarding how their revenue had changed during the past two weeks. The weighted average[7] for all sectors indicated that revenues were more than 15% lower than what they would normally be. Although the situation improved throughout 2020, the weighted average remained below -10% throughout the year and the beginning of 2021 (see figure 4). While the change in revenue was negative for the average

[7] Weighted average calculated by Konjunkturinstitutet using value added for the manufacturing sectors and number of employees for the remaining sectors

respondent within all reported sectors throughout 2020 and the beginning of 2021, the service sector was the most severely impacted (Konjunkturinstitutet, 2021).

Figure 4:

Y-axis: Weighted average of change in revenue during the last two weeks relative to what it would normally be (%), X-axis: Time of survey

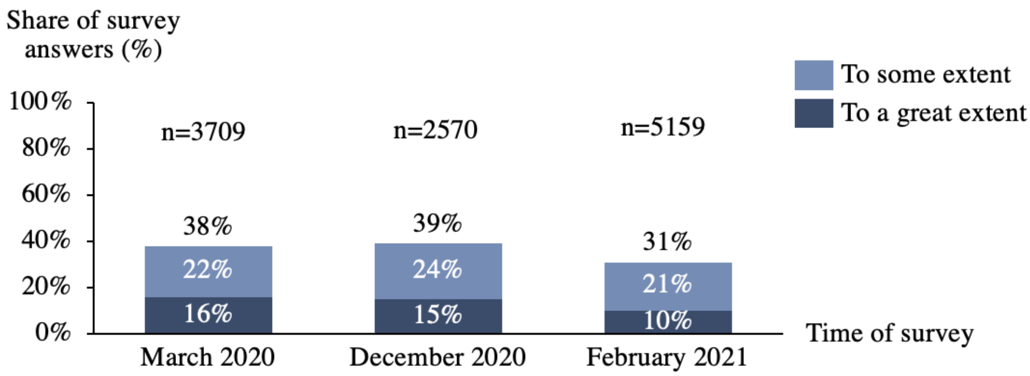


Source: Data obtained from Konjunkturinstitutet

The Swedish government took precautions early on to reduce the consequences of the pandemic for Swedish companies. Actions taken included increased possibilities for tax deferrals and a government loan guarantee programme for small and medium-sized enterprises (Government offices of Sweden, 2020). However, only 1.4 billion out of the 100 billion included in the government loan guarantee programme had been utilized as of the summer of 2020 due to the fact the Swedish banks were unwilling to lend money despite the fact that the government guaranteed 70% of the loans (Strandberg & Lucas, 2020). In spite of the many precautions undertaken by the Swedish government, surveys conducted during 2020 and 2021 by Svenskt Näringsliv (2020a, 2020b, 2021) suggested that companies experienced liquidity or financing issues during the pandemic (see figure 5). Unlike private companies, public companies were able to turn to liquid capital markets to raise equity capital and both the number of new equity issues and the total announced amount[8] was at a high level in Sweden during 2020 compared to the preceding five years (see appendix 24).

Figure 5:

Y-axis: Share of surveyed companies stating that they had liquidity or financing issues to some extent or to a great extent; X-axis: Time of survey



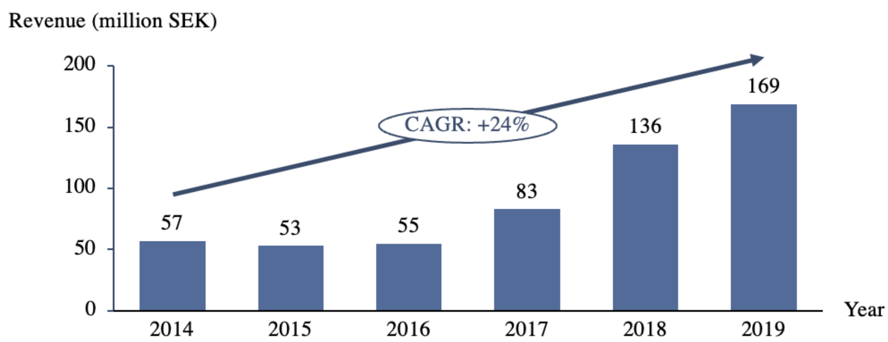
Source: Data obtained from Svenskt Näringsliv

4.2 Overview of MAFI

In 1992, MAFI was founded in Mora, Sweden. With its core business within the telecom industry, they had helped vendors and operators to build thousands of telecom sites through the years. Since then, MAFI had experienced significant growth- mainly driven by the roll-out of the 2G, 3G and 4G network (see figure 6).

Figure 6:

Y-axis: Revenue of MAFI (million SEK); X-axis: Year



Source: Data obtained from company material provided by MAFI

[8] The actual total amount raised could differ from the announced amount if the equity issue would have been under-or oversubscribed

The company was owner-led and entirely owned by the board of directors consisting of Kent Hansson, Philip Lindsten and Pierre Bengtsson who also served as the CEO of MAFI (see appendix 15).

4.2.1 Products & customers

Since the 90's, MAFI had specialized in the development and design of products used to mount various telecom infrastructure equipment such as antenna and radio units (see appendix 12 for exemplifying products). MAFI both sold standardized solutions that could be used by all customers and customized solutions that were tailored to the unique needs of their customers (see appendix 13 for detailed information). The products sold could not only be used in the construction of new sites but also in the upgrade of existing sites.

MAFI sold products to all actors in the telecom value chain and their customer base could be divided into six segments- carriers, original equipment manufacturers (OEMs), tower companies, designers, installers as well as distributors (see appendix 14 for detailed information). Carriers and OEMs represented MAFI's most important customer segments in terms of revenue and their three biggest customers represented more than 50% of their total revenue[9]. Customers of MAFI requested products that could be mounted quickly and that could be transported effectively. In other words, customers required a low cost of ownership. In addition, customers requested durable and high-quality products since it was of great importance to ensure that the products used to mount telecom equipment would not break and cause damage to the expensive equipment. This meant that customers were willing to pay more for high quality products that were easy to configure and that allowed for effective transportation and installation. Comparing MAFI to its competitors, MAFI had a competitive advantage in their light-weight, durable and high-quality products.

MAFI had close and established customer relationships with several of their customers which was considered one of the key success factors in the industry. Firstly, this allowed subcontractors like MAFI to gain an understanding of the complex challenges that the customers faced in the construction of telecom sites and cater to their needs. Secondly, selling to large OEM's like Nokia and Ericsson required contacts with several parties in the organizations and the sales cycle was generally quite long. As such, it was crucial to establish

[9] The exact share of MAFI's revenue that the three biggest customers represented could not be disclosed due to confidentiality reasons

an understanding of their procurement processes and to have established relationships with key personnel within these organizations.

4.2.2 Geographic markets

In 2020, MAFI sold their products to 130 different countries across the globe. To lower transportation and production costs, MAFI made use of a global network of warehouses and outsourced production sites (see appendix 14). In terms of revenue, the Nordic countries and the United Kingdom had represented the most important markets historically, but the relative importance of different markets was subject to cyclical fluctuations. During 2019 and the beginning of 2020, the US and Chinese markets were experiencing strong growth. European countries, on the other hand, were still auctioning out 5G rights and were somewhat behind the United States and China with regards to the roll-out of the 5G network. Africa was lagging behind even more but strong growth was expected going forward.

4.3 Overview of Cinder

In June 2020, Cinder was set-up as a JV investment company with five parties. The reason that the investment vehicle was set-up as a joint-venture Aktiebolag (AB)[10] as opposed to a traditional PE fund was that it was considered unnecessary to set up the investment vehicle as a traditional PE fund given the limited number of investors. Moreover, it was considered too complicated and time-consuming from a regulatory point of view to set up the investment vehicle as a fund. Because the initiators of Cinder wanted to set-up the investment vehicle as soon as possible, an Aktiebolag (AB) was considered a more appropriate option.

SEB and AMF were the two JV partners that initiated Cinder and the three remaining partners were AP4, AFA as well as FAM (see appendix 4 for description of the JV partners). These five JV partners each committed between 500 and 2000 million SEK, totaling a committed amount of 5 billion SEK (see appendix 3). With an intended investment size of 50-500 million SEK, Cinder intended to include 20-30 companies in their portfolio[11]. Similar to a traditional PE fund, the contributed capital was supposed to be invested by Cinder during the first three years of the JV. The investment period was to be followed by a holding period in which the investments would have an intended average holding period of five years. After all investments would have been exited, the JV would be dissolved unless the JV partners would

[10] *Aktiebolag (AB)* is the Swedish term for limited company
[11] It should be noted that this was no more than a rough estimate of the intended number of investments

decide on another purpose for the investment vehicle. In other words, Cinder would not raise any subsequent funds unlike traditional PE firms that commonly raise several subsequent funds (see appendix 11 for further comparison).

Cinder's organization consisted of an independent investment committee, a board of directors and an investment team (see appendix 5, 6 & 7). The investment team, headed by Jan Amethier, consisted of ten members- primarily previous employees at SEB. The vast majority of these members had a background within finance and neither of the employees had an operational background. As such, a financial expertise rather than an operational expertise represented the core competence of the investment team.

5. The case

5.1 Cinder is founded

In March 2020, internal discussions had started at SEB regarding how the pandemic would affect Swedish businesses. Although few industries were expected to pass through the pandemic unaffected, the consequences of the pandemic were expected to be diverse. Some companies were expected to be negatively affected by the pandemic in the long-run. Other companies were only expected to experience a negative demand shock to return to a normal state post the pandemic. For some companies, the effects of the pandemic were even expected to have positive demand implications.

SEB closely monitored how the liquidity and performance of Swedish companies developed in the light of the pandemic and feared that many previously well-performing companies with well-functioning business models would suddenly face issues. Due to a negative demand shock caused by the pandemic, it was expected that revenues would fall while costs would partially remain fixed, resulting in a significant deterioration of their operating performance as well as their operating cash flows. Accordingly, it was anticipated that liquidity and solvency issues would become prevalent in the light of the pandemic.

Although Cinder saw that support was underway from the Swedish government, such as credit facilities and tax deferrals, the planned support was, at the time, mostly in the form of credit or debt and would thus not alleviate solvency issues. Accordingly, it was predicted that companies negatively affected by the pandemic would sooner or later need to seek equity financing to maintain an adequate solvency and liquidity. At SEB, discussions were held regarding what actors within the Swedish market that could provide such capital.

"*At some point in time, there would be too much debt for these companies when their revenues and profits are falling and there is a loss of cash flows. Banks could absolutely be supportive and help. But if the pandemic continues for too long, equity would have to be injected to strengthen the balance sheet and possibly also the liquidity [of the affected companies]. We were asking ourselves where this money would come from- that was the discussion at SEB*"- Jan Amethier, CEO at Cinder

In parallel, similar concerns had been raised at AMF regarding how the capital needs of Swedish companies would change in the light of the pandemic. AMF had been in contact with Swedish banks that had expressed concerns regarding how the solvency of Swedish companies would develop during the pandemic and that had suggested that many companies would have to raise additional equity before the banks would be willing to make additional loans or extend current ones.

"In the spring [of 2020], we pictured that the [equity] capital need would increase during the fall [of 2020] and during the beginning of this year [2021]. We predicted that the debt would increase relative to equity and that additional equity would be needed during the year [of 2020]" - Tomas Flodén, Chief Investment Officer at AMF and board member at Cinder

In addition to being concerned with how Swedish companies would manage the economic consequences of the pandemic, both AMF and SEB predicted that the pandemic would give rise to attractive investment opportunities. Not only did they expect that the valuations would be lower during the pandemic. They also predicted that the pandemic would open up for the opportunity to access companies with a strong track record, a solid business model and a positive long-term outlook that might not even have been interested in taking on an investor under different circumstances. With the intention of taking advantage of these investment opportunities, SEB reached out to AMF to discuss whether they could set up a new investment vehicle together. Once AMF and SEB had agreed on a structure for the investment vehicle and set up the term sheet, a few other investors were invited to participate in the JV. This was the start of Cinder- a JV investment company.

5.2 Cinder's identified investment opportunities

Cinder recognized that companies that had experienced a negative demand shock caused by the pandemic carried significant return potential. Many of the companies that had been negatively affected had a well-functioning business model, a capable management team and a positive long-term outlook. Accordingly, Cinder realized that the negatively affected companies had the potential to recover from the temporary downturn in their operating performance to become worth at least as much as they were prior to the pandemic as long as they were provided with capital to overbridge their temporary loss in demand and to address liquidity and solvency issues. On account of the identified return potential, Cinder considered companies negatively affected by the pandemic attractive targets. How negatively affected the targeted companies would have to be was only loosely defined by Cinder. In more severe cases, companies could be in need of capital to address immediate liquidity and solvency issues in order to avoid financial distress. In less severe cases, companies could be in need of strengthening their liquidity in order to be able to retain key employees throughout the pandemic or to uphold an expansion strategy in spite of a deterioration of their profitability and cash flows. Cinder however stressed that they only considered companies that were *temporarily* affected by the pandemic attractive targets. Companies for which the pandemic were believed to have permanent demand implications, such as certain companies within the business-travel industry, were not considered attractive targets. Cinder moreover emphasized that they would only invest in companies that had a well-documented profitability prior to the pandemic. This investment criteria was included to ensure that the companies that Cinder invested in were underperforming due to the economic consequences of the pandemic rather than any other reason. Moreover, it ensured that the targeted companies had well-functioning business models that could enable them to recover from their temporary drop in performance post the pandemic.

Cinder knew that many of the companies negatively affected by the pandemic had access to financiers or liquid capital markets that could provide them with the necessary capital to overbridge the pandemic. Among the companies negatively affected by the pandemic, Cinder did however identify a segment of companies which had capital needs and preferences that could *not* be satisfied by financiers within the Swedish capital market during the pandemic. The segment that Cinder identified and decided to target was private[12], family-owned or owner-led, medium-sized enterprises. A size limitation for the companies was included that required that the companies had at least 250 employees and 300 million SEK in revenues. This size limitation was motivated by the fact that each investment would have to be big enough in monetary terms to justify the transaction costs that each investment would incur.

[12] Cinder had the mandate to invest in public companies as well but considered it unlikely that public companies would seek capital from Cinder given that they had other options such as the opportunity to raise capital through liquid capital markets

Many of the owners behind family-owned or owner-led companies were, even before the pandemic, reluctant to take in external owners and wanted to maintain full ownership of their firms. They would therefore usually exhaust all financing alternatives available to them before they would seek equity capital from an external financier. Nonetheless, it was predicted that solvency and liquidity issues caused by the pandemic would leave them with few other options. The targeted companies would not be willing or able to service additional debt. While not all targeted companies were necessarily experiencing severe solvency issues, they were experiencing a deteriorating or negative profitability as well as uncertain cash flows as a result of the pandemic. Taking on additional debt during the pandemic would thus not be a viable option for them. Accordingly, an equity issue would be their only option to raise the capital necessary to overbridge the negative demand shock that the pandemic imposed on them. Existing owners were however, in many cases, incapable of injecting enough additional capital themselves due to the fact that they already had invested most of their wealth in their companies. Thus, the targeted companies would have no other option but to turn to an external financier in order to address their deteriorating liquidity and solvency. Because the targeted companies were private however, they would not be able to raise equity through liquid capital markets like public companies would be able to. Giving up a majority stake or selling the firm would in many cases not be considered a viable option either since many of the owners of family-owned or owner-led companies wanted to retain control and continue to run their company throughout the pandemic and thereafter. In addition, the owners would be particularly reluctant to sell their firm at a steep discount during the temporary downturn caused by the pandemic (see table 3 for summary of characteristics of targeted segment).

All things taken into consideration, Cinder realized that the targeted companies were in need of equity capital from an investor that would not require a controlling stake or long-term ownership. Cinder recognized that these capital needs and preferences could be satisfied by offering to inject equity capital, requiring only a minority stake in return and offering the targets the possibility to buy Cinder out post the pandemic. That way, the current owners would only have to give up ownership temporarily and would be allowed to retain full ownership of their firm in the long term. When Cinder contemplated what existing financiers that could provide medium-sized, private and family-owned or owner-led businesses with equity capital without requiring the existing owners to give up a majority stake or long-term ownership, Cinder were unable to identify any actors within the Swedish market. Neither could independent parties. Accordingly, Cinder anticipated a limited competition within their targeted segment.

Table 3:

Characteristics of Cinder's target segment

Characteristics of target segment
1. Incorporated in Sweden 2. Negatively affected by the pandemic, but only temporarily 3. Well-managed with positive long-term outlook and well-documented profitability prior to the pandemic 4. Medium-sized: At least 250 employees and/or 300 million SEK in revenue 5. Family-owned or owner-led 6. Unwilling or unable to take on additional debt 7. In need of equity capital injections to overbridge negative demand shock imposed by the pandemic and to address solvency and liquidity issues 8. Private- no access to liquid capital markets 9. Owners reluctant to give up ownership and control

Source: Information obtained from interviews conducted by the thesis authors

In short, Cinder recognized that a negative demand shock caused by the pandemic had led their targeted segment to seek equity injections from an external investor, enabling Cinder to access the segment of well-managed family-owned or owner-led companies with a positive long-term outlook that would not have been interested in taking in external owners under different circumstances. Cinder anticipated that they would be able to invest in the targeted companies at lower valuations than under normal circumstances due to three reasons. Firstly, the competition within the segment was limited. Secondly, the companies were experiencing a temporary downturn in their operating performance. Thirdly, the pandemic imposed an uncertainty regarding how the performance of the companies would develop going forward. Nonetheless, Cinder expected that it would be possible to exit the targeted companies at higher valuations post the pandemic owing to two reasons. Firstly, the operating performance of the targeted companies would improve as the economic effects of the pandemic abated and their demand returned to a normal state. Secondly, the uncertainty that the pandemic imposed on the future performance of the companies would subside as soon as the spread of the virus could be controlled.

"*/.../ we know that the pandemic will pass and that the businesses will get back at some point in time. Of course, there is always a certain risk but there is a risk in all predictions /.../ In all cases, we are pretty much alone in offering this type of financing*" - Tomas Flodén, Chief Investment Officer at AMF and board member at Cinder.

5.2 Designing a strategy to take advantage of the identified investment opportunities

5.2.1 The financial instrument

Cinder would invest in the targeted companies through a directed equity issue of redeemable preferred shares which would normally have a preferred accruing and cumulative PIK dividend of 8-12%[13]. In connection to the investment, Cinder and the portfolio company would agree on an investor share[14], determining Cinder's share of the total equity value of the portfolio company (see indicative term sheet in appendix 8). All the components of the financial instrument had been carefully considered and was adapted to fit the investment opportunities at hand.

Investing in *newly issued* capital was a cornerstone of the investment strategy as the targeted companies would be in need of a capital injection to strengthen their liquidity during the pandemic. The choice of injecting new capital in the form of preferred equity as opposed to debt or common equity was guided by several factors. Firstly, preferred equity would, unlike debt, be booked as equity on the balance sheet and would allow Cinder's portfolio companies to strengthen their solvency. Injecting new capital in the form of debt was not considered appropriate given that the targeted companies experienced a deteriorating profitability and faced an uncertainty regarding their future cash flows during the pandemic. Secondly, the preferred equity would be considered as equity by banks. This was imperative since it would increase the chances of Cinder's portfolio companies to extend their current loans and get additional loans in the future, if needed. Thirdly, the preferred equity would provide Cinder with a downside protection, unlike common equity. In case of bankruptcy, Cinder would have the right to be paid their investment amount as well as their preferred accumulated dividends before common equity holders would be paid anything.

The use of a cumulative and accruing preferred dividend allowed Cinder to set a floor on the return that they would be able to realize from each investment unless the common equity value of their portfolio companies would be reduced to zero. Both the return floor and the downside protection represented essential components of the investment strategy given that Cinder invested in companies negatively affected by the pandemic without any certainty

[13] Cinder could deviate from the range to set a lower or a higher preferred dividend rate. The 8-12% range should thus merely be interpreted as an indication of the preferred dividend rate that Cinder would typically set

[14] The meaning of *investor share* as used by Cinder is the share owned of the total equity value of the firm, including the preferred equity as well as the common equity

regarding how long the pandemic would go on or how it could affect their portfolio companies going forward.

The use of a PIK feature was also an important feature of the investment strategy since many companies targeted by Cinder were experiencing a decline in their liquidity during the pandemic. If Cinder would have required cash payments during their holding period, they would further strain the liquidity of their portfolio companies and impair their ability to perform the necessary actions to return to the state that they were in prior to the pandemic. Accordingly, Cinder decided that they would not require any cash payments during their holding period. Instead, they made use of a PIK model in which the preferred dividends would be accumulated and accrued until the point at which Cinder's preferred shares would be redeemed.

The use of a redemption feature was pivotal to Cinder's ability to access the targeted companies which had owners that were reluctant to give up ownership. Thanks to the redemption feature, Cinder could offer the owners of their target companies the possibility to repurchase the preferred shares and reclaim full ownership post the pandemic. As such, the redemption feature meant that the owners of the targeted companies would only have to give up ownership in the short-term.

Given that Cinder made use of redeemable preferred equity, they had to decide on a redemption price for their preferred shares. As opposed to setting a fixed redemption price, Cinder included the right to be repurchased at the highest of two redemption prices. The first price entailed the investment amount plus the accumulated preferred dividends ("the minimum amount"). The second price entailed Cinder's investor share of the total equity market value of their portfolio company at exit. The exit valuation would be carried out using an independent appraiser unless Cinder and the portfolio company could agree on a market value themselves. After the market value of the firm had been established, Cinder would receive the highest of the two redemption prices. The possibility to be paid the highest of the two redemption prices guaranteed Cinder a full participation in any potential increase in the equity value of their portfolio company during their holding period. This full upside participation represented a crucial component of the investment strategy given that Cinder invested in their portfolio companies with the thesis that they had the potential to recover and become worth at least as much as they were prior to the pandemic.

Through the use of the two redemption prices, Cinder circumvented the difficulties inherent to reaching an agreement on a fixed, pre-specified price at which Cinder could be repurchased. On the one hand, Cinder invested in the targeted companies with the thesis that they could recover to become worth at least as much as they were prior to the pandemic.

Therefore, Cinder would not be willing to accept a lower redemption price for their investor share than a price reflecting the anticipated equity value of their portfolio companies in a best-case scenario. On the other hand, the economic effects of the pandemic imposed a significant uncertainty on the future equity value of the targeted companies. In a worst-case scenario, the pandemic could be prolonged and depress the equity value of the portfolio companies even further. On account of the risk that a worst-case scenario could prevail, the owners of the targeted companies would be reluctant to accept a prespecified redemption price reflecting the equity value in a best-case scenario. As a consequence of the challenges inherent to agreeing on a fixed redemption price beforehand, Cinder did not consider it likely that the parties would be able to agree on a fixed, pre-specified price that would guarantee Cinder a full-upside participation. Taking in an external appraiser at exit as opposed to agreeing on a fixed repurchase price beforehand, allowed Cinder to overcome these challenges.

"/.../ As minority investors, we get a mix of downside protection through the preferred dividend rate and upside in the options element, it's like the best of both worlds" - Jan Amethier, CEO at Cinder.

5.2.2 Minority investments

One of the cornerstones of the investment strategy was that Cinder would only make minority investments. The investments made would range between 50-500 million SEK, typically representing a 10-30% investor share post-money. Through their investment, Cinder would acquire voting rights that would be proportional to their investor share.

An important factor in the choice of making minority investments as opposed to majority investments was that the owners of the targeted companies were unwilling to give up a controlling stake. Even if they would be willing to give up a controlling stake at some point in time, the owners of previously well-performing companies with a positive long-term outlook would not be willing to sell their company at, what the owners considered to be, a steep discount during the pandemic. Accordingly, it was anticipated that owners of the targeted companies would find it more attractive to give up a minority stake as opposed to their whole companies at a low valuation.

The use of minority investments as opposed to majority investments was however not guided by a desire to diversify risk by making several smaller minority investments as opposed to fewer and bigger majority investments. That Cinder did not consider minority investments a way to diversify their risk could be explained by the fact that the perhaps most significant risk of each investment would be common across all portfolio companies- namely that the pandemic would be prolonged and prevent their demand from returning to a normal state during Cinder's holding period. The exposure to this risk could not be reduced by making several minority investments as opposed to fewer majority investments given that all targeted companies were exposed to the risk of a prolonged pandemic.

"*The reason that we make minority investments does not have anything to do with diversification, it is rather the whole idea with starting Cinder. Indeed, we have portfolio theoretical discussions about it, but it's not something that we have looked into, it [making minority investments] was rather the axiom when we started [Cinder].*" - Jan Amethier, CEO at Cinder.

Being a non-controlling shareholder, Cinder would have a limited possibility to modify the management team and the business plan that their portfolio companies had in place. Although Cinder would be able to propose and discuss such changes with the remaining board members and the management team, they would not have the possibility to exert any changes unilaterally. Thus, they would essentially invest in the existing management team and their business plan and would have to believe in the ability of the existing management team to develop the company in a desirable direction post their investment. For that reason, Cinder sought companies with a talented management that had developed the company with a strong track record during an extended period of time prior to Cinder's investment.

"*If a company does not have a good management team, I would not consider a minority investment appropriate. That is my view. If you make minority investments, you have to believe in the existing management team*"- Nicholas Macneil, Investment Director at Cinder

5.2.3 Holding period

Although Cinder intended to hold their portfolio companies for five years on average, they had no predetermined holding period that would apply to all of their portfolio companies. Instead, the intended holding period would vary from case to case depending on when Cinder believed that their portfolio companies would be able to recover from the economic effects of the pandemic. If needed, the portfolio companies would be able to retain Cinder's capital longer than Cinder's intended holding period. The holding period could also be shortened if the companies would recover earlier than initially expected. That the holding period was flexible was important because it was uncertain for how long the pandemic would go on and thus for how long the companies would need to retain the financing provided by Cinder. Nevertheless, Cinder would set a lower limit for their holding period which would typically be three years. During this period, the portfolio companies would not be able to repurchase the preferred shares. This lower limit was included in the term sheet in the interest of ensuring that enough time would pass in order for Cinder to realize a sufficient profit on their investment before they were bought out (see appendix 8).

5.2.4 Exit plan

Cinder's exit plan would be identical across all portfolio companies- namely to be bought out by their portfolio companies. In the ideal scenario, the investee would voluntarily repurchase Cinder's preferred shares within the intended holding period using retained earnings, by refinancing the company or a combination of both. Because Cinder planned to exit their investments by being repurchased by their portfolio companies, it was of great importance that Cinder, already before their investment, assessed whether the company would become profitable enough to repurchase Cinder's preferred shares.

"*What sets us apart from another actor is that we always keep an eye on, if we invest 200 and get 20% [of the company], is it possible for this owner to pay us back? The value that our stake represents in five years, can they finance it- buy us out?*" - Jan Amethier, CEO at Cinder

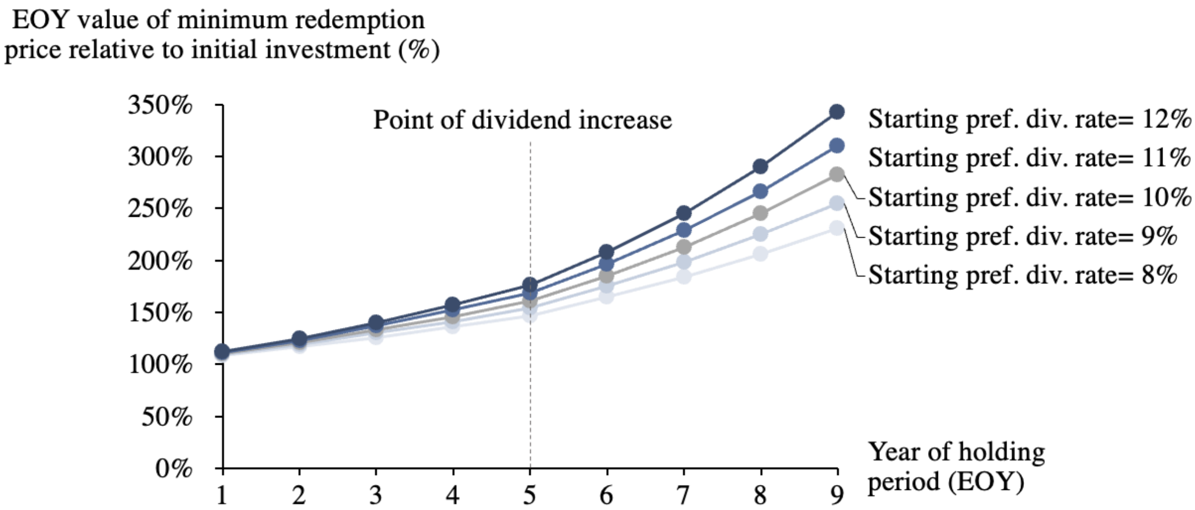
Although Cinder anticipated that their portfolio companies would voluntarily repurchase their preferred shares, two other scenarios had been taken into consideration in the design of the investment strategy. First, a scenario could prevail in which the portfolio company would refuse to repurchase Cinder's shares although they would be able to afford it. To prevent such a scenario from prevailing, Cinder designed their financial instrument to create a natural exit moment in the year that they intended to exit their investment. At this point, which would typically be at the end of the fifth year of the holding period, the preferred dividend would increase with 50%[15] or more from the prior preferred dividend rate of 8-12% to 12-18%. The logic behind the use of this dividend increase was that it would make Cinder's financing expensive in comparison to other financing alternatives and incentivize the portfolio companies

[15]This increase in the preferred dividend could be greater or smaller. The 50% should merely be interpreted as an indication of the preferred dividend increase that Cinder would typically set. Moreover, the point for the dividend increase could vary depending on the intended length of the holding period

to repurchase the preferred shares. Cinder however considered it improbable that a portfolio company would refuse to repurchase Cinder's shares unless they would be unable to afford it. If a portfolio company would do well, the company would be incentivized to repurchase Cinder's shares as soon as possible to avoid sharing any further increase in their equity value with Cinder. Even if a company would not do well, the portfolio company would be incentivized to repurchase Cinder's shares given that the minimum redemption price would increase exponentially due to the accruing dividend (see figure 7).

Figure 7:

Y-axis: Value of minimum redemption price relative to initial investment with different preferred dividend rates[16]; X-axis: Year of holding period (end of year)



Source: Authors' own calculations based on data obtained from company material provided by Cinder

If a portfolio company would refuse a repurchase in spite of this, Cinder would have the right to force a redemption after eight years[17], either by demanding that the shares would be repurchased by the company or demanding a sale of the company through a sale to an external party or an IPO (i.e. a drag-along right). Consequently, Cinder's holding period would in practice be limited to a maximum length of eight years.

In the second scenario, the portfolio company would not be able to afford the repurchase of Cinder's shares. In this scenario, like in the prior, Cinder would be able to make use of their drag-along right. To prevent a scenario in which the portfolio company would be unable to

---

[16] Calculation assumes that no dividends are paid in cash during the holding period and that the dividend increase occurs in the fifth year of the holding period

[17] The eight years provide an indication of the term that Cinder would usually use in their term sheet. However, Cinder could include a shorter or longer period in their term sheet

afford the repurchase, Cinder included the right to demand an immediate repurchase if the value of Cinder's investment would exceed more than 50% of the market value of the portfolio company.

5.2.4 Governance and incentives

To monitor the actions taken by their portfolio companies, Cinder would always require the right to appoint a board observer. In some cases, they would also require the right to appoint a board member[18]. Beyond the more formal board meetings and the reports that the investees would supply Cinder with, Cinder expected to have a more frequent informal interaction with their portfolio companies given that their target companies seldom had any other external owners.

"I expect that we will have a lot of contact in addition to the board meetings given that they [the investees] seldom have any other [external] owners. It [the governance process] is a much more informal process in this type of medium-sized, privately held family business than in listed companies"- Jan Amethier, CEO at Cinder

Although Cinder would be able to monitor the companies through their board representation, Cinder would not be able to control the decisions made by the board or the management team as they would always acquire non-controlling positions in their portfolio companies. To be able to prevent the board and management team from making decisions that could have a profound impact on the value of Cinder's stake, Cinder complemented their board representation with minority protections. The number and type of minority protections would vary from one investment case to another but Cinder had eight minority protections that they would typically include in their contracts (see appendix 9).

Naturally, Cinder's minority protections would not prevent every possible action undertaken by the portfolio companies that could disbenefit Cinder as a minority investor. Accordingly, it was important for Cinder to ensure that the incentives of the management team and board would be aligned with that of Cinder. Cinder would therefore only invest in companies where the management or board had themselves invested a meaningful share of their wealth in the company.

[18] The board observer would always be a representative from Cinder while the appointed board member could be an external party with experience from the industry that the portfolio company operated in

5.2.5 Operational involvement and contribution beyond capital

Cinder invested with the thesis that the temporary underperformance of the targeted companies was entirely caused by an external factor (i.e. the pandemic) rather than an internal factor such as an incapable management team or an inadequate business model. As soon as the economic effects of the pandemic abated and the demand of the targeted companies returned to a normal state, Cinder believed that their portfolio companies would improve their operating performance and become worth at least as much as they were prior to the pandemic. Consequently, Cinder did not find it necessary to intervene with the operational aspects of their portfolio companies to change their management team or business plan during the holding period.

"*We sit down with the management and the board to discuss their [business] plan and if we agree with it [the plan], we can invest. If we do not, we cannot invest. Then it is up to them to pursue it [the business plan]- in that aspect, we are in the back seat.*" - Jan Amethier, CEO at Cinder

Although Cinder would have a low degree of operational involvement in their portfolio companies, they aimed to contribute with more than capital. First, Cinder aimed to contribute with expertise in areas in which they believed that the typical company in their targeted segment lacked expertise. Due to the pandemic and the economic disruption that followed, many companies were expected to face major challenges- both of a financial and a strategic nature. In managing these challenges, Cinder believed that it would be valuable for companies to be backed by a team of investors with extensive experience from financial and strategic analysis.

"*Medium-sized companies seldom have access to the financial competence that the team at Cinder has. Given the financial challenges that follow the pandemic, I think this can be very valuable for them*"- Jan Amethier, CEO at Cinder

Moreover, Cinder aimed to give their portfolio companies access to a wider network- not only the network of the employees at Cinder but also the network of the investors in the JV. These networks could be used to find new board members, customers, suppliers or other strategic partners. As Cinder exited their portfolio companies, these contacts could also be used to find new financiers.

5.4 MAFI- Cinder's first portfolio company?

In the summer of 2020, Cinder had evaluated several investment cases but had yet to make their first investment. While they had not actively sourced any investments, they had marketed themselves through several advisory firms. In August 2020, the advisory firm Grant Thornton connected Cinder with MAFI.

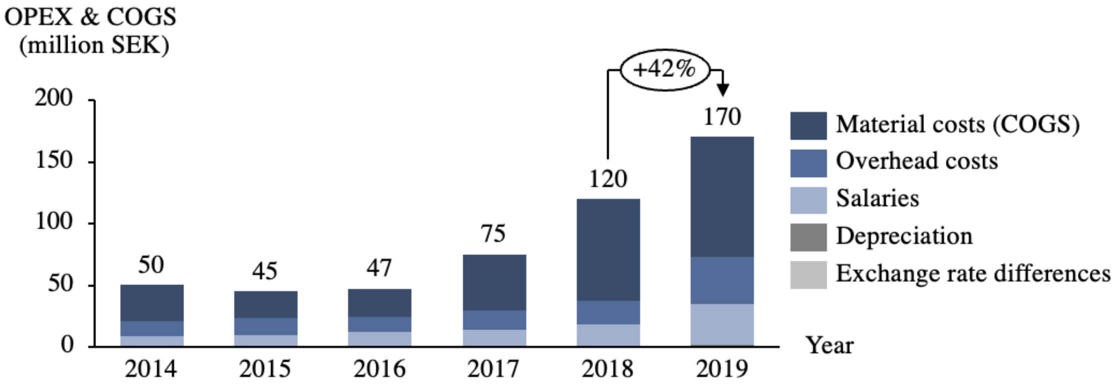
5.4.1 MAFI in the year prior to the pandemic

In 2019, MAFI was expecting a significant increase in the demand of their products as a result of the upcoming global roll-out of the 5G network which would not only result in an increase in the demand of mounting equipment for telecom units. It would also give rise to a demand for more sophisticated and expensive mounting equipment. On account of the expected increase in demand, MAFI predicted that their revenues would grow by 50% during the year of 2020. To be able to satisfy the expected increase in demand, MAFI accelerated the expansion of their organization, both in Mora and internationally. Two new offices were opened up in China and the United States in order to facilitate an accelerated growth in these markets. In parallel, the headquarter in Mora was expanded by adding roles and functions such as a product management office and a supply chain manager. In connection with this, MAFI hired more than ten new employees, representing a significant growth of their workforce.

During 2019, MAFI grew to become a global player with global sales and offices in four different continents (see appendix 14). Because of the revenue growth that was expected to be realized in 2020, MAFI willingly expanded their cost base and realized a net operating loss in 2019 (see appendix 17). Without knowing that a pandemic would break out in just a few months' time, MAFI had increased the sum of their operating expenses (OPEX) and material costs (COGS) with 42% (see figure 8).

Figure 8:

Y-axis: Sum of OPEX and COGS for MAFI (MSEK) 2014-2019[19]; X-axis: Year



Source: Data obtained from company material provided by MAFI

5.4.2 MAFI during the pandemic

During the early phases of the pandemic, MAFI managed relatively well. However, it soon became clear that the pandemic would create a significant delay in the roll-out of the 5G network globally. Consequently, MAFI recognized that the increased demand that they had expected would be postponed and that they would realize a revenue growth well below the pre-pandemic expectation of 50%.

Approaching the summer of 2020, MAFI experienced a negative demand shock and revenues started to deteriorate dramatically. In June, MAFI experienced liquidity constraints and had to utilize their revolving credit facility to keep their business running. Thanks to the fact that MAFI had outsourced their production, they could avoid some fixed costs that competitors with in-house production could not avoid but with revenue and cash flows well below their expected levels, MAFI was left with no choice but to initiate a powerful cost saving program. The organization in Mora was streamlined to lower costs and several employees were let go. Due to the fact that employees had a period of notice, these cost saving measures would however be subject to a lag.

Despite the initiated cost savings package, MAFI realized that they would no longer be able to support their expansion at the desired pace without a capital injection. With uncertainty regarding how the pandemic would affect cash flows going forward, MAFI did not consider it appropriate to lever their company further. Instead, they aimed to improve their solvency by injecting additional equity and paying off existing debt. Although the current owners were able

[19] Depreciation and Exchange rate differences represented an insignificant part of the total cost base and is thus not visible in the diagram.

to invest additional funds into their company, Chairman Kent Hansson realised that MAFI would have to seek capital from an external investor in order to uphold their expansion strategy throughout the pandemic. However, given the economic consequences that the pandemic had caused MAFI, Hansson recognised that they would get a low valuation for their company. For this reason and because the current owners wanted to keep running the company, they were not willing to give up a majority stake. Neither were they interested in taking on a long-term owner without the possibility of buying them out post the pandemic.

"*Given that the pandemic hit and that [MAFI's] growth was postponed, it was apparent that we would not get the right valuation for the company*" - Kent Hansson, Chairman at MAFI

5.4.3 MAFI and Cinder is connected

Although MAFI, with 37 employees and 169 million SEK in revenues 2019, was smaller than the companies that Cinder had initially decided to target, Cinder thought that MAFI represented a compelling investment case that fit well into the segment that Cinder had decided to target (see table 4).

Table 4

Comparison of characteristics of Cinder's target segment and MAFI's

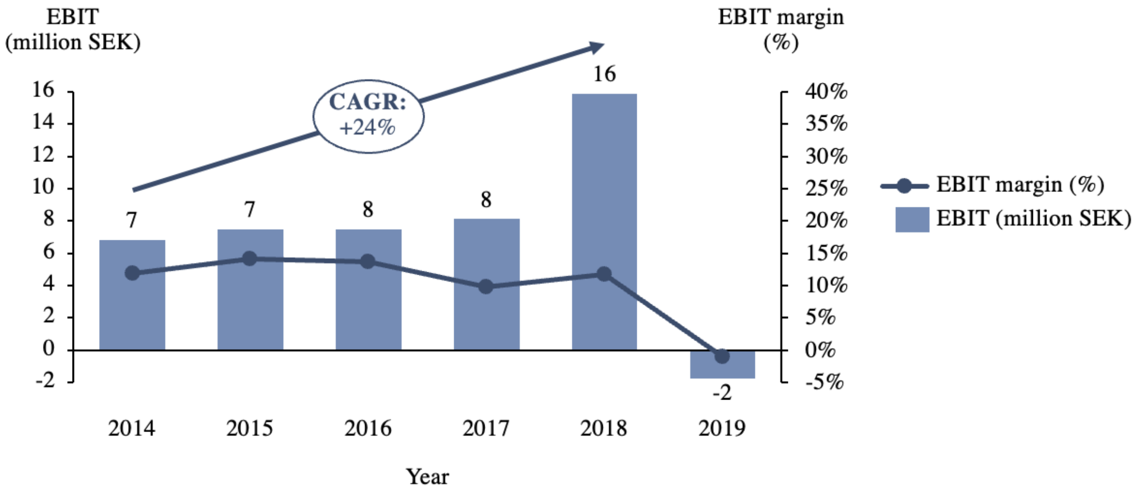
Characteristics of target segment	True for MAFI?
Incorporated in Sweden	Yes
Negatively affected by the pandemic, but only temporarily	Yes
Well-managed with positive long-term outlook and well-documented profitability prior to the pandemic	Yes
Medium-sized: At least 250 employees and/or 300 million SEK in revenue	No
Family-owned or owner-led	Yes
Unwilling or unable to take on additional debt	Yes
In need of equity capital injection to overbridge negative demand shock imposed by the pandemic and to address solvency and liquidity issues	Yes
Private- no access to liquid capital markets	Yes
Owners reluctant to give up ownership and control	Yes

Source: Interviews with Cinder Invest and MAFI

Cinder's impression was that MAFI was a well-managed company with a solid business model. Moreover, MAFI had a well-documented profitability and growth. Between 2014-2019, MAFI had grown their revenues at a 24% CAGR. Although MAFI had willingly incurred an operating loss in 2019, they had demonstrated a stable profitability in the preceding five years- between 2014 and 2018, MAFI had grown their operating profits at a CAGR of 24% with an average operating margin of 12% (see figure 9). This represented a considerably stronger performance than that of MAFI's closest Swedish competitor Cue Dee (see appendix 20, 21 & 22).

Figure 9:

Y-axis: EBIT (million SEK) and EBIT margin (%); X-axis: Year



Source: Authors' own calculations based on data obtained from company material provided by MAFI

In addition to MAFI's historical financial performance, Cinder was intrigued by the fact that MAFI operated in an industry that was not expected to be negatively affected by the pandemic in the long-term. If anything, it was the opposite way around. With MAFI being a subcontractor in the telecom industry, it was believed that the roll-out of the 5G network would support a strong revenue growth post the pandemic.

"*It [the roll-out of the 5G network] is subject to a temporary delay but it is hardly the case that we will be using 5G less in five years. If anything, we will use it more*" - Nicholas Macneil, Investment Director at Cinder

MAFI on the other hand, realized that Cinder could provide the necessary capital to allow their company to overbridge the temporary loss in demand without breaking off the expansion plans that they had initiated prior to the onset of the pandemic. MAFI, which had no external owners, were keen to retain control and full ownership of their firm in the long-term. That Cinder could provide capital without demanding a controlling stake in return and offered the current owners the possibility to reclaim full ownership post the pandemic was therefore imperative to MAFI.

"*They [Cinder] have a good brand, good owners and an investment philosophy that suited us- that is, they will join us for some time but they will not take a majority position*"- Kent Hansson, Chairman at MAFI

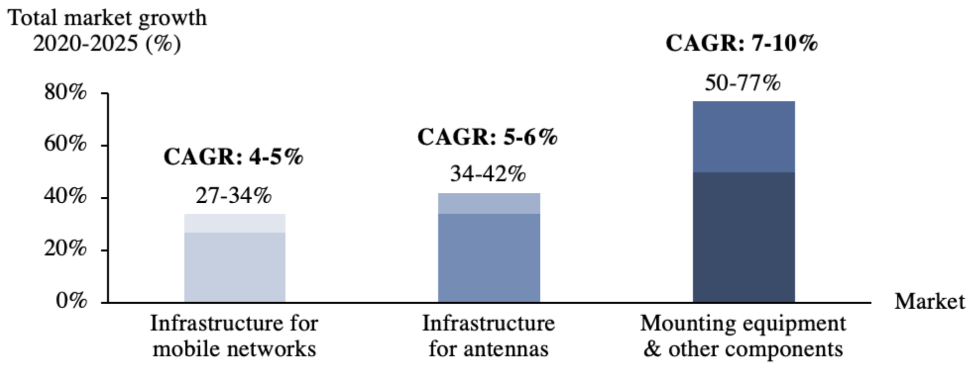
5.4.4 The investment decision

Both Cinder and MAFI felt confident that MAFI would be able to subsist the pandemic without becoming financially distressed- even if Cinder would decide not to inject capital. Nonetheless, Cinder had some concerns regarding MAFI's future performance. One of the primary concerns of Cinder was whether there was enough stickiness in the revenues of MAFI. Because Cinder's view was that the products of MAFI were manufactured using quite simple engineering techniques, they were concerned that their customers had low switching costs and that MAFI could be replaced by another manufacturer that could offer lower prices. Given that MAFI's three biggest customers represented more than 50% of their total revenue, it was imperative for Cinder to ensure that these customers would not suddenly turn to another supplier. During the due diligence process, Cinder learned that MAFI had strong and well-established relationships with their customers and that they did not only sell products to them but also functioned as a consultant in their product development. Moreover, MAFI had a competitive advantage in their light-weight, high quality and durable products. With that, Cinder felt confident that MAFI had customer loyalty and a competitive advantage that allowed for stickiness in their revenue. Yet another concern however, was how MAFI would handle the situation if the delay of the 5G network would be extended for longer than initially anticipated as a result of a prolonged impact of the pandemic or other macro events. Thanks to the fact that MAFI had already initiated powerful cost saving packages, it was believed that they would manage well throughout 2021 even if the pandemic would go on.

Post the pandemic, Cinder expected that the roll-out of the 5G network would support continued growth. Between 2020 and 2025, it was expected that the market for wireless network infrastructure would grow with 27-35% and that the market for antenna infrastructure would grow with 34-42%. The market for mounting equipment was expected to grow even more, with 50-77% (see figure 10). This was because the roll-out of the 5G network would not only require a densification of existing telecom infrastructure but also more sophisticated mounting equipment and a greater amount of mounting equipment per telecom unit.

Accordingly, the market for mounting equipment would benefit from higher unit prices as well as an increase in the number of requested components.

Figure 10:
Expected market growth between 2020-2025



Source: Authors' own calculations based on data obtained from company material provided by external consultancy firm hired by Cinder

An assuring factor for Cinder was that MAFI had an experienced management with a well-established track record of developing the company. Cinder felt confident that Pierre Bengtsson would be able to face the challenges going forward given that he had served as the CEO of MAFI for more than twenty years. Moreover, Pierre and the remaining board members would retain a majority stake in MAFI post the potential transaction (see appendix 16). This assured Cinder that the incentives of the board and the management would be aligned with that of Cinder.

In evaluating the investment, Cinder incorporated three scenarios. In addition to a base case scenario, Cinder considered a worst case and a best-case scenario. In the best-case scenario, Cinder expected that the effects of the pandemic would abate during 2021, allowing MAFI to return to profitability during the same year. Moreover, they incorporated that new customers could be acquired during their holding period. In the worst-case scenario, the pandemic would be prolonged and MAFI would not return to profitability until 2022-2023. In addition, it was incorporated that MAFI could lose one of their biggest customers in the worst-case scenario[20].

[20] Any exact financial estimates not disclosed for confidentiality reasons

5.5 Epilogue

In the end of December 2020, the transaction between MAFI and Cinder was completed. With that, MAFI became the first company that Cinder invested in[21]. The equity injections made by the current owners and Cinder amounted to 31.5 million SEK in total (see appendix 19). In the end of 2020, MAFIs annual revenue had only grown with 13%, representing a revenue growth well below the pre-pandemic expectation of 50% and the lowest top-line growth in four years. The initiated cost saving-program was subject to a lag and MAFI realized a negative operating profit of -11 million SEK 2020, representing an operating margin of -6%. Without the equity injections, MAFI would have experienced a considerable deterioration of their solvency and liquidity during the 2020. However, owing to the equity injected, MAFI managed to improve their liquidity and solvency (see figure 11 & 12 and appendix 19). In April 2021, Cinder's view was that MAFI had developed in a desirable direction post their investment although only a few months had passed. It was expected that MAFI would return to profitability during 2021 and that a positive top-line growth would be maintained.

Figure 11:
Y-axis: Solvency ratio for MAFI; X-axis: Year (EOY)

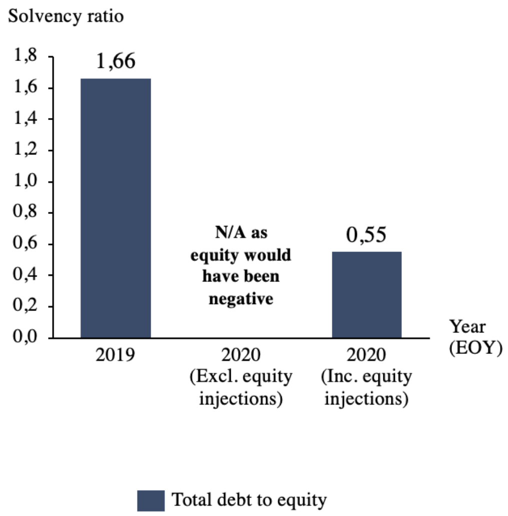
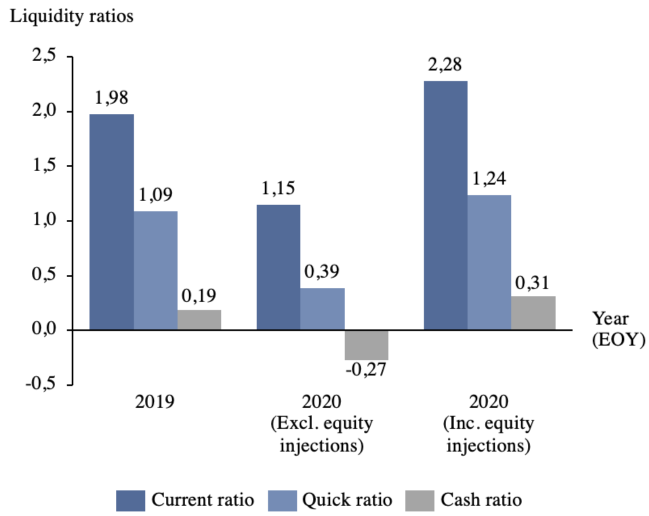


Figure 12:
Y-axis: Liquidity ratios for MAFI; X-axis: Year (EOY)



Source: Authors' own calculations based on data obtained from company material provided by MAFI

[21] For confidentiality reasons, Cinder did not want to share the exact terms of the deal with the public in April 2021- including the amount invested, the investor share and the preferred dividend rate. Neither did they want to disclose any projections for the future performance of MAFI

Looking back, the economic effects of the pandemic had turned out slightly different than what had been anticipated by the JV partners at the onset of the pandemic. While many companies had realized deteriorating profits and cash flows, not as many as expected had realized *negative* profits and cash flows. Solvency and liquidity issues had therefore not been as prevalent as they had been expected to be. As a result, some companies had so far been able to manage the situation without raising additional capital. Other companies, which experienced liquidity issues but that had managed to maintain an acceptable solvency, had been able to turn to other financiers that could offer capital without requiring any ownership in return, such as banks.

"*There are more actors that are willing to step in [invest or lend] given that the situation has not turned out as bad compared to the considerably darker economic situation that we for long feared*" - Tomas Flodén, Chief Investment Officer at AMF and Board Member at Cinder

Consequently, the target group of medium-sized, family-owned or owner-led companies in need of equity injections, had been smaller than what had been anticipated initially. This shed light on the fact that the investment strategy of Cinder was not only subject to the risk that the pandemic would be prolonged and cause additional economic disruption for their portfolio companies during Cinder's holding period. The investment strategy was also subject to the risk that private, medium-sized, family-owned or owner-led companies would be able to overbridge the pandemic *without* an equity injection from an external investor, limiting the number of companies in Cinder's target segment.

Going forward, it was expected that additional companies would appear in the segment targeted by Cinder. It had been observed that many private and family-owned or owner-led companies had, so far, managed to keep their businesses running despite a negative demand shock by using retained earnings and cost-saving packages. It was expected that these companies would soon find their survival strategy untenable and seek equity injections unless their demand would return to a normal state in the near future.

"*/.../ there are many companies that have endured and struggled [through the pandemic], that now realise that it [the pandemic] is going to be more protracted than what they initially expected /.../ There are a number of companies that have consumed their reserves at this point in time. So we still believe that there will be [investment] opportunities going forward*" - Jenny Askfelt Ruud, Board Member at Cinder and Head of alternative investments at AP4

In April 2021, Cinder had invested in three companies; MAFI, JY Holding AB ("JumpYard") as well as Stureplansgruppen AB (see appendix 10). Cinder had additional deals in their pipeline that were expected to be completed during the second quarter of 2021. All deals that had been made were proprietary in the sense that Cinder had participated in exclusive discussions with the targeted companies as opposed to structured processes involving several potential bidders.

6. Discussion

6.1 What investment opportunities did Cinder identify among companies negatively affected by the pandemic?

Among the various companies that had been negatively affected by the pandemic, Cinder identified the opportunity to access a previously inaccessible segment of Swedish, private, medium-sized and family-owned or owner-led companies that were well-managed and had a positive long-term outlook. As a result of a negative demand shock caused by the pandemic, the targeted companies were experiencing solvency and liquidity issues as well as a downturn in their operating performance. Nonetheless, Cinder recognized that the targeted companies had the potential to recover from their temporary downturn in performance to become worth at least as much as they were prior to the pandemic if they were provided with the capital to overbridge the economic effects of the pandemic.

Under normal circumstances, the owners of the targeted companies would not have been willing to give up ownership to an external party. However, given the liquidity and solvency issues that the pandemic had imposed, the owners of the targeted companies were left with few other options than to seek equity capital from an external investor. As such, the negative impact of pandemic had opened up for the opportunity for an external investor to even access the targeted companies. Moreover, the limited competition within the targeted segment, the temporary downturn in their operating performance as well as the uncertainty that the pandemic imposed on their future performance, allowed for lower entry valuations than under normal circumstances. As soon as the economic effects of the pandemic abated and the demand returned to a normal state, an increased operating performance as well as a reduced uncertainty regarding the future performance of the targeted companies were expected to give rise to higher exit valuations than the entry valuations.

6.2 How can an investment strategy be designed to take advantage of the identified investment opportunities and how does the strategy designed by Cinder compare to the traditional investment strategies within the PE market?

The case study highlighted that three main categories of factors had to be considered in designing the investment strategy to take advantage of the identified investment opportunities. The first category entailed what investment strategy that would be viable and suitable given the financial needs that the targeted companies had as a result of the pandemic. The second category entailed how the investment strategy could be designed to access companies that were reluctant to give up control and ownership. The third category entailed how the investment strategy could be designed to capture the full return potential of the identified investment opportunities and ensure healthy risk-adjusted returns (see table 5 for summary).

It could be argued that some of the traditional strategies within the PE market does not involve targeting the same companies as those targeted by Cinder, deeming any further comparison of the strategies irrelevant. It is however difficult to draw a distinctive line between the type of companies targeted by Cinder and the traditional PE strategies. Firstly, while the strategies of VC funds involve investments in young companies, the strategy of VC funds can also include later stage investments in more mature companies like those targeted by Cinder. Secondly, while Cinder invested in companies negatively affected by the pandemic, the companies could still be profitable, just like the companies targeted by buyout funds. Thirdly, the capital injected by Cinder could be used to finance an expansion strategy, just like the capital injected by growth funds. Fourthly, the companies targeted by Cinder could represent a turnaround target or experience financial distress, just like the companies targeted by distressed funds. Last but not least, although mezzanine funds usually target companies that are anticipating an IPO or a sale to an external party in the near future, mezzanine funds can invest in a broad range of companies. All in all, there is an overlap in the targets that the traditional strategies involve and those of Cinder. Therefore, a more in-depth comparison of all the traditional investment strategies to that of the strategy designed by Cinder is provided below.

6.2.1 Adapting a strategy to the financial needs of the target segment

Injection of additional capital

First and foremost, the targeted companies would be in need of a capital injection to overbridge their temporary loss in demand and strengthen their liquidity, as demonstrated in the MAFI investment case. As such, the provision of new capital was a central part of the designed investment strategy. The provision of new capital is an element of the strategy that is similar to the strategies of VC funds, growth funds, mezzanine funds as well as the turnaround and the loan-to-own strategy of distressed funds. The strategy of buyout funds *can* include the injection of new capital although the invested capital is primarily used to buy out existing owners.

The injection of capital represents a key difference of the strategy compared to the distressed-for-control strategy of distressed funds that involves investments in existing debt. The aim of the strategy is however not to satisfy the capital needs of the companies. Instead, the aim of the strategy is to force the companies into a restructuring. Nonetheless, the strategy would not be suitable to take advantage of the investment opportunities at hand given that the opportunities entailed investing in well-managed companies with a positive long-term outlook which had the potential to recover from the pandemic without going through a financial restructuring.

Equity injection to strengthen solvency

Like exemplified by MAFI, the targeted companies were in need of equity to strengthen their solvency during the pandemic. Since the companies were experiencing a deteriorating profitability and faced uncertain future cash flows due to the pandemic, an investment strategy that involved further levering the companies would not have been viable. As outlined above, many of the traditional strategies involve the provision of new capital. However, only the strategies of VC funds, growth funds, the strategy of mezzanine funds involving the investment in preferred equity and the turnaround strategy of distressed funds involve the provision of new capital in the form of equity without levering their companies further. The strategy of buyout funds could too involve the injection of equity capital but the strategy entails heavily levering their portfolio companies. The strategy of mezzanine funds involving the investment in debt and the loan-to-own strategy of distressed funds also impose an increased leverage on their portfolio companies as they provide new capital in the form of debt. However, like the distressed-for-control strategy, the loan-to-own strategy involves deliberately forcing the companies into a restructuring as opposed to satisfying their capital needs. Notwithstanding, these distressed debt strategies would not have been suitable to take advantage of the investment opportunities at hand, as explained above.

Pay-in-kind dividend payments

Since the targeted companies had liquidity issues following the economic effects of the pandemic, the investment opportunities required a strategy that would not further strain the liquidity of the targeted companies. The designed strategy therefore involved a PIK-model, allowing the portfolio companies to avoid making any additional cash payments during their holding period. Like the designed strategy, neither the strategy of growth funds, VC funds, mezzanine funds nor the loan-to-own strategy of distressed funds necessarily require their portfolio companies to service additional cash payments during their holding period since the potential interest payments or preferred dividends required can be PIK. The turnaround strategy of distressed funds does not necessarily require their portfolio companies to service additional cash payments either since they commonly reduce the leverage of their portfolio companies and sometimes even carry out financial reconstructions to reduce the interest payments required. The distressed-to-own strategy of distressed funds involves the investment in *existing* debt and does thus not impose additional cash interest payments on their portfolio companies either.

Buyout funds, on the other hand, commonly lever their portfolio companies heavily and require their portfolio companies to service additional cash interest payments during their holding period. While buyout funds can benefit from incentive benefits of such interest payments, such as the reduction of wasteful spending, the companies targeted by Cinder would already have limited liquidity. Consequently, cash payments could, instead of bringing incentive benefits, reduce the ability of the targeted companies to exhaust positive NPV investments and recover from the pandemic.

Flexible holding period & exit timing

Due to the fact that there was an uncertainty regarding how long the pandemic would go on and how long it would take for the targeted companies to recover from the pandemic, it would not have been appropriate to set a predetermined holding period that would force the companies to repay the invested capital at a pre-specified date. Accordingly, the investment strategy was designed so that the exact length of the holding period would be guided by the companies themselves and how long they would be in need of the provided capital, although the designed strategy included a lower and an upper limit for the holding period.

Unlike the designed strategy, the strategy of mezzanine funds involving the investment in debt include a predetermined investment period. While this period can be set to fit the financial needs of their investees, the investees would not be free to retain the capital for as long as they would want to as debt has a contractually defined repayment date. The strategy of mezzanine funds investing in preferred equity and the strategy of VC funds, on the other hand, can allow their investees to retain the provided capital as long as it would be needed as preferred shares in theory have an infinite life. However, like the designed strategy, these strategies can include a drag-along clause or the right to demand redemption of the preferred shares to set an upper limit for their holding period.

A comparison of the repayment aspect of the designed strategy to that of buyout funds and distressed funds[22] is deemed irrelevant given that it is not possible to make a distinction between the company and the provider of the financing as the strategies of buyout funds and distressed funds both involve acquiring majority stakes. As the strategies involve taking control of their portfolio companies, they can exit whenever they consider it optimal from a return point of view- something that the designed strategy did not allow for.

6.2.2 Enabling the access to companies reluctant to give up ownership and control

Non-controlling investments

The acquisition of minority stakes was an essential element of the investment strategy given that the target companies had owners that were reluctant to give up a controlling stake, in particular during the pandemic. Many other of the traditional strategies within the PE market also allow the current owners to retain control during their holding or investment period- such as that of VC funds, growth funds and mezzanine funds that either involve the acquisition of minority stakes or investments in debt. The strategies of buyout funds and distressed funds, on the other hand, primarily involves the acquisition of controlling stakes[23]. Thus, they would not allow the current owners to retain control during their holding period.

In the cases in which buyout funds have made use of minority investment, one of their motives found was similar to the motive of Cinder- to become attractive to targets resisting controlling investments. However, unlike both buyout funds and VC funds, Cinder's use of minority investments was not motivated by a desire to diversify risk since the perhaps most significant risk of the investments were common across all targeted companies- that the pandemic would be prolonged and prevent the demand from returning to a normal state.

Redeemable preferred shares

Because the owners of the companies in the target segment, like Kent Hansson at MAFI, were not only unwilling to give up a majority stake but also wanted to retain full-ownership in the long-term, the designed strategy involved the use of redeemable preferred shares that would

[22] Assuming that the distressed debt strategies succeed so that their debt is exchanged for a controlling stake in the restructured firm

[23] Distressed debt strategies do not acquire controlling stakes directly but the aim of the strategy is to take control of the firm by exchanging the debt invested in for equity in the restructured firm

allow the current owners to reclaim full ownership after Cinder's exit. Neither the strategies of buyout funds, VC funds, growth funds nor distressed funds would allow the current owners to reclaim full ownership after their holding period as their strategies involve exiting their investments by selling their portfolio companies through an IPO, sale to a strategic buyer or sale to a financial buyer.

The strategy of mezzanine funds, however, *could* allow the current owners to reclaim full ownership in one of two ways. Firstly, the mezzanine fund might not choose to trigger the equity component of their financial instrument or they might choose to have their preferred shares redeemed by the company. Secondly, the owners could be able to reclaim full ownership even if the equity component of the financial instrument would be triggered. This possibility would however depend on which of the three kinds of liquidity moments that the mezzanine fund would make use of; a natural liquidity moment (i.e. an IPO or sale to an external party), an artificial liquidity moment in the form of a drag-along right or an artificial liquidity moment in the form of put options that would allow the firm to repurchase the shares at a pre-specified price. Only the use of an artificial liquidity moment in the form of put options would allow the current owners to reclaim full ownership of their firm. If the mezzanine fund would make use of a natural liquidity moment or an artificial liquidity moment in the form of a drag-along right, the current owners would not be able to reclaim full ownership since the firm would be acquired by external parties through a sale to an external party or through an IPO.

6.2.3 Capturing the full return potential and ensuring healthy risk-adjusted returns

Governance and incentives

As the designed strategy involved the use of non-controlling investments without the possibility to alter the management team or business strategy of the portfolio companies, the success of the strategy depended on that the management team and board would make decisions that would have a positive impact for Cinder as an investor. Consequently, an important part of the designed strategy entailed the possibility to monitor the actions taken by the board and management team through board representation. The strategy of performing governance through board representation is similar to the strategy of buyout funds, VC funds and distressed funds that commonly take seats on the board to monitor their portfolio companies.

As Cinder would not be able to control the decisions made by the management team or the board as a non-controlling investor, it was important that any actions that would have a profound effect on the returns on the investments could be prevented. The designed strategy therefore included the use of minority protections that allowed Cinder to prevent certain actions from being taken without their approval. The use of minority protections can be found in the strategies of other minority investors such as that of growth funds, VC funds and the strategy of mezzanine funds that involves investments in preferred equity.

The designed strategy entailed targeting companies in which the management team or board had invested their own wealth with the aim of ensuring that the management team and board were properly incentivized. In this respect, the designed strategy is much similar to the strategy of buyout funds, VC funds and distressed funds that make use of equity-linked incentives to ensure that the management team of their portfolio companies are properly incentivized.

Degree of operational involvement

It was expected that an improved operating performance as well as a reduced uncertainty regarding the future performance of the targeted companies would give rise to higher future valuations and that this would occur as soon as the economic effects of the pandemic abated. In other words, it was believed that the targeted companies were experiencing a temporary underperformance that was due to an external factor (i.e., the pandemic) rather than an internal factor such as an inadequate business model or deficient management team. The designed investment strategy did therefore not involve any changes to the existing business plan or the management team. In other words, the designed strategy involved creating returns independent of substantial operational engineering measures, similar to the strategy of buyout that commonly involves the creation of a meaningful amount of value by buying low and selling high.

However, the limited degree of operational involvement that the strategy involved sets it apart from that of buyout funds, VC funds and distressed funds that perform operational engineering to increase the value of their portfolio companies- such as hiring or firing management team members and/or changing the business model of their portfolio companies. Nonetheless, the designed strategy involved the provision of strategic guidance and network to their portfolio companies. As such, the designed strategy was more similar to the strategy of mezzanine funds which entails a limited degree of involvement in their portfolio companies.

Prior research has suggested that operational engineering capabilities can function as a competitive advantage for buyout funds towards competing investors. However, within the targeted segment, the competition was limited- the deals made were exclusively proprietary, in contrast to the deals made by buyout funds. As such, it is possible that the value-added gains in the targeted companies would not be as incorporated into the acquisition price as it would be in a competitive auction. Thus, in comparison to investments made by buyout funds, the identified investment opportunities could be considered to require less operational engineering measures in order to generate satisfactory returns.

Downside protection & return floor

Since the identified investment opportunities entailed making investments in companies negatively affected by the pandemic without any certainty regarding how long the pandemic would go on or how it would affect the targeted companies going forward, the use of a downside protection as well as a return floor was central to the investment strategy. To ensure healthy risk-adjusted returns, the designed strategy included the use of preferred shares, with a preferred dividend of 8-12%, which would have liquidation preference over common equity holders.

The strategy of investing in an instrument with liquidation preference is similar to the strategies of mezzanine funds, VC funds and growth funds that either involve the investment in preferred equity, which have liquidation preference over common equity holders, or debt which have liquidation preference over both preferred and common equity holders. It could be argued that the strategies of distressed funds involving the investment in debt also include a downside protection. The downside protection of the distressed funds investing in debt would however be lost once the debt would be exchanged for common equity in the restructured firm. The strategies of buyout funds and the turnaround strategy of distressed funds that involve the investment in common equity do however not include a downside protection as the common equity that they invest in does not have liquidation preference over any other financial instrument[24]. Consequently, they would incur a loss on the first dollar decrease of the firm value of their portfolio companies.

The cumulative and accruing dividend included in the designed strategy also guaranteed a minimum return that would be realized unless the firm value of their portfolio companies would be reduced by more than 100% of the common equity value. A return floor can be found in the strategies of VC funds, growth funds and mezzanine funds involving the investment in preferred equity with a cumulative preferred dividend. The strategies of mezzanine funds involving the investment in debt can also provide a return floor, but in the form of interest payments instead of preferred dividends. It could be argued that the strategies of distressed

[24] Buyout funds do invest in preferred equity or shareholder loans as well but as buyout funds hold the majority of the common equity, the preferred equity or shareholder loan only have a liquidation preference over the common equity that buyout funds themselves own.

funds involving the investment in debt also provide a return floor as they are entitled to interest payments until the debt is potentially exchanged for common equity in the restructured firm. However, after the debt of distressed funds is exchanged for common equity, their return floor is lost. The strategy of buyout funds and the turnaround strategy of distress funds does not include a return floor since their strategies involve investments in common equity- an instrument that does not provide a fixed return[25].

Full upside participation

Given that it was predicted that the targeted companies had the potential to recover and become worth at least as much as they were prior to the pandemic, a crucial part of the investment strategy was to guarantee the participation in any increase in the market value of their portfolio companies during the holding period. Consequently, the designed investment strategy entailed the possibility to receive the highest of the market valuation of their investor share and the invested capital plus the accumulated preferred dividends upon their exit. This guaranteed a full participation in any increase in value of their investor share during their holding period.

Like the designed strategy, the strategies of buyout funds, VC funds, growth funds as well as the turnaround strategy of distressed funds also allow for a full participation in the increase in firm value during their holding period given that the strategies either involve a direct investment in common equity or the investment in preferred equity that could be converted into common equity. At exit, these strategies allow the actors to receive the market value of their equity stake as the strategies involve an exit in the form of an IPO or a sale to an external party.

The upside participation of distressed funds investing in debt is however not guaranteed since it is dependent on whether their investment strategy succeeds. The borrower might be able to repay the debt or the debt might be written off in the restructuring process, leaving the investor without any equity and thus without any participation in the upside.

The upside participation of mezzanine funds varies depending on the terms in their contract and the type of financial instrument used. First, the financial instrument that mezzanine funds hold might not be convertible or include warrants- as in the case with preferred equity that is only participating or that only include a preferred dividend. Mezzanine funds holding such instruments would only receive dividends up until the point of their exit and would not take part in the value of any future expected profits. Thus, these strategies would not allow for

[25] Buyout funds invest in preferred equity (or shareholder) loans with dividends (or interest) as well. However, as they are majority holders of the common equity in their portfolio companies, they do not have a return floor on their investment as a whole.

a full upside participation in the increase in firm value during their investment period. The strategies of mezzanine funds that do include convertible instruments or warrants *can* allow for a full upside participation. However, their possibility to achieve full upside participation is dependent on which of the three types of liquidity moments that they would make use of; a natural liquidity moment (i.e. an IPO or a sale to an external party), an artificial liquidity moment in the form of a drag-along right or an artificial liquidity moment in the form of put options allowing the mezzanine funds to sell their shares back to their investee as at a predetermined price. The use of the first two types of liquidity moments would allow mezzanine funds to sell their shares at their market value through an IPO or sale to an external party. If mezzanine funds instead were to make use of an artificial liquidity moment in the form of put options on the other hand, their upside participation would be limited. As highlighted in the case section, it is not likely that the targeted companies would agree to a pre-specified strike price reflecting the equity value of the firm in a best-case scenario given the uncertainty that the pandemic imposed on their future performance. As such, the agreed strike price would likely be lower than the price reflecting the market equity value in a best-case scenario and set a cap on the upside participation of the mezzanine fund. Cinder solved this issue by taking in an external appraiser at exit that could determine the market value of the equity *as if* a natural liquidity moment would occur. However, this was merely a way to ensure that they would receive the full market value of their investor share and thus, a full upside participation.

Table 5

Categories of considerations and the implied requirements on the investment strategy

Categories of considerations	Requirements on investment strategy
(1) Financial needs of the targeted companies	(1.1) Must include injection of new capital (1.2) Must strengthen solvency of portfolio companies (1.3) Must not require portfolio companies to service additional cash payments during holding period (1.4) Must not entail a set repayment date or a fixed holding period
(2) Accessing companies unwilling to give up control and ownership	(2.1) Must not include acquisition of controlling stakes (2.2) Must offer existing owners the possibility to retain or reclaim full ownership of firm post holding period
(3) Capturing full return potential and ensuring healthy risk-adjusted returns	(3.1) Must include use of governance and incentives mechanisms (3.2) Must include downside protection as well as a return floor (3.3) Must allow for a full upside participation

Source: Information obtained from analysis conducted by the thesis authors

6.3 Did the identified investment opportunities require an investment strategy that differs from the traditional investment strategies within the PE market?

As highlighted in the comparison of the designed investment strategy and the traditional strategies within the PE market, the traditional strategies within the PE market lack at least one of the components essential to take advantage of the identified investment opportunities (see table 6).

Firstly, neither the strategy of buyout funds, the strategy of mezzanine funds involving the investment in debt, the distressed-for-control strategy nor the loan-to-own strategy of distressed funds involve the provision of new equity capital without levering the companies further. Thus, the strategies would not have been suitable given the financial needs that the targeted companies as a result of the pandemic.

Secondly, neither the strategy of buyout funds, VC funds, growth funds nor the strategies of distressed funds would enable the access to the targeted companies which had owners that were unwilling to give up control and wanted to retain or reclaim full ownership after the holding period. All these strategies involve exiting their positions by selling the firm through an IPO or sale to an external party which would leave the current owners without the possibility to reclaim full ownership of their firms. In addition, the strategy of buyout funds and the strategy of distressed funds commonly involve the acquisition of controlling stakes and would leave the current owners without the possibility to retain control during the holding period.

All in all, the strategies of buyout funds, VC-funds, growth funds, distressed funds and mezzanine funds investing in debt would not be suitable to take advantage of the identified investment opportunities as they would be inappropriate with respect to the financial needs of the targeted companies or would not enable the actors to access the targeted companies that were reluctant to give up control and ownership. Unlike these strategies, the strategy of mezzanine funds involving the investment in preferred equity tick a majority of the boxes with respect to its ability to take advantage of the identified investment opportunities- it entails the injection of new equity capital, does not involve the acquisition of a controlling stake and *could* allow the current owners to reclaim full ownership post their holding period. As such, the strategy of mezzanine funds involving the investment in preferred equity is the only one of the traditional strategies within the PE market that would *both* enable the access to the targeted companies and that would be appropriate given their financial needs.

Table 6:

Main shortcomings of the traditional investment strategies with respect to their ability to take advantage of the identified investment opportunities and difference to strategy designed by Cinder

Traditional PE investment strategy	Main shortcomings and differences compared to the investment strategy designed by Cinder
Strategy of buyout funds	(1) Primarily invest in existing shares instead of injecting new equity capital (2) Commonly highly lever portfolio companies and require them to service additional cash interest payments during holding period (3) Does normally not allow the current owners to retain control during the holding period (4) Does not allow current owners to reclaim full ownership post the holding period (5) Neither provides a downside protection nor a return floor
Strategy of VC funds	(1) Does not allow current owners to reclaim full ownership post the holding period
Strategy of growth funds	(1) Does not allow current owners to reclaim full ownership post the holding period
Turnaround strategy of distressed funds	(1) Does not allow the current owners to retain control during the holding period (2) Does not allow current owners to reclaim full ownership post the holding period (3) Neither provides a downside protection nor a return floor
Loan-to-own strategy of distressed funds	(1) Further lever portfolio companies instead of injecting new equity capital (2) Does not allow the current owners to retain control during the holding period (3) Does not allow current owners to reclaim full ownership post the holding period (4) Neither provides a downside protection nor a return floor after the debt has been exchanged for equity in the restructured firm (5) Upside participation not guaranteed
Distressed-for-control strategy of distressed funds	(1) Does not involve the injection of new equity capital (2) Does not allow the current owners to retain control during the holding period (3) Does not allow owners to reclaim full ownership post the holding period (4) Neither provides a downside protection nor a return floor after the debt has been exchanged for equity in the restructured firm (5) Upside participation not guaranteed
Mezzanine funds: debt strategies	(1) Further lever companies instead of injecting new equity capital (2) Require portfolio companies to repay capital at a pre-specified date (3) Inability to combine a full upside participation with the possibility for the current owners to reclaim full ownership
Mezzanine funds: preferred equity strategies	(1) Inability to combine a full upside participation with the possibility for the current owners to reclaim full ownership

Source: Information obtained from analysis conducted by the thesis authors

Nonetheless, the strategy of mezzanine funds involving the investment in preferred equity does have an apparent shortcoming with respect to the ability to exploit the identified investment opportunities. This shortcoming entails the inability of the strategy to combine a full upside participation with the possibility for the current owners to reclaim full ownership. On the one hand, the use of a natural liquidity moment (i.e. an IPO or a sale to an external party) or the use of an artificial liquidity moment in the form of a drag-along right would allow mezzanine funds to achieve full upside participation. However, it would not allow the current owners to reclaim full ownership as the firm would be sold through an IPO or the sale to an external party. On the other hand, the use of an artificial liquidity moment in the form of put options would allow the current owners to reclaim full ownership of their firm. However, it would not allow mezzanine funds to achieve a full upside participation since the strike price of the put options would cap their upside participation. Accordingly, the strategy of mezzanine funds involving the investment in preferred equity would not be suitable to take advantage of the identified investment opportunities either.

All things considered, it can be concluded that none of the traditional investment strategies within the PE market would have been well-suited to take advantage of the identified investment opportunities and that the identified investment opportunities that the pandemic gave rise to required an investment strategy that differed from the traditional ones within the PE market.

7. Conclusion

7.1 Concluding remarks

The case study provides insights into the investment opportunities that five prominent financial institutions identified among companies negatively affected by the pandemic within the Swedish PE market. The JV partners behind Cinder recognized that the solvency and liquidity issues caused by the pandemic led the targeted companies to seek equity injections from an external investor, enabling Cinder to access the segment of well-managed family-owned or owner-led companies with a positive long-term outlook that would not have been interested in taking in external owners under different circumstances. A temporary downturn in the operating performance of the targeted companies, an uncertainty regarding their future performance and a limited competition within the segment opened up for the opportunity to invest at lower valuations than what would have been possible under normal circumstances. Nonetheless, the companies within the targeted segment were believed to have the potential to recover to become worth at least as much as they were prior to the pandemic if they were provided with the capital to overbridge their temporary downturn. As the economic effects of the pandemic abated and their demand returned to a normal state, an improved operating performance as well as a reduced uncertainty regarding the future performance of the targeted companies was expected to give rise to higher exit valuations than the entry valuations.

The paper further highlights three categories of factors that had to be considered in designing an investment strategy to take advantage of the identified investment opportunities. First, the investment strategy had to be adapted to the financial needs that the targeted companies had as a result of the negative impact of the pandemic. Secondly, the investment strategy had to be designed to enable the access to the targeted companies that were reluctant to give up control and ownership. Thirdly, it had to be considered how an investment strategy could be designed to capture the full return potential of the identified investment opportunities and to ensure healthy risk-adjusted returns. While the comparison of the designed investment strategy to that of the traditional strategies within the PE market highlighted that the designed strategy shared similarities with the traditional strategies, it also uncovered some important differences.

The comparison of the strategies uncovered that none of the traditional strategies within the PE market were suited to take advantage of the described investment opportunities that the pandemic had given rise to. In other words, the identified investment opportunities required an investment strategy that differed from the traditional ones within the PE market. Thus, the paper highlights the fact that although the traditional investment strategies have been used to make the bulk of investments within the PE market, times of economic disruption such as the one caused by the pandemic, can give rise to investment opportunities which call for an investment strategy that differs from the traditional strategies within the PE market.

7.2 Further research

If it would have been possible, we would have complemented our study with a quantitative analysis studying PE investors making use of the traditional investment strategies and analyze how the returns of their funds invested *during* the pandemic compare to the returns of their funds invested *prior* to the pandemic. Our case study uncovered that the pandemic gave rise to investment opportunities that the traditional strategies were not well-suited to exploit. However, such a complementary quantitative study could uncover whether the traditional investment strategies have been well-suited to take advantage of attractive investment opportunities within the PE market at large during the pandemic. Unfortunately, it was not possible to conduct such a study at the point that this paper was written due to the fact that funds invested during the pandemic had not yet been liquidated.

A perhaps more unrelated suggested topic for further research concerns the investment strategies of growth funds. During the process of writing this paper, it was found that there is very limited research regarding the investment strategies of growth funds specifically. As prior research has suggested that there is an increasing number of PE funds that are raised specifically for growth equity investments, it would have been interesting to uncover what kind of investment strategies that they make use of and how these strategies compare to other strategies within the PE market.

Last but not least, there is limited research regarding the investment strategies of other actors within the private equity market- in particular regarding the strategies of investment companies and family offices. A qualitative or quantitative study of their strategies could thus contribute to a more comprehensive understanding of the investment strategies used within the private equity market.

8. References

8.1 Papers published in periodicals, books and unpublished material

Acharya, Viral V., Conor Kehoe, and Michael Reyner, 2009, Private Equity vs. PLC Boards in the U.K.: A Comparison of Practices and Effectiveness, Journal of Applied Corporate Finance, 21(1), 45–56.

Allen, Peter M., 2018, Private Equity Firms and Hedge Funds' Distressed Investing Strategies in Chapter 11 and Out-of-Court Corporate Restructuring and Distressed M&A, The Investment Lawyer, 25(6), 8-24.

Amornsiripanitch, Natee, Paul A. Gompers, and Yuhai Xuan, 2019, More than Money: Venture Capitalists on Boards, The Journal of Law, Economics, and Organization, 35(3), 513-543.

Bagaria, Rajay, 2016, High Yield Debt: An Insider's Guide to the Marketplace, Vol. I (John Wiley & Sons Inc., New York, U.S.).

Baker, H., Kent, Greg Filbeck, and Halil Kiymaz, 2015, Private Equity: Opportunities and Risks, Vol. I (Oxford University Press, Oxford, U.K.).

Bergemann, Dirk, and Hege Ulrich, 1988, Venture Capital Financing, Moral Hazard, and Learning, Journal of banking & finance 22(6), 703–735.

Berk, Jonathan, and Peter DeMarzo, 2017, Corporate Finance, Vol. IV, (Pearson Education, Essex, U.K.).

Botticelli, Peter, 1998, Spyder Active Sports, Inc. and CHB Capital Partners, Harvard Business School.

Brinkmann, Svend, and Steinar Kvale, 2015, InterViews: Learning the Craft of Qualitative Research Interviewing, 3. ed. (Sage Publications, Los Angeles, US).

Carr, Diana, Matthew Harvey, Mark Hoffmeister, Julie Langdon and Steve Szejner, 2020, The Prudential Private Capital Guide to Mezzanine Financing, Prudential Private Capital Insights.

Caselli, Stefano, 2018, Private Equity and Venture Capital in Europe: Markets, Techniques, and Deals (Academic Press, London, U.K.).

Casperson, Bill, and Raj Makam, 2016, Strategy primer: investing in mezzanine debt, Oaktree Insights.

Chemla, Gilles, Michel A. Habib, and Alexander Ljungkvist, 2007, An analysis of shareholder agreements, Journal of European Economic Association 5(1), 93-12.

Chemmanur, Thomas J., Elena Loutskina, and Xuan Tian, 2014, Corporate Venture Capital, Value Creation, and Innovation, The Review of Financial Studies,. 27(8), 2434-2473.

Contazino, Cameron and Bagdol, Alese, 2020, Five Emerging Trends in Growth Equity Deals, Goodwin.

Cornelli, Francesca, and Oğuzhan Karakaş, 2012, Corporate Governance of LBOs: The Role of Boards, Social Science Research Network.

Cuny, Charles, J., and Eli Talmor, 2007, A theory of private equity turnarounds, Journal of Corporate Finance, 13(4), 629-646.

Czajkowska, Agnieszka, 2015, Mezzanine as an Alternative Form of Corporate Financing, Oeconomia Copernicana, 6(1), 99-111.

Davis, Stephen-George and Zane Carmean, 2020, Growth Equity Overview: Analyzing key components and increased LP investment in the strategy, Pitchbook.

de Ruijter Korver, Martjin and Steven Ongena, 2008, European mezzanine., Applied Financial Economics, Vol 18(20), 1613-1622.

Demaria, Cyril, 2013, Introduction to Private Equity Venture, Growth, LBO & Turn-Around Capital, Vol. II. (John Wiley & Sons publications, West Sussex, U.K.).

DePonte, Kelly, 2009, An Overview of the Private Equity Distressed Debt and Restructuring Markets, Probitas Partners, 17-22.

Döskeland, Trond M, and Per Strömberg, 2018, Evaluating investments in unlisted equity for the Norwegian Government Pension Fund Global (GPFG), Working Paper, Norwegian School of Economics, and Stockholm School of Economics.

Eisenhardt, Kathleen, 1989, Building Theories from Case Study Research, The Academy of Management review, 14(4), 532–550.

Gertner, Robert, and Steven N. Kaplan, 1996, The value-maximizing board, working paper, University of Chicago.

Gibbert, Michael, Winfried Ruigrok, and Barbara Wicki, 2008, What passes as a rigorous case study? Strategic Management Journal, 29(13), 1465-1474.

Gilson, Stuart, C., 2012, Coming Through in a Crisis: How Chapter 11 and the Debt Restructuring Industry Are Helping to Revive the U.S. Economy, Journal of Applied Corporate Finance, 24(4), 23-35.

Gompers, Paul, A., and Timothy Dore, 2014, Private Equity Exits, Harvard Business School, 9-213-112, 1-8.

Gompers, Paul, Steven N. Kaplan, and Vladimir Mukharlyamov, 2016, What do private equity firms say they do?, Journal of Financial Economics, 121, 449–476

Gompers, Paul, Will Gornall, Steven N. Kaplan, and Ilya Strebulaev, 2017, How do venture capitalists make decisions?, Journal of Financial Economics, 34(1), 169-190.

Gustafsson, Johanna, 2017, Single case studies vs. multiple case studies: A comparative study, Academy of Business, Engineering and Science Halmstad University.

Heller, J., Dean, 2012, What's in a Name: Mezzanine Debt Versus Preferred Equity, Stanford Journal of Law, Business & Finance, 18(1), 40-71.

Hellmann, Thomas, Manju Puri, 2002, Venture Capital and the Professionalization of Start-Up Firms: Empirical Evidence. The journal of finance, 57(1), 169-197.

Jenkinson, Tim, and Miguel Sousa, 2015, What Determines the Exit Decision for Leveraged Buyouts?, Journal of banking & finance 59(3), 399–408

Jensen, Michael C., 1989, Eclipse of the public corporation, Harvard Business School.

Jensen, Michael, C., 2010, Active Investors, LBOs, and the Privatization of Bankruptcy, Journal of Applied Corporate Finance, 22(1), 77–85.

Kaplan, Steven, N., and Antoinette Schoar, 2005, Private Equity Performance: Returns, Persistence, and Capital Flows, The journal of finance, 60(4), 1791-1823.

Kaplan, Steven, N., and Per Strömberg, 2003, Financial Contracting Theory Meets the Real World: An Empirical Analysis of Venture Capital Contracts, Review of Economic Studies, 70(2), 281-315.

Kaplan, Steven N., and Per Strömberg, 2001, Venture Capitalists as Principals: Contracting, Screening, and Monitoring, The American economic review 91(2), 426–430.

Kaplan, Steven, N., and Per Strömberg, 2009, Leveraged Buyouts and Private Equity, Journal of Economic Perspectives, 23(1), 121–146.

Liou, Dah-Kwei, and Malcolm Smith, 2007, Financial Distress and Corporate Turnaround: A Review of the Literature and Agenda for Research, Accounting, Accountability & Performance, 13(1), 74-114.

Lerner, Josh, 1995, Venture Capitalists and the Oversight of Private Firms, *The Journal of finance* 50(1), 301–318.

Megally, Esmeralda, Hans V. Swaay, and Benoît Leleux, 2015, Private Equity 4.0: Reinventing Value Creation. Vol. I (Wiley, Sussex, U.K).

Merriam, Sharan, B., 1994, Fallstudien som forskningsmetod (Studentlitteratur, Lund, Sverige).

Metrick, Andrew, Ayako Yasuda, 2010, Venture capital and other private equity: A survey, Working paper, National Bureau of Economic Research.

Metrick, Andrew, and Ayako Yasuda, 2011, Venture Capital and the finance of innovation, Vol. II (John Wiley & Sons Inc, New Jersey, U.S.).

Moyer, Stephen., G., David Martin, and John Martin, 2012, A Primer on Distressed Investing: Buying Companies by Acquiring Their Debt, Journal of Applied Corporate Finance, 24(3), 59-76.

Nijs, Luc, 2014, Mezzanine: Financing Tools, Applications and Total Performance, Vol. I (John Wiley & Sons publications, West Sussex, U.K.).

Puche, Benjamin, and Christoph Lotz, 2015, Private Equity Minority Investments, The Journal of Private Equity, 18(4), 46-55.

Ramsinghani, Mahendra, 2014, The Business of Venture Capital: Insights from Leading Practitioners on the Art of Raising a Fund, Deal Structuring, Value Creation, and Exit Strategies, Vol II (John Wiley & Sons Inc, New Jersey, U.S.).

Ritter, Jay R., 2015, Growth Capital-Backed IPOs, Financial Review, 50(4), 481-515.

Robinson, Arthur D., Igor Fert, and Daniel N. Webb, 2013, Mezzanine Finance: Overview, Simpson Thacher & Bartlett LLP.

Sahlman, William A, 1990, The Structure and Governance of Venture-Capital Organizations, Journal of financial economics 27(2), 473–521.

Sazonov, Sergey Petrovich, Irina Alexandrovna Ezangina, Elena Anatolievna Makarova, Natalia Valerievna Gorshkova, and Konstantin Dmitrievich Vaysbeyn, 2016, Alternative sources of business development: Mezzanine financing, Scientific Papers of the University of Pardubice. Series D.Faculty of Economics and Administration, 37, 143-155.

Stewart, Metthew, 2012, Growth Equity: The Intersection of Venture Capital and Control Buyouts, Fenwick & West LLP.

Strandberg, Hans and Dan Lucas, 2020, Så lite utnyttjas statens coronastöd, Dagens Nyheter

Svenskt Näringsliv, 2020a, Företagen och Corona-krisen: Företagarpanelen 22 april 2020.

Svenskt Näringsliv, 2020b, Nationella resultat-utskick 2.

Svenskt Näringsliv, 2021, Företagarpanelen Q1-2020 Extrafrågor Covid 2019: Riket.

Sörensen, Morten, 2007, How Smart Is Smart Money? A Two-Sided Matching Model of Venture Capital, The journal of Finance, 62(5), 2725-2762.

Torpey, William J., and Jerry A. Viscione, 1987, Mezzanine money for smaller businesses, Harvard business review, 65(3), 116.

Vasilescu, Laura Giurca, 2010, Financing gap for SMEs and the mezzanine capital, Unpublished manuscript, Economic Research-Ekonomska Istraživanja.

Wang, Wei, and Kai Li, 2016, Debtor-in-possession financing, loan-to-loan, and loan-to-own, Journal of Corporate Finance, 39(1), 121-138.

Yin, Robert, K., 2014, Case Study Research-Design and Methods (Sage Publications, London).

8.2 Websites

Arbetsförmedlingen, 2020, Tidigare statistik. https://arbetsformedlingen.se/statistik/sok-statistik/tidigare-statistik (Accessed 2021-04-01)

Boston Consulting Group, 2015, Private Equity Minority Investments: Can Less Be More?. https://www.bcg.com/publications/2015/private-equity-minority-investments-can-less-be-more (Accessed 2021-04-01)

Dechert LLP and Mergermarket, 2020, 2020 Global Private Equity Outlook. https://www.dechert.com/knowledge/event-and-webinar/2020/12/2021-global-private-equity-outlook.html (Accessed 2021-04-01)

Folkhälsomyndigheten, 2020, Folkhälsomyndighetens arbete med covid-19. https://www.folkhalsomyndigheten.se/smittskydd-beredskap/utbrott/aktuella-utbrott/covid-19/folkhalsomyndighetens-arbete-med-covid-19/ (Accessed 2021-04-01)

Government offices of Sweden, 2020, För företagare med anledning av covid-19. https://www.regeringen.se/regeringens-politik/regeringens-arbete-med-coronapandemin/foretag/#omstallninganchor (Accessed 2021-04-01)

Konjunkturinstitutet, 2020, Metodbok för Konjunkturbarometern. https://www.konj.se/download/18.b13117415e341d103836f7a/1606832655905/Metodbok.pdf (Accessed 2021-04-01)

Konjunkturinstitutet, 2021, Allt fler industriföretag uppger att minskad produktion beror på brist på insatsvaror. https://www.konj.se/statistik-och-data/covid-19-relaterat/extramatningar/2021-02-25-allt-fler-industriforetag-uppger-att-minskad-produktion-beror-pa-brist-pa-insatsvaror.html (Accessed 2021-04-01)

Statistics Sweden, 2021a, National Accounts, quarterly and annual estimates https://www.scb.se/en/finding-statistics/statistics-by-subject-area/national-accounts/national-accounts/national-accounts-quarterly-and-annual-estimates/

Statistics Sweden, 2021b, GDP indicator increased slightly in the fourth quarter. https://www.scb.se/en/finding-statistics/statistics-by-subject-area/national-accounts/national-accounts/national-accounts-quarterly-and-annual-estimates/pong/statistical-news/national-accounts-fourth-quarter-2020/ (Accessed 2021-04-01)

Statistics Sweden, 2021c, Säsongrensade serier: kvartal.

https://www.scb.se/hitta-statistik/statistik-efter-amne/arbetsmarknad/arbetskraftsundersokningar/arbetskraftsundersokningarna-aku/pong/tabell-och-diagram/sasongrensade-data/sasongrensade-serier-kvartal/ (Accessed 2021-04-01)

Statistics Sweden, 2021d, Household consumption expenditure (ESA2010) by purpose COICOP, seasonally adjusted current prices. Quarter 1981K1 - 2020K. https://www.statistikdatabasen.scb.se/pxweb/en/ssd/START__NR__NR0103__NR0103B/NR0103ENS2010T15Kv/ (Accessed 2021-04-01)

Vinge, 2020, PE Minority Investments Offer Alternative Capital During Crisis. https://www.vinge.se/nyheter/covid-19-and-its-impact-on-international-trade/

World Health Organisation, 2020, WHO announces COVID-19 outbreak a pandemic. https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/news/news/2020/3/who-announces-covid-19-outbreak-a-pandemic

9. Appendix

Appendix 1: Main topics covered during interviews*

Interview number*	Interviewee(s)	Main topics covered
1	Jan Amethier & Nicholas Macneil	How Cinder was founded, the identified investment opportunities, the design of the investment strategy, how the investment vehicle was set up
2	Tomas Flodén	How Cinder was founded, the identified investment opportunities, the design of the investment strategy, how the investment vehicle was set up
3	Nicholas Macneil	The MAFI investment case, business model of MAFI
4	Kent Hansson	Business model of MAFI, how MAFI was affected by the pandemic, MAFI's capital needs during the pandemic, MAFI's view on Cinder as an investor and their investment strategy
5	Nicholas Macneil	Complementary questions regarding the MAFI investment case as well as the investment strategy of Cinder
6	Daniel Sachs & Anders Thelin	Capital needs and preferences of Cinder's target segment, how the pandemic had affected Cinder's targets segment, view on Cinder's investment strategy and potential competitors
7	Anonymous partner	Capital needs and preferences of Cinder's target segment, how the pandemic had affected Cinder's targets segment, view on Cinder's investment strategy and potential competitors
8	Albin Wihlborg	Capital needs and preferences of Cinder's target segment, how the pandemic had affected Cinder's targets segment, view on Cinder's investment strategy and potential competitors
9	Jenny Askfelt Ruud	How Cinder was founded, the identified investment opportunities, the design of the investment strategy, how the investment vehicle was set up
10	Kent Hansson	Complementary questions regarding the business model of MAFI, how MAFI was affected by the pandemic, MAFI's capital needs during the pandemic, MAFI's view on Cinder as an investor and their investment strategy
11	Jan Amethier & Nicholas Macneil	Complementary questions regarding Cinder's investment strategy as well as investments made during the first quarter of 2021

*Interviews listed in chronological order

Appendix 2: Translated quotes

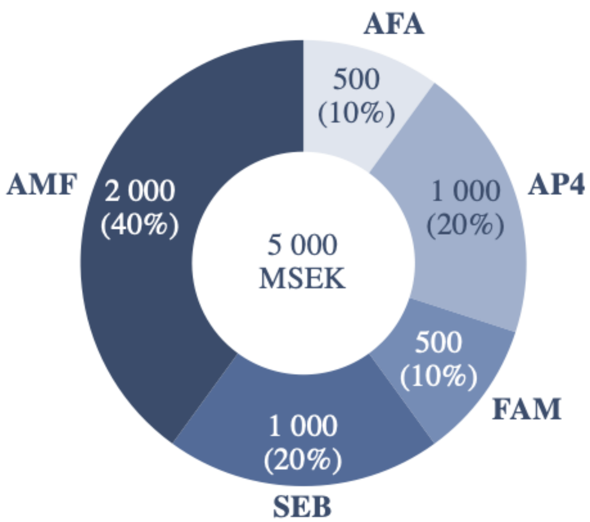
Interviewee	Original quote in Swedish	Translated version of the quote
Jan Amethier	*"Det skulle bli för mycket lån i något läge för de bolagen när intäkter och vinster faller och kassaflöden faller bort. Banker kunde absolut vara supportive och ställa upp. Men om pandemin pågår under för lång tid så behöver man också ta in eget kapital för att stärka balansräkningen men också kanske likviditeten. Vi funderade kring vad dessa pengar skulle kunna komma ifrån- det var diskussionen på SEB.*"	*"At some point in time, there would be too much debt for these companies when their revenues and profits are falling and there is a loss of cash flows. Banks could absolutely be supportive and help. But if the pandemic continues for too long, equity would have to be injected to strengthen the balance sheet and possibly also the liquidity. We were asking ourselves where this money would come from- that was the discussion at SEB"*
	"*/.../* Vi får som minoritetsägare en mix av downside protection genom pref-utdelningssatsen och uppsida i options elementet, det är som det bästa av två världar"	*"/.../ As minority investors, we get a mix of downside protection through the preferred dividend rate and upside in the options element, it's like the best of both worlds"*
	"*Anledningen till att vi gör minoritetsinbesteringar har inget med diversifiering att göra utan det är grundtanken till att vi kom upp [startade Cinder]. Vi har absolut portföljteroretiska diskussioner om det men det är inget vi har tittat närmare på utan det var axiomen när vi satte upp.*"	"*The reason that we make minority investments does not have anything to do with diversification, it is rather the whole idea with starting Cinder. Indeed, we have portfolio theoretical discussions about it, but it's not something that we have looked into, it [making minority investments] was rather the axiom when we started [Cinder].*"
	"*Vi sitter ned med ledningen och styrelsen och pratar igenom hur deras plan ser ut och om vi är överens om den planen kan vi investera. Är vi inte överens kan vi inte investera. Sedan är det upp till dem att jobba på [med den] helt enkelt- vi är i det avseendet i baksätet".*	"*We sit down with the management and the board to discuss their [business] plan and if we agree with it [the plan], we can invest. If we do not, we can not invest. Then it is up to them to pursue it [the business plan]- in that aspect, we are in the back seat.*
	"Det som skiljer oss mot en annan aktör är att vi hela tiden har ett öga på, om vi stoppar in 200 så får vi 20%, är det möjligt för den här ägaren att betala tillbaka så mycket? Den värdeandel vi kan ha om fem år kan de finansiera den, köpa ut oss?"	"*What sets us apart from another actor is that we always keep an eye on, if we invest 200 and get 20% [of the company], is it possible for this owner to pay us back? The value that our stake represents in five years, can they finance it- buy us out?*"
	"*Sen tror ju jag att det kommer vara ganska mycket mer kontakt än bara styrelsemötena till följd av att de [portföljbolagen] inte har några andra [externa] ägare. Det [governance-processen] är ju en mycket mer informell process i den typen utav mellanstora, privatägda familjebolag än börsbolag"*	*"I expect that we will have a lot of contact in addition to the board meetings given that they [the investees] seldom have any other [external] owners. It [the governance process] is a much more informal process in this type of medium-sized, privately held family businesses than in listed companies*"

	"*Medelstora bolag privatägda bolag har sällan tillgång till finansiell kompetens som teamet på Cinder har. I och med finansiella utmaningar som det blir under pandemin tror jag att detta kan vara väldigt värdefullt för dem*"	"*Medium-sized companies seldom have access to the financial competence that the team at Cinder has. Given the financial challenges that follow the pandemic, I think this can be very valuable for them"*
Tomas Flodén	*"Vi hade ju en bild under våren [2020] att kapitalbehovet skulle öka under hösten [2020] och början av det här året [2021]. Vi såg ju framför oss att skuldsättningen skulle gå upp i förhållande till det egna kapital och att man skulle behöva fylla på med det här [eget kapital] under året [2020]."*	*"In the spring [of 2020], we pictured that the [equity] capital need would increase during the fall [of 2020] and during the beginning of this year [2021]. We predicted that the debt would increase relative to equity and that additional equity would be needed during the year [of 2020]"*
	"*/.../vi vet ju att en pandemi är övergående och att verksamheterna nån gång kommer igång. Det är klart att det alltid finns en viss risk men det finns det i alla bedömningar /.../ I alla fall är vi hyfsat ensamma om att erbjuda den här typen av finansiering*"	*"/.../ we know that the pandemic will pass and that the businesses will get back at some point in time. Of course, there is always a certain risk but there is a risk in all predictions /.../ In all cases, we are pretty much alone in offering this type of financing"*
	"De är fler som är beredda att gå in [investera eller låna ut] när det inte ser så illa ut jämfört med om det varit en betydligt mörkare ekonomisk situation som vi länge fruktade."	*"There are more actors that are willing to step in [invest or lend] given that the situation has not turned out as bad compared to the considerably darker economic situation that we for long feared*"
Nicholas Macneil	*"Är det bolag som inte har bra managment- då är inte minoritetsinvesteringar rätt form. Det är min bild. Om man gör minoritetsinvesteringar måste man tro på den management som finns."*	"*If a company does not have a good management team, I would not consider a minority investment appropriate. That is my view. If you make minority investments, you have to believe in the existing management team*"
	"*Det är ju en tillfällig försening av det [utrullningen av 5G-nätet] men det är ju inte så att vi kommer att använda 5G mindre om fem år. Utan snarare tvärt om.*"	"*It [the roll-out of the 5G network] is subject to a temporary delay but it is hardly the case that we will be using 5G less in five years. If anything, we will use it more*"
Kent Hansson	"*Med tanke på att pandemin kom och tillväxten skjuts framåt så säger det sig självt att då får du inte upp rätt värdering på bolaget."*	"*Given that the pandemic hit and that [MAFI's] growth was postponed, it was apparent that we would not get the right valuation for the company*"
	De [Cinder] har ett bra varumärke, de har bra ägare och de hade en investeringsfilosofi som passade oss. Det vill säga, de ska vara med ett tag men de ska inte ta [en] majoritet[sposition]."	"*They [Cinder] have a good brand, good owners and an investment philosophy that suited us- that is, they will join us for some time but they will not take a majority position*"

Jenny Askfelt Ruud	*"/.../ det finns en hel del bolag som har härdat ut som verkligen har kämpat [genom pandemin], som vi nu ser kanske inser att det här blev mer långdraget än vad man trodde [initialt] /.../ Det har varit ett antal bolag som har ätit upp sina reserver vi det här laget. Så vi ser fortfarande att det kan finnas [investerings-] möjligheter [framöver]."*	*"/... / there are many companies that have endured and struggled [through the pandemic], that now realise that it [the pandemic] is going to be more protracted than what they initially expected /.../ There are a number of companies that have consumed their reserves at this point in time. So we still believe that there will be [investment] opportunities going forward"*

Source: Swedish quotes obtained from interviews conducted by the thesis authors. Translations from Swedish to English were made by the thesis authors. All translations approved by the relevant interviewee.

Appendix 3: Capital committed by each joint venture partner in Cinder Invest



Source: Data obtained from company material provided by Cinder Invest.

Appendix 4: Description of joint venture partners behind Cinder Invest

Name of joint venture partner	Role in Cinder Invest	Description of company
SEB	Initiator and investor	One of Sweden's largest banks
AMF	Initiator and investor	One of Sweden's largest pension companies
AP4	Investor	A manager of a part of the Swedish national pension systems buffer capital
AFA	Investor	A Swedish life insurance company
FAM	Investor	A holding company owned by the three largest Wallenberg foundations

Source: Information obtained from the web pages of the joint venture partners.

Appendix 5: Cinder Invest's Investment Committee* (as of April 2021)

Role	Represented company
Member	AP4
Member	AFA
Member	FAM
Member	AMF
Member	SEB

*These members would collectively have the final say in all investments. Each of the joint venture investors had appointed one member each to the independent investment committee but to ensure that these representatives would make decisions based on their own judgement without influence of the joint venture partners, none of the representatives received any compensation from the joint venture partners that appointed them. Names and professional experience not disclosed at the request of Cinder Invest.

Source: Information obtained from company material provided by Cinder Invest.

Appendix 6: Cinder Invest's Board of Directors* (as of April 2021)

Role in Cinder Invest's board	Represented company
Independent chairman	-
Board Member- Jenny Askfelt Ruud	AP4
Board member	AFA
Board member	FAM
Board member- Tomas Flodén	AMF
Board member	SEB

* Each joint venture partner had a representative board member. Names of board members other than those who participated in the case study not disclosed at the request of Cinder Invest.

Source: Information obtained from company material provided by Cinder Invest.

Appendix 7: The Investment team at Cinder Invest* (as of April 2021)

Name	Professional role at Cinder	Professional experience
Jan Amethier	Chief Executive Officer (CEO)	2018- 2020: Head of SEB Singular 2016-2018: Head of Corporate Finance at SEB 2010-2016: Executive Vice President, Merchant Banking International at Handelsbanken
Not disclosed	General Counsel	SEBs legal division
Not disclosed	Investment Director	Finance at SEB
Nicholas Macneil	Investment Director	2017-2020: Director at the Corporate Finance division of SEB 2014-2017: Vice President at the Corporate Finance Division of SEB 2011-2013: Associate at the Corporate Finance Division of SEB
Not disclosed	Investment Director	Mid cap acquisitions and venture capital at SEB
Not disclosed	Investment Manager	Finance at SEB
Not disclosed	Credit Specialist	Structured finance at SEB
Not disclosed	Investment Associate	Management consulting at BCG
Not disclosed	Investment Associate	Finance at SEB
Not disclosed	Chief of Staff	Strategy and operations at SEB

Source: Data obtained from material provided by Cinder Invest.

*Names of employees and detailed professional experience of employees other than the interviewees not disclosed at the request of Cinder Invest

Appendix 8: Indicative term sheet of Cinder Invest (Partial)*

Indicative term sheet structure	
Company:	[●]
Owners:	[●]
Investor:	Cinder Invest AB
Investment Amount:	SEK [●] million
Investor Share:	[●]%
Preferred Shares:	The Investor acquires the Preferred shares through a directed new issue against the Investment Amount.
Preferred Dividend:	Priority to dividend in the Company corresponding to an interest rate of [●]% per annum on the Investment Amount and on any accumulated unpaid dividend. After [●] years from the Investment, the interest rate increases to [●]% per annum.
Redemption:	The Company has the right to redeem the Preferred Shares after [●] years from the date of the Investment against the Redemption Amount.
Redemption Amount:	The Redemption Amount shall be calculated as the higher of (i) the Investment Amount (including accumulated Preferred Dividend) (the "Minimum Amount") and (ii) the value of the Investor Share of the Company at the time of redemption in accordance with a Market Valuation as described below.
Owners' right to sell shares in the Company:	The Owners are not entitled to sell their shares in the Company for a period of [●]years from the Investment without the Investor's consent. Thereafter, the Owners have the right to sell all the shares in the Company with a Tag Along for the Investor and a Drag Along for the Owners
Sale of all shares:	If the Preferred Shares have not been redeemed by the Company within [●] years from the Investment, the Investor has the right to have the shares redeemed.
Market Valuation:	[Market valuation approach to be agreed]
Liquidation:	The Preferred Shares have preferential rights in the event of liquidation
Investment agreement:	The Company, the Company's Owners and the Investor will enter into an investment agreement with customary provisions for minority investments.
Shareholders' agreement:	The Company's Owners and the Investor will enter into a shareholder agreement with customary provisions. This includes, for example: - One member of the Company board being appointed by the Investor - Decisions for which the Investor's consent is required, including: (i) Significant changes in the nature and scope of the business, (ii) Dividends and other value transfers
Applicable law:	Swedish law
Arbitration:	Disputes between the parties shall be resolved at the Arbitration Institute of the Stockholm Chamber of Commerce (SCC)

* The term sheet is only indicative and only partial information has been included at the request of Cinder Invest.

Source: Information obtained from company material provided by Cinder Invest. The term sheet has been translated to English by the thesis authors and translation has been approved by Nicholas Macneil, Investment Director and Cinder Invest

Appendix 9: Typical minority protections required by Cinder Invest

Minority protections
(1) Consent required for changes in the Articles of Association and share capital (2) Consent required for agreements between the company and owners and their affiliates (3) Consent required for liquidation and mergers (4) Consent required for material changes in the nature and scope of the business, including major acquisitions, investments and divestments (5) Consent required for dividends and other value transfers (6) Restrictions regarding the owner's sale of shares in the company for an agreed number of years (7) After the restricted period has expired, Cinder has the right to participate in a sale of all shares in the company (a.k.a. tag-along right) (8) After an extended period has expired, the right to have the preferred shares redeemed by the company or to request a sale of all shares in the company (a.k.a. drag-along right)

Source: Data provided by Cinder Invest. List of minority protections were translated by the thesis authors and translation was approved by Nicholas Macneil, Investment Director at Cinder Invest.

Appendix 10*:* Deals completed by Cinder Invest as of April 1st 2021

Name of company	Industry of company	Revenue of company in 2019	Investor share	Date of announcement
MAFI Group AB	Telecom industry	169 million SEK	< 35%*	December 2020
Stureplansgruppen AB	Restaurant and hospitality industry	1 276 million SEK	20%	March 2021
JY Holding AB	Sports & entertainment industry	49 million SEK**	< 35%*	March 2021

*Exact numbers not disclosed for confidentiality reasons

** Had an expected run rate of 150 million SEK in 2020

Source: Data provided by Cinder Invest.

Appendix 11: Comparison of typical traditional private equity fund structure compared to the structure of Cinder Invest's joint venture aktiebolag (AB)*

Characteristic	Traditional private equity fund	Cinder Invest's Joint Venture AB
Fund term	10 year with potential extension of 2-3 years	No fund term, but an expected life time for the joint venture of 10 years
Investment period	5-6 years	3 years
Holding period for portfolio companies	4 years on average	Flexible but typically 5 years
Monetary incentives for investment team	General partners receive a management fee of ~1.5-2.5% per annum based on committed capital during investment period and then invested capital; and carried interest of ~20% with ~8% hurdle rate	Compensation only loosely tied to the performance of the investments- mainly based on a qualitative performance assessment. No carried interest.
Decision-making body	Investment committee	Investment committee

Source: Information obtained from Döskeland & Strömberg (2018) and material provided by Cinder Invest.

Appendix 12: MAFI's product categories and examples of products (From product catalogue of 2020)

1. Supports and brackets	2. Radio brackets	3. Antenna Brackets
		
4. Wall mount solutions	5. Rooftop solutions	6. Accessories
		

Source: Information obtained from the product catalogue of MAFI.

Appendix 13: In-depth outline of the four different product portfolios of MAFI and competition within them (as of April 2021)

Product portfolio	Information
MAFI Standardised Solutions (MSS)	MSS was the product portfolio that was launched first and entailed standardised and modularised products. These could be used by all potential customers. With the products offered through the MSS portfolio, MAFI became the first player in the European market that offered standardised mounting equipment for telecom sites. Other actors had followed MAFIs lead since then and competitors mostly included local players that had a smaller geographic coverage than MAFI. The reason that most competitors were local was that the products were very heavy. Long-distance transports would consequently entail high costs. MAFI reduced their transportation costs through their global network of outsourced production sites and warehouses as well as by producing lighter products.
MAFI Integrated Solutions (MIS)	The MIS product portfolio consisted of customised solutions that had been tailored to the unique needs of specific customers. Within this segment, MAFI was competing with the OEMs themselves who could develop their own customised solutions. In 2020, the MIS portfolio together with the MSS portfolio represented the bulk of MAFI's revenues and the share of revenue attributable to each of these two portfolios varied with the business cycle- when the telecom industry was booming, the relative revenue share of the MSS product portfolio increased while the relative revenue share of the MIS product portfolio increased during downturns.
MAFI Customer Solutions (MCS)	The MCS product portfolio was made up of products that MAFI developed and or produced, but that they did not own the intellectual property rights to. Through the MCS portfolio, MAFI offered product development, project management and supply chain services. This product portfolio was recently launched and had yet to represent a significant part of MAFIs revenues.
MAFI Digital Services (MDS).	Through the MDS portfolio, MAFI offered digital services. Being the newest product portfolio, the first digital service that would be offered was a proprietary system allowing carriers to determine the exact wind circumstances at the telecom site, the exact geographic position of a telecom unit and how the telecom site should be designed accordingly. Like the MCS portfolio, the MDS portfolio was recently launched and had yet to represent a significant part of MAFIs revenues.

Source: Information obtained from material provided by MAFI as well as interviews with Kent Hansson, Chairman and one of the three owners of MAFI.

Appendix 14: Global units of MAFI (as of April 2021)

Office locations	**Warehouse locations**	**Outsourced productions sites**
Mora, Sweden (HQ)	Mora, Sweden	Mora, Sweden
Stockholm, Sweden	Dallas, US	Mexico, Mexico
Dallas, US	Derby, UK	Delhi, India
Nairobi, Kenya	Essex, UK	Shanghai, China
Shanghai, China	Nairobi, Kenya	

Source: Information obtained from material provided by MAFI.

Appendix 15: MAFI's customer segments within the telecom industry

Customer segment	Information
Carriers	Included operators such as Telia, Vodafone and Orange
OEMs	Included manufacturers of telecom infrastructure equipment like Eriksson, Nokia, Samsung and Huawei
Tower companies and infrastructure owners	Included companies that owned telecom towers and telecom sites. One of the largest actors within the segment was American Tower Corporation.
Designers (architects & engineers)	Included companies that designed telecom sites such as Rambol, Netel, Eltel & Scanmast
Installers & contractors	Included companies that installed telecom infrastructure equipment on telecom sites such as Netel, Eltel, Attunda, Axians & Scanmast
Distributors	Included resellers of products needed in the mounting of telecom infrastructure equipment such as the mounting equipment produced by MAFI. Actors within the segment included Ahlsell, Elektroskandia & GCA

Source: Information obtained from interviews with Kent Hansson, Chairman and one of the three owners provided by MAFI.

Appendix 16: Board of Directors and Management team of MAFI (as of April 2021)

BOARD OF DIRECTORS

Name	Role	Ownership prior to Cinder's investment*	Ownership post Cinder's investment**
Kent Hansson	Chairman since	Full ownership (100%) together w. the remaining board	Majority stake (>50%) together w. the remaining board
Philip Lindsten	Board Member	Full ownership (100%) together w. the remaining board	Majority stake (>50%) together w. the remaining board
Pierre Bengtsson	Board Member	Full ownership (100%) together w. the remaining board	Majority stake (>50%) together w. the remaining board
Representative from Cinder Invest***	Board Member	N/A	No direct ownership, representative from Cinder Invest

MANAGEMENT TEAM

Name	Role	Ownership prior to Cinder's investment*	Ownership post Cinder's investment**
Pierre Bengtsson	CEO	Full ownership (100%) together w. the remaining board	Majority stake (>50%) together w. the remaining board
Lina Nyström	CFO	0%	0%
Robert Lyttbacka	COO	0%	0%
Per Tägtström	CTO	0%	0%
Tony Lane	Vice President Americas	0%	0%
Andreas Persson	Vice President Europe	0%	0%
Andy Zhao	Vice President Asia	0%	0%
Jan Sandén	Vice President Africa/ Middle East	0%	0%

*Exact ownership structure prior to Cinder's investment not disclosed for confidentiality reasons
** Exact ownership structure post Cinder's investment not disclosed for confidentiality reasons
***Representative from Cinder Invest appointed in connection to the investment. Name not disclosed at the request of Cinder Invest

Source: Information obtained from MAFI's website as well as interviews with Kent Hansson, Chairman and one of the three owners of MAFI.

Appendix 17: Income statement of MAFI AB and MAFI Group AB* (Amounts in '000 SEK)

INCOME STATEMENT
(Amounts in thousand SEK)

	2014	2015	2016	2017	2018	2019	2020
Net sales	56 910	52 520	54 753	83 277	134 408	166 050	187 181
Other Income	250	204	82	38	1 564	2 585	1 021
Total revenue	**57 160**	**52 724**	**54 835**	**83 315**	**135 972**	**168 635**	**188 202**
Operating expenses							
Material costs	-28 993	-21 339	-22 688	-45 278	-82 384	-96 924	-116 819
Overhead costs	-12 724	-14 102	-12 515	-15 910	-19 151	-38 701	-36 495
Salaries	-8 095	-8 931	-11 937	-12 846	-17 280	-32 981	-40 058
Depreciations (Detta ska väl vara deprec	-263	-264	-206	-537	-1 274	-1 800	-2 619
Exchange rate differences	-270	-608	17	-613	0	0	-3 072
Operating Profit (EBIT)	**6 816**	**7 480**	**7 506**	**8 131**	**15 883**	**-1 771**	**-10 861**
Profit from financial items							
Profit from shares in group companies	82	0	0	0	-300	0	0
Other interest income and similar items	7	0	0	0	36	0	0
Net interest	-148	-121	-24	-914	-914	-1 132	-1 969
Profit after financial items	**6 757**	**7 359**	**7 482**	**7 217**	**14 705**	**-2 903**	**-12 830**
Year-end appropriations	-1 789	-1 694	-2 135	-2 493	-4 085	0	0
Profit before tax	**4 968**	**5 665**	**5 347**	**4 724**	**10 620**	**-2 903**	**-12 830**
Tax on profit for the year	-1 163	-1 353	-1 266	-1 209	-2 594	-1 360	2 828
Net Income	**3 805**	**4 312**	**4 081**	**3 515**	**8 026**	**-4 263**	**-10 002**

*The MAFI Group changed their group parent company in 2019 from MAFI Aktiebolag (556441-9140) to MAFI Group AB (556679-4417). Prior to this point, no consolidated financial statements had been produced. The consolidated financial statements of MAFI Group AB (556679-4417) have been used for the financial year of 2019 and 2020. The financial activity in the subsidiaries of MAFI AB between 2014 and 2018 was limited. Upon the suggestion from MAFI and Cinder Invest, minor differences between the consolidated financial statements and those of the parent company MAFI Aktiebolag (556441-9140) have been disregarded and the financial statement represents that of MAFI Aktiebolag (556441-9140) between 2014 to 2018 without group corrections.

Source: Income statement provided by MAFI. The income statement has been translated to English by the thesis authors and the translation has been approved by Kent Hansson, Chairman and one of the three owners of MAFI.

Appendix 18: Balance sheet of MAFI AB and MAFI Group AB* (Amounts in '000 SEK)

BALANCE SHEET
(Amounts in thousand SEK)

	2014-12-31	2015-12-31	2016-12-31	2017-12-31	2018-12-31	2019-12-31	2020-12-31
ASSETS							
Fixed assets							
Intangible assets	144	123	102	81	61	40	40
Goodwill	0	0	0	0	0	206	158
Building and land	25	22	19	2 015	1 812	2 246	2 258
Machinery, Inventory and tools	1 023	78	1 322	4 089	5 459	7 699	8 779
Improvements others property	0	0	466	0	0	0	0
Shares in group companies	367	367	368	368	552	0	0
Shares in associated- and jointly controlled companies	0	0	0	0	0	0	0
Total fixed assets	**1 559**	**591**	**2 277**	**6 553**	**7 884**	**10 191**	**11 235**
Current assets							
Stock	4 965	5 037	6 672	6 657	19 239	22 956	27 646
Customer receivables	5 236	14 953	14 266	18 814	38 157	23 809	23 191
Receivables Group companies	1 720	2 699	507	2 223	3 331	0	0
Current tax assets	0	0	0	1 287	522	0	0
Other receivables	680	1 058	319	1 800	2 733	1 556	2 747
Prepaid expenses & accrued income	441	217	393	487	1 248	2 376	1 635
Other short term investments	200	200	200	200	200	200	200
Cash & Bank	7 152	485	9 986	1 917	14	5 175	8 401
Total current assets	**20 395**	**24 649**	**32 343**	**33 385**	**65 444**	**56 072**	**63 820**
TOTAL ASSETS	**21 954**	**25 239**	**34 620**	**39 938**	**73 328**	**66 263**	**75 055**
EQUITY AND LIABILITIES							
Equity							
Share capital	100	100	100	100	100	143	216
Reserve fund	20	20	20	20	20	0	0
New capital	0	0	0	0	0	0	31 000
Retained earnings	3 087	5 933	7 745	5 326	2 341	21 890	10 103
Profit of the year	3 805	4 312	4 081	3 515	8 026	-4 263	-10 002
Total Equity	**7 013**	**10 365**	**11 946**	**8 961**	**10 487**	**17 770**	**31 317**
Untaxed reserves							
Accumulated over-depreciation	0	0	377	1 170	1 725	0	0
Accrual funds	2 639	4 333	6 091	7 791	11 321	0	0
	2 639	**4 333**	**6 468**	**8 961**	**13 046**	**0**	**0**
Provisions							
Tax liabilities	0	0	0	0	0	3 081	0
Liability for guarantee	50	100	100	100	259	259	259
	50	**100**	**100**	**100**	**259**	**3 340**	**259**
Long term liabilities							
Liabilities to credit institutions	667	0	0	2 600	4 460	2 900	1 340
Overdraft facility	0	0	0	0	591	13 990	14 196
Total long-term liabilities	**667**	**0**	**0**	**2 600**	**5 051**	**16 890**	**15 536**
Short term liabilities							
Liabilities to credit institutions	1 333	667	0	800	1 560	12 530	1 604
Accounts payable	4 144	2 842	4 701	6 344	13 458	11 271	**15 212**
Liabilities Group companies	0	0	0	0	0	0	0
Tax liabilities	1 007	2 218	1 366	0	0	159	**486**
Invoice credit	3 069	3 232	7 609	9 377	26 477	0	**0**
Other liabilities	728	446	607	1 328	574	1 513	5 691
Accrued expenses & prepaid revenues	1 305	970	1 823	1 467	2 416	2 790	**4 950**
Total short term liabilities	**11 586**	**10 442**	**16 106**	**19 316**	**44 485**	**28 263**	**27 943**
TOTAL EQUITY AND LIABILITIES	**21 954**	**25 239**	**34 620**	**39 938**	**73 328**	**66 263**	**75 055**

*The MAFI Group changed their group parent company in 2019 from MAFI Aktiebolag (556441-9140) to MAFI Group AB (556679-4417). Prior to this point, no consolidated financial statements had been produced. The consolidated financial statements of MAFI Group AB (556679-4417) have been used for the financial year of 2019 and 2020. The financial activity in the subsidiaries of MAFI AB between 2014 and 2018 was limited. Upon the suggestion from MAFI and Cinder Invest, minor differences between the consolidated financial statements and those of the parent company MAFI Aktiebolag (556441-9140) have been disregarded and the financial statement represents that of MAFI Aktiebolag (556441-9140) between 2014 to 2018 without group corrections.

Source: Balance sheet provided by MAFI. The balance sheet has been translated to English by the thesis authors and the translation has been approved by Kent Hansson, Chairman and one of the three owners of MAFI.

Appendix 19: Cash flow statement MAFI Group AB*

CASH FLOW STATEMENT
(Amounts in thousand SEK)

	2019	2020
Operating activities		
Profit after financial items	-2 903	-12 830
Adjustments for items not included in cash flow	1 800	2 773
Paid tax	-2 694	3 575
working capital	**-3 797**	**-6 482**
Cash flows from changes in working capital		
Changes in inventories and work in progress	-3 047	-4 690
Changes in current assets	15 889	-947
Changes in current liabilities	-1 419	4 974
Cash flows from operating activities	**7 626**	**-7 145**
Investing activities		
Investments in fixed assets	-4 421	-3 817
Cash flows from investing activities	**-4 421**	**-3 817**
Financing activities		
New equity issues	4 800	29 668
Shareholders' contributions	0	1 800
Loan repayments	-3 673	-12 280
Paid dividend	0	-5 000
Cash flows from financing activities	**1 127**	**14 188**
Cash flows for the year	**4 332**	**3 226**
Cash and cash equivalents at the beginning of the year	**843**	**5 175**
Cash and cash equivalents at the end of the year	**5 175**	**8 401**

*Only the cash flow statements for 2019 and 2020 are disclosed due to the fact that no consolidated financial statements were produced in previous years. Producing cash flow statements using the direct method that MAFI Group AB made use of was not possible given the lack of access to internal data.

Source: Cash flow statements obtained from MAFI Group AB. Cash flow statement has been translated to English by the thesis authors and the translation has been approved by Kent Hansson, Chairman and one of the three owners of MAFI.

Appendix 20: Calculation of solvency and liquidity ratios of MAFI*

Ratio	Formula	Items used
Debt-to-assets	Total interest-bearing liabilities divided by total assets	Total interest-bearing liabilities include *Long- and short term liabilities to credit institutions* and *overdraft facility*. See Balance Sheet in Appendix 17
Current ratio	Total current assets divided by total current liabilities	Total current assets include *Stock, Customer receivables, Receivables Group companies, Current tax assets, Other receivables, Prepaid expenses & accrued income, Other short term investments* and *Cash & Bank*. Total current liabilities include *Short term overdraft facility, Short term liabilities to credit institutions, Accounts payable, Liabilities Group companies, Tax liabilities, Invoice credit, Other liabilities* and *Accrued expenses & prepaid revenues*. See balance sheet in Appendix 17 and cash flow statement in appendix 18
Quick ratio	Total current assets minus inventory (stock) divided by total current liabilities	Current assets include *Receivables Group companies, Current tax assets, Other receivables, Prepaid expenses & accrued income, Other short term investments* and *Cash & Bank*. Total current liabilities include *Short term liabilities to credit institutions, Accounts payable, Liabilities Group companies, Tax liabilities, Invoice credit* and *Other liabilities*. See balance sheet in appendix 17 and cash flow statement in appendix 18
Cash ratio	Cash and cash equivalents divided by total current liabilities	Cash and cash equivalents include *Other short term investments* and *Cash & Bank*. Total current liabilities include *Short term overdraft facility, Short term liabilities to credit institutions, Accounts payable, Liabilities Group companies, Tax liabilities, Invoice credit* and *Other liabilities*. See balance sheet in appendix 16 and cash flow statement in appendix 18

*For the year of 2019 and the year of 2020 including equity injections, the financial statements provided by MAFI were used. For the year of 2020 excluding equity injections, the total equity injections of 31.5 million SEK was subtracted from the equity and cash balance. It was furthermore assumed that it would not have been possible to pay off any debt without the equity injections. Accordingly, it was assumed that the EOY 2020 debt level would have been equal to the 2019 EOY debt level. The debt that was repaid during 2020 was thus added back to the cash balance for the year of 2020 excluding equity injections. It should be noted that the repayment of debt (revolving credit facility) was not obligatory. Instead, MAFI chose to reduce the balance of its RCF, owing to cash management purposes. The terms of the RCF remained unaltered.

Appendix 21: Income Statement of Cue Dee AB*

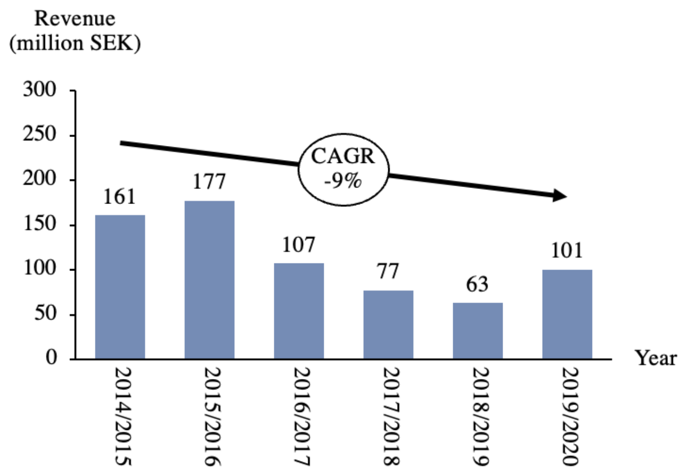
Income Statement
(Amounts in thousand SEK)

	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Net sales	158 193	178 501	107 445	77 069	62 478	92 396
Change of stock items during production, finished goods and ongoing work on behalf of others	2 341	-1 456	-312	34	0	7 645
Other operating sales	460	349	195	363	606	676
Total revenues	**160 994**	**177 394**	**107 328**	**77 466**	**63 084**	**100 718**
Operating expenses						
Raw materials and consumables	-82 813	-80 485	-55 155	-40 788	-29 495	-49 645
Other external expenses	-36 200	-42 651	-15 421	-19 358	-15 558	-24 331
Personnel costs	-20 427	-27 041	-22 084	-18 708	-17 882	-17 591
Depreciation of tangible fixed assets	-434	-757	-599	-553	-549	-506
Other operating expenses		0	0	0	-41	0
Operating Profit (EBIT)	**21 121**	**26 460**	**14 069**	**-1 939**	**-441**	**8 644**
Profit from financial items						
Profit from shares in group companies	0	0	27 386	8 424	0	34 760
Other interest income and similar items	653	113	529	10	9	513
Interest expenses and similar items	-20	-249	-700	-57	-14	0
Profit after financial items	**21 755**	**26 324**	**41 283**	**6 438**	**-446**	**43 917**
Year-end appropriations	-3 548	-245	0	2 480	6 999	3 290
Profit before tax	**18 207**	**26 079**	**41 283**	**8 918**	**6 553**	**47 207**
Tax on profit for the year	-4 213	-5 733	-3 410	-583	-1 681	-4 516
Deferred tax	-98	0	0	0	0	0
Net Income	**13 896**	**20 347**	**37 874**	**8 335**	**4 872**	**42 691**

*Cue Dee uses broken fiscal years

Source: Data obtained from Cue Dee's income statement, retrieved from allabolag. The income statement has been translated from Swedish to English by the thesis authors.

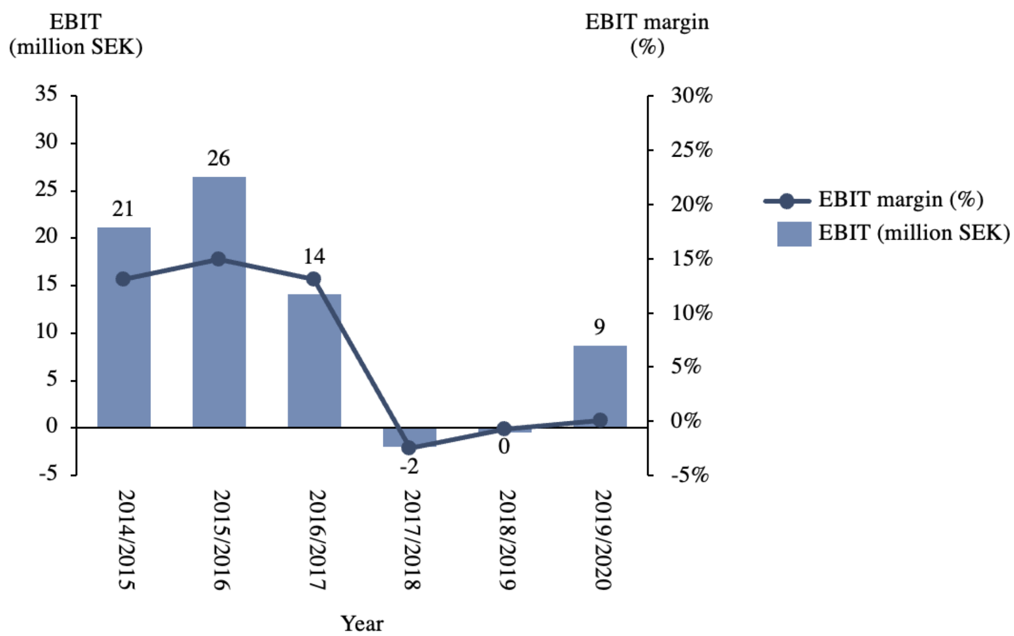
Appendix 22: Revenue of Cue Dee 2014/2015-2019/2020*



*Cue Dee uses broken fiscal years

Source: Data obtained from Cue Dee's income statement, retrieved from allabolag.

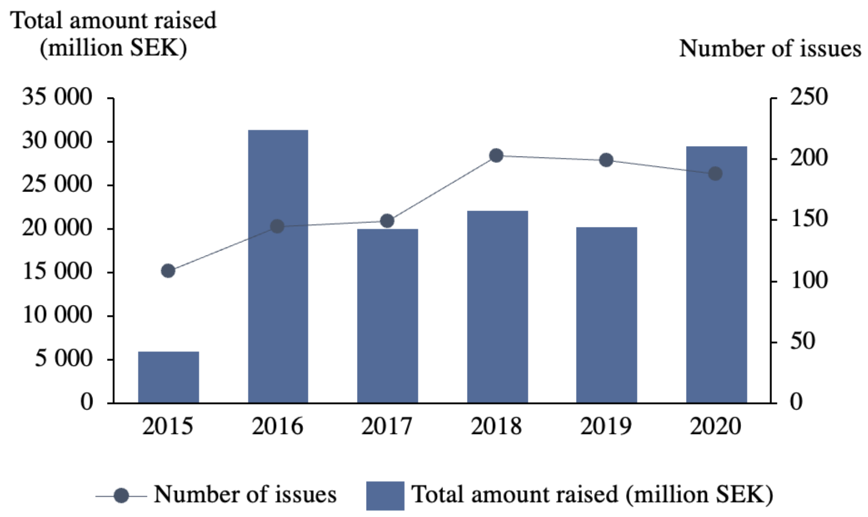
Appendix 23: Operating profit and operating margin of Cue Dee 2014/2015-2019/2020*

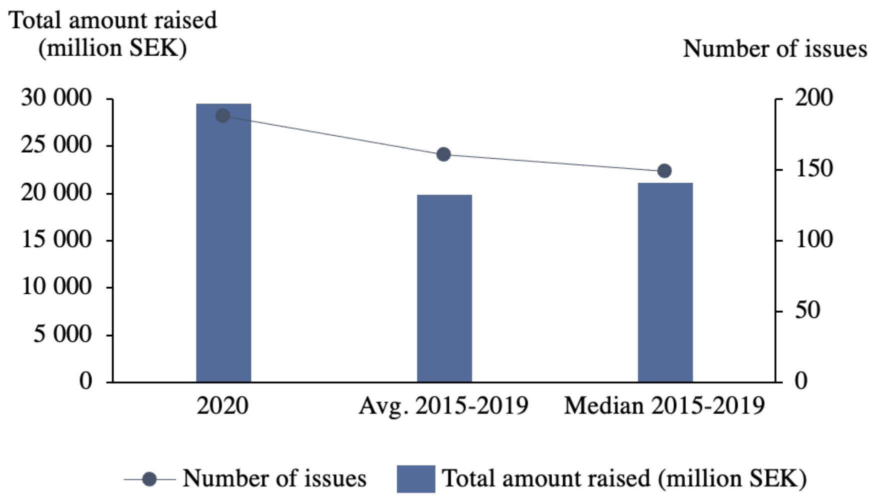


*Cue Dee uses broken fiscal years

Source: Data obtained from Cue Dee's income statement, retrieved from allabolag.

Appendix 24: Announced equity issues by Swedish public (i.e listed) companies 2015-2020*





*No corrections have been made for the difference between the announced amount and actual amount raised. There could both be negative and positive differences between the announced and the actual amount. The *Total amount raised* in the diagrams should therefore be interpreted as the total amount of capital that was intended to be raised each year.

Source: Data obtained from the Finbas database owned by the Swedish House of Finance.