

# The Eternal Fight Against Bugs

A case study of EQT's investment in Anticimex

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## Abstract

Our thesis aims to highlight strategies for long-term value creation in private equity, evaluate the performance of extended funds and discuss the dynamics around the decision to extend or exit investments. In order to achieve this, we perform a single case study of EQT's investment in Anticimex and a quantitative analysis of returns for a larger sample of US and EU private equity funds. We find that EQT adopted a very different approach than previous financial buyers in Anticimex, scaling up internationally through a highly active acquisition agenda, reaping the benefits of increased local density. They simultaneously invested heavily in digital solutions, which improved the value proposition and margins. It also facilitated the buy-and-build strategy as there was a strategic appeal for smaller competitors to join the group as they could not match the development. Several factors gave rise to the long-term value creation in Anticimex and hence EQT's decision to keep the company. This was primarily the support of megatrends increasing the need for pest control, multiple expansion for pest control companies and the fact that EQT was uniquely positioned to extract value and would not be fully compensated by a buyer due to asymmetric information. As for the performance of extended funds, we find that extended funds outperform normal funds by approximately 6 p.p. in terms of internal rate of return. However, the extended part (beyond year 10) actually underperforms by almost 5 p.p. compared to the internal rate of return between year one and year ten for the same funds. This may indicate that successful funds more often receive approval for extensions but do so for less successful investments.

**Keywords:** Private Equity, Secondary Buyout, Buy-and-Build, Value Creation, Extension Fund.

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## **Abbreviations and definitions**

PE = private equity

VC = venture capital

LBO = leveraged buyout

IRR = internal rate of return

MOIC = multiple on invested capital

CM = cash multiple

GP = general partner

LP = limited partner

M&A = mergers and acquisitions

NAV = net asset value

EV = enterprise value

US = United States

FY = Full Year

SBO = secondary buyout

PME = public market equivalent

HR = Human Relations

COO = Chief Operating Officer

In this thesis, private equity funds/transactions refer only to buyout funds/transactions if not otherwise stated. Venture capital refers to seed, growth and expansion capital and will be referred to as venture capital explicitly. Turnaround and distress funds are also separated from the other two segments.

## 1. Introduction

On the second of April 2012, Swedish PE house EQT announced that they were buying the pest control company Anticimex for an enterprise value of approximately SEK 2.7 billion (EQT, 2012). As Anticimex most recently was owned by Ratos, a Swedish listed investment company and prior to that Nordic Capital, another major Swedish PE house, EQT became the third financial owner of the company since 2001. Naturally questions arose around how much value creating activities there were left for EQT to undertake.

The deal team at EQT alongside the newly appointed CEO Olof Sand had a plan to expand internationally through acquisitions and drive consolidation of the fragmented pest control industry. The aim was also to become the front runner within digital solutions and several hundreds of millions SEK were invested to achieve it.

Five years later, in the beginning of 2017, Anticimex had been transformed to a large extent. Revenues had grown by 130%, both through organic expansion and as part of the consolidation strategy with more than 100 international acquisitions. In terms of profitability, EBITDA margins had improved from 12% to 15%, and Anticimex were closing in on their main global competitors. The digitalization of the business model had made progress and the company was now considered the number one digital pest control company. By now, LPs expected to see some realized returns. Would EQT be able to hold on to Anticimex for longer and if so, would it be a good idea? How long would they be able to keep on creating value in the company, to motivate continued private ownership? Rumors were valuing Anticimex at around SEK 20 billion, which would yield a compelling return for EQT fund VI. On the other side there seemed to be room for additional operational improvements and EQT did not want to exit the company prematurely, leaving too much money on the table.

Previous literature on value creating strategies and activities in PE is quite exhaustive. However, there is not much literature which focuses on longer term value creation and the theme of prolonging investments beyond the initial intended horizon or extending investments by setting up a new fund or alternative fund structure. The performance of secondary buyouts has also been studied, but the literature on what portfolio companies are suitable for secondary buyouts and the value creating strategies applied is scarcer. Therefore, we aim to contribute to the field by answering the following research question.

- 1) *How can private equity firms create value in portfolio companies over a long-term horizon and is there an upper limit?*

We find that the strategy EQT used in Anticimex was very different from the previous financial owners, which likely gave rise to the opportunity for continued value creation. This highlights the increasing importance for PE firms to be able to create value through creative business plans focused on operational improvements. Our results show that the fragmented market and the easy process of integrating pest control providers were prerequisites for execution of the buy-and-build strategy used by EQT. The digital investments were an important tool in acquiring targets, as small firms could not match them and therefore saw a strategic appeal in joining the Anticimex group. Apart from the operational improvements, EQT implemented

extensive incentive programs where management reinvested more than 50% of their proceeds and took an active role through the TROIKA model. They also acknowledged the need for different leadership capabilities throughout various stages of the value creation process.

In order to take a more holistic view of PE funds as long-time value creators we searched for previous research examining the performance of prolonged and extended investments. Due to the scarcity within this research field, we chose to conduct a two-step quantitative analysis with the goal of answering the following research question.

2) *How do extended investments perform compared to traditional private equity investments?*

Some PE investments are extended, either through pushing the liquidation date of the existing fund one to three years further after receiving approval from LPs or through establishing a formal extension fund to which assets are transferred. As extensions require agreement from LPs, it is not a straightforward alternative and it may be viewed with skepticism as one of the main advantages of a predetermined liquidation date is the discipline and need for efficacy it enforces. There is also the possibility that LPs require the liquidity for other purposes.

In the first part of the analysis we find that funds liquidated within ten years underperform compared to funds liquidated beyond ten years in terms of internal rate of return and cash multiple. A potential explanation for this is that the most successful funds between year one and ten are better able to negotiate extensions with LPs and therefore enjoy more flexibility in their exit strategy. In the second part we examine the theoretical incremental investment of buying the PE fund for the net asset value recorded ten years after its inception. By studying the succeeding capital calls and cash distributions, we find that the incremental investments deliver returns below the mean and median of the full fund sample, as well as below the returns of the extended funds between year one and year ten. However, by comparing to an equivalent market portfolio of the S&P500, we find that the incremental investments slightly outperform. The underperformance of the extended part further speaks in favor of successful funds more often being able to extend investments as the reason for the observed difference in long-term performance, with questionable results for the actual extensions.

The fund returns from the incremental investments also exhibited high cross-sectional variation. Therefore, we suspected that the decision to exit or keep a portfolio company depended on several factors, which are hard to account for through analyzing performance data only. To fully understand why fund managers choose to extend investments and what type of investments that are optimal for extensions, we analyze the decision-making process in light of EQT's investment in Anticimex and ask the following research question.

3) *What are the main determining factors affecting the choice to extend investments rather than to exit?*

Our case study finds that, in the case of Anticimex, the main characteristic in favor of a long-term horizon was underlying megatrends, such as urbanization and traveling, which increase the need for pest control services. In addition, there were continuous shifts in customer behavior, with decreasing pest acceptance driven by higher income levels. Another important

fact was that the main financial effect of the digital disruption initiated by EQT had not, and still has not, yet materialized. This leaves room for expansion of both top line and margins to this day. While EQT is well suited to value Anticimex and its future potential correctly, potential buyers might not be able to do so given asymmetric information, which needs to be considered when contemplating an exit as it may suppress the exit multiple. Given EQT's information advantage they were more inclined to keep the company, as they would not be entirely compensated for the true value according to them. Some of the remaining value creation EQT expected was likely also conditional on the firm's unique capabilities, with a dedicated digital team and well-established relationships with the management of Anticimex, which would not have been possible for a different owner to extract.

### **1.1 Purpose**

The purpose of this thesis can be divided into three parts. The first objective is to analyze the overall performance of extended funds in comparison to both the public market and other PE funds' performance. The second and main objective is to present an in-depth analysis of EQT's decision to acquire and later keep Anticimex as a portfolio company, even though they had already succeeded in executing a rapid transformation and internationalization strategy. By doing so we hope to develop insights into long-term PE value creation and the dynamics of decisions to extend or exit. Finally, we hope to provide the faculty of Stockholm School of Economics with material that can be developed into a case study for teaching purposes. This affects the level of details provided in the case and some theories and context might be viewed as a bit outside of our research questions. However, we consider an extensive background a necessity to be able to address and understand the full situation surrounding Anticimex.

### **1.2 Contribution**

Our mixed method research paper contributes firstly to the scarce research field of performance among PE extended funds versus traditional funds. To the best of our knowledge no similar study has been done to date and we hope our contribution encourages further research on this topic.

Secondly, we contribute to existing literature by providing an understanding of why PE firms may choose to prolong investments in certain portfolio companies. This includes some of the different value creating initiatives widely investigated by several other researchers, but also some contribution to the less studied field of secondary buyouts. Extensive work has been done on portfolio company performance and especially the comparison between primary and secondary buyouts, though less emphasis has been put on analyzing operational strategies PE firms undertake in SBOs (secondary buyouts). We hope that our case study can highlight some of these strategies as well as find support in, or contradict, existing literature. Lastly, we hope to shed some light on the factors determining exit decisions. This has been studied in general terms by several other researchers, but we hope to contribute with some new perspectives through an in-depth case study of a specific transaction.

### 1.3 Outline

The rest of the paper proceeds as follows. Section one continues with a brief general review of PE as well as some industry statistics. In section two we conduct a literature review addressing PE performance, value creating strategies, secondary buyouts, exit strategies and agency problems. Section three consists of the quantitative analysis of the performance of extension fund proxies, including the method used, results found and a brief discussion. In section four we outline the methodology used for the case study and in section five we present the necessary case background. Section six presents the results of our case study. Finally, we elaborate further on the discussion of our quantitative results and discuss the findings of our case study in section seven and present our concluding remarks and ideas for further research in section eight.

### 1.4 Private Equity Model

In the following section a brief description of the PE model and the most common structures of PE funds are presented.

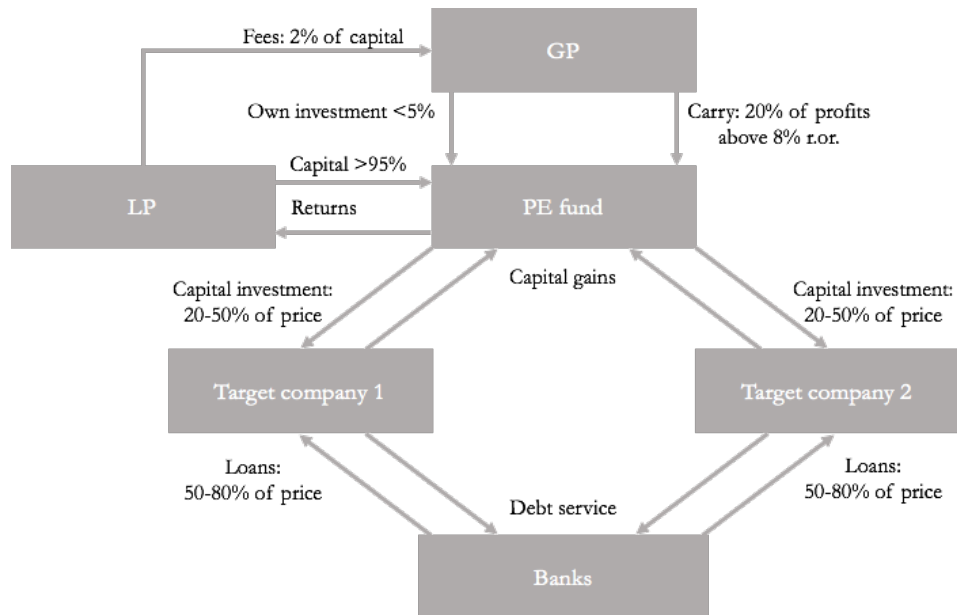
Private equity fund structures include two main stakeholders, general partners (GPs) and limited partners (LPs). The limited partners usually consist of institutional investors such as pension funds and endowments but may also include family offices. The general partners are PE professionals responsible for investment activities of the fund. Døskeland and Strömberg (2018) state that ever since the 1980s, setting up PE funds as limited partnerships has been the dominating structural form.

The general partners manage the fund and usually receive a fixed management fee of 1.5% to 2.5%, as well as a performance-based fee. The limited partners provide most of the capital, whereas the general partners must commit at least 1% of the capital, which contributes to alignment of incentives (Døskeland and Strömberg, 2018). In recent years LP's have put additional pressure for more "skin in the game" which has resulted in an increased capital commitment from GPs, going from 1-2% to 3.3% on average (Private Equity Wire, 2018). The variable part of fees is often called carried interest and, in most cases, consists of a 20% share of the profits after the fund has met some predetermined hurdle rate (Kaplan and Schoar, 2005). If no covenants in the fund agreement are breached the limited partner has very limited ability to influence investment decisions. However, agreements often include a covenant called no fault divorce, which means that an underperforming GP can be replaced if 75% of LPs vote in favor of it (Døskeland and Strömberg, 2018). The PE model outlined above is illustrated in *Figure 1*.



**Figure 1**

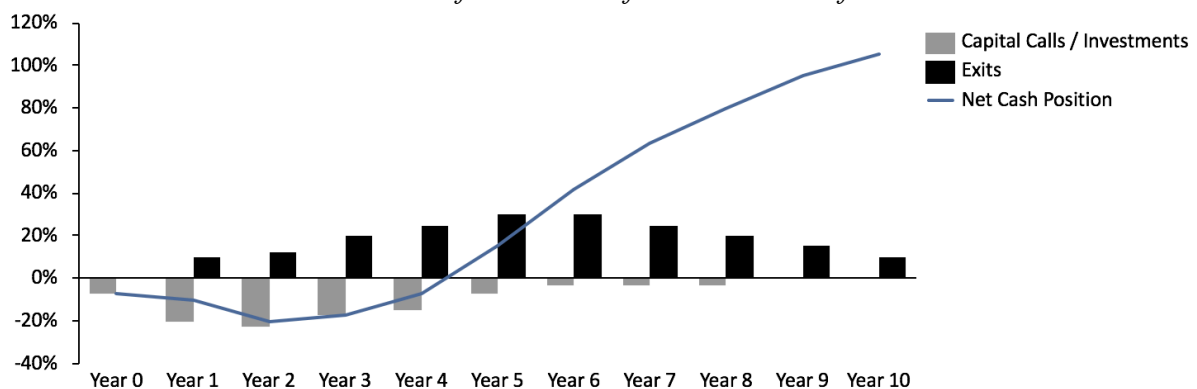
*A reconstruction by the authors, figure originally illustrated in Watt and Galgóczi (2009)*



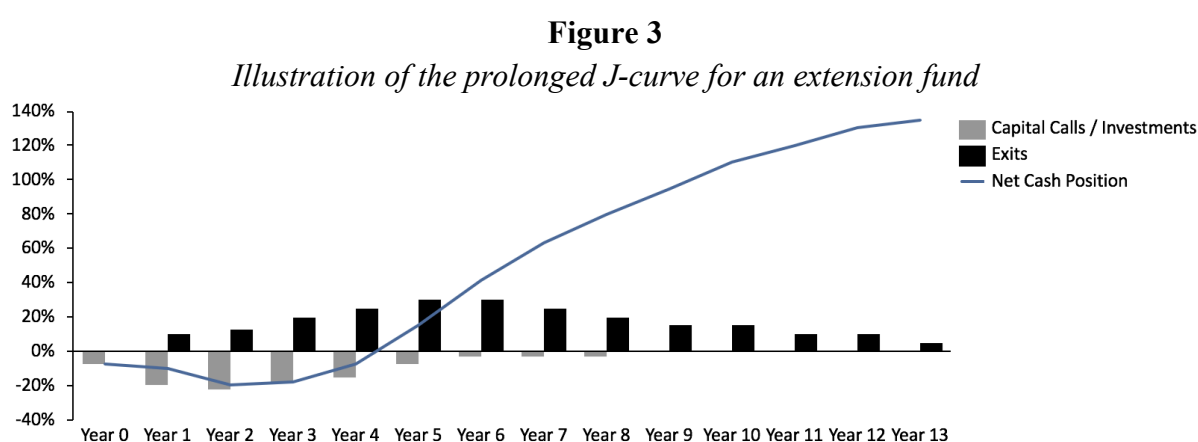
The traditional PE fund is usually a closed ended fund which has historically been liquidated after ten years. The investment period, when firms call capital from the LPs and deploy it through acquisitions of portfolio companies, is normally limited to the first five or six years of the fund life (Døskeland and Strömberg, 2018). The typical closed-ended PE fund has a built-in feature of providing investors with a certain fund liquidation date. For institutional investors this results in a convenient way to match liquidity and strategy in their different investments (Topping, 2014). The limited fund life can however be a disadvantage as well, as pressured sellers receive lower valuations (Arcot et al., 2015). The net cash position of traditional funds tends to follow a J-curve, since investments dominate early in the fund, whereas exits dominate later in the fund. See *Figure 2* below for an illustrative example of cash flows in a traditional fund.

**Figure 2**

*Illustration of the J-curve for a traditional fund*



It is not unusual to have a provision which allows the fund to be extended two to three additional years beyond the ten years, conditional on receiving approval from LPs (Døskeland and Strömberg, 2018). This allows for increased flexibility in terms of liquidation and exits may occur after ten years from fund inception. The additional time should, *ceteris paribus*, result in a higher CM (cash multiple) for the fund. One could argue that there is less discipline enforced as there is more time to deliver returns, but given that extensions are, as Døskeland and Strömberg (2018) state, usually conditional upon approval from LPs, discipline is ensured, and agency costs reduced. However, upon inception of the fund many managers negotiate the right to extend the lifetime of the fund for at least two to three years without LP approval. This could potentially lead to an agency conflict where GPs have the incentive to maximize fees rather than performance (Phalippou, 2009). See *Figure 3* below for an illustrative example of cash flows in an extension fund.



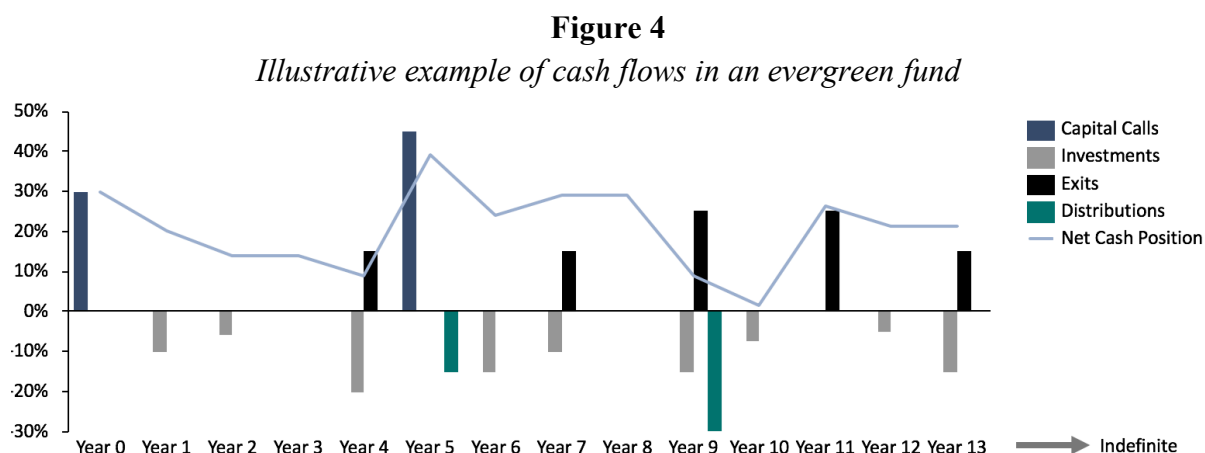
In recent years, more alternative fund structures have grown in interest among GPs and LPs. Døskeland and Strömberg (2018) claim that the underlying reason for this trend can be found in the industry ambition to reduce fee levels, as well as making direct investments or co-investments<sup>1</sup> from LPs more accessible. One of these fund strategies is the evergreen fund, a fund in which the proceeds from sales of investments are kept in the fund rather than immediately paid out as distributions to investors, hence the fund has an indefinite lifetime. Having a more permanent capital base enables funds to avoid any time constraints related to fundraising, the process of sourcing, executing and divesting deals. For partners this means that less time needs to be spent on intensive fundraising cycles and more emphasis can be put on deal making (Topping, 2014). Other supporting arguments for an evergreen fund is that both GPs and LPs want to avoid premature exits and rather wait for the perfect exit timing (Døskeland and Strömberg, 2018).

The primary contrast between the traditional PE fund structure and the evergreen fund structure is the time-limited exit period. Even though some PE funds have longer time horizons, they must eventually exit all investments, and this can lead to suboptimal outcomes. The alternative solution to this closed-ended fund structure is to have an indefinite fund structure, to better

<sup>1</sup> Refers to situations when LPs invest alone, or syndicated, into private companies. While in co-investments situations LPs are offered by the GPs of a PE fund to invest directly, alongside the fund, in a portfolio company.

match long-term return horizons in sectors like infrastructure, natural resources, health and renewable energy. Having an evergreen fund structure makes it possible to extend holding cycles and in the long run create maximum value for LPs (McKinsey, 2018).

For evergreen funds it is of utmost importance to generate enough returns from the portfolio companies to be able to support the liquidity requirements from investors. Much like an investment company the evergreen fund must be able to meet investors' demands for continuous, as well as final payouts (Topping, 2014). This system is not necessarily frictionless, with potential issues around allowing LPs to cash out their fund position and what claim new LPs should have on existing portfolio companies. Even when GPs are deciding payouts on an individual deal basis, LPs in a more permanent fund structure need to make sure that they get cash distributions. Different sorts of dividend systems have been implemented but there is still much uncertainty around how to structure payouts to investors (Døskeland and Strömberg, 2018). In the absence of having a built-in liquidation date for investors to benefit from, some evergreen funds choose to float the fund as an investment company in the public equity market e.g. Ratos<sup>2</sup>. Another concern surrounding evergreen funds relates to interim valuations and the risk of adverse incentives resulting in mark ups or mark downs of the portfolio companies' values. This stems from the lack of continuous fundraising, which alleviates any pressure to exit and actual returns become harder to measure (ILPA Roundtable, 2016; Døskeland and Strömberg, 2018). See *Figure 4* below for an illustrative example of cash flows in an evergreen fund.



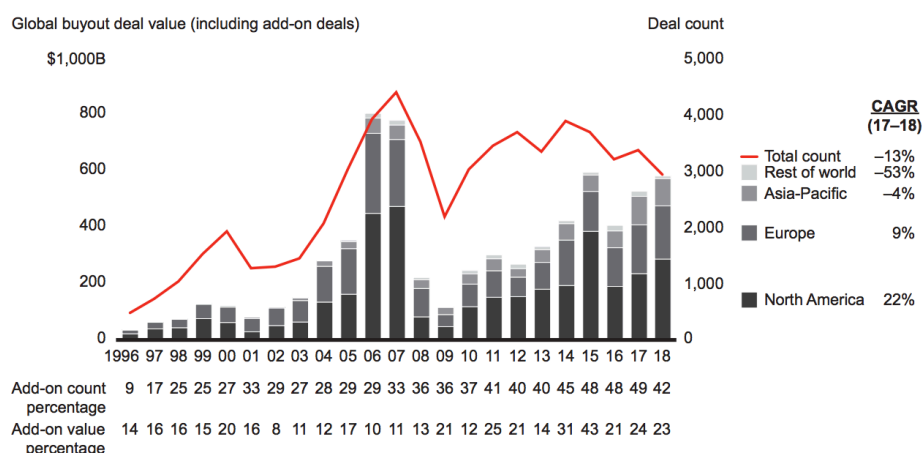
## 1.5 Market Statistics

The following section presents some relevant PE industry statistics. The modern global PE market experienced considerable growth after 2001, culminating in deal value levels several times higher in 2007. Both deal value and deal count dropped significantly in 2008, although deal value was more affected than deal count. In the aftermath of the global financial crisis the market has quite consistently increased, and the global buyout deal value was 582 billion USD

<sup>2</sup> Ratos AB is a Swedish PE company, founded in 1934 and still controlled by the Söderberg family, listed on the Stockholm stock exchange.

in 2018, still below pre-crisis levels. Public-to-private deals made up approximately 39% of total buyout deal value globally in 2018 (Bain, 2019).

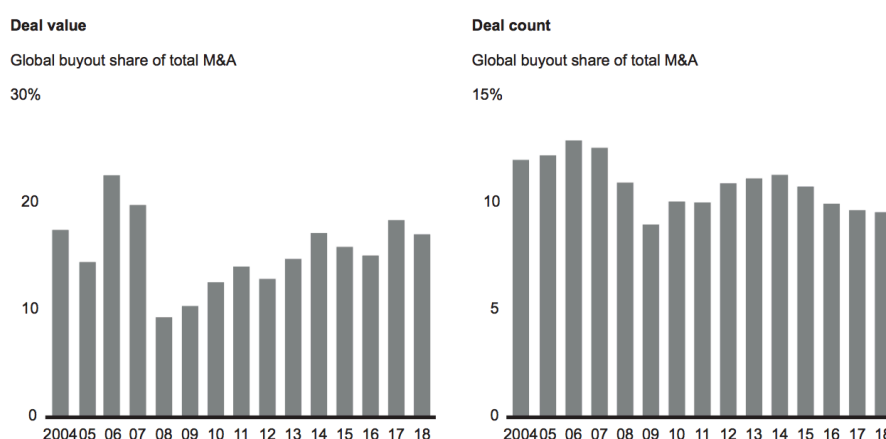
**Figure 5**  
*Global PE deal value and deal count, part 1*



*Source: Bain Global Private Equity Report 2019*

Buyouts make up 10-15 percent of total M&A deal value globally but less than ten percent of deal count, indicating buyouts are on average larger than other M&A transactions. The share consisting of buyouts in terms of deal count has been relatively stable over time. The share in terms of deal value experienced a considerable drop during the global financial crisis and has been showing a recovering trend since then (Bain, 2019).

**Figure 6**  
*Global PE deal value and deal count, part 2*

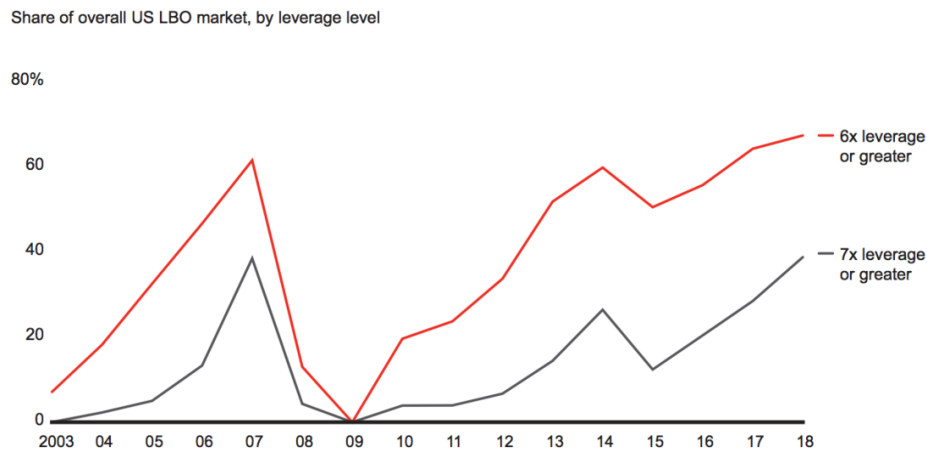


*Source: Bain Global Private Equity Report 2019*

The average equity/EBITDA multiples paid in buyouts was 10.9 in 2018, slightly down from record levels of 11 in 2017. As for leverage financing, the share of deals using debt/EBITDA

levels of at least six times were at higher levels than before the global financial crisis (Bain, 2019).

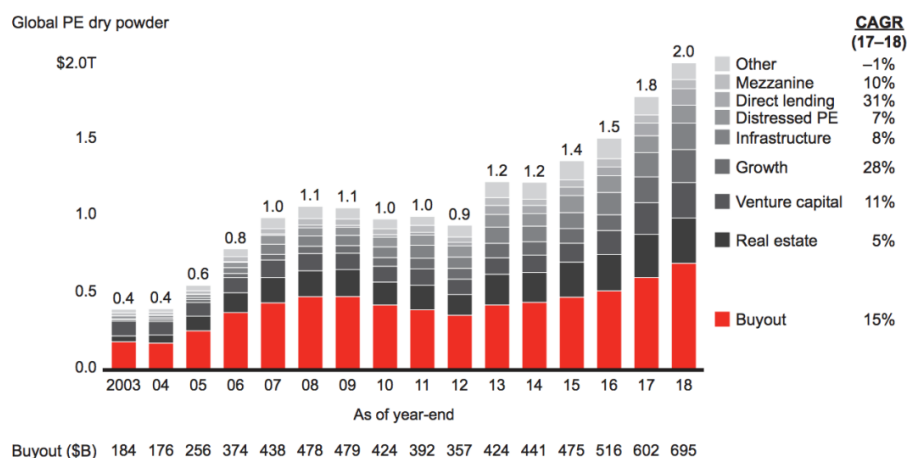
**Figure 7**  
*Development of leverage levels in the LBO market*



Source: Bain Global Private Equity Report 2019

Committed capital not yet deployed, also known as dry powder, has been rising steadily in recent years, doubling from one trillion USD in 2011 to two trillion USD in 2018. This caution can be explained by the large amount of cheap financing combined with increasing asset prices and a modest economic outlook. However, current dry powder levels correspond to three years of investments, which is well below the level of 4.6 in 2007 and 2008, and the typical investment period of five years (Bain, 2019).

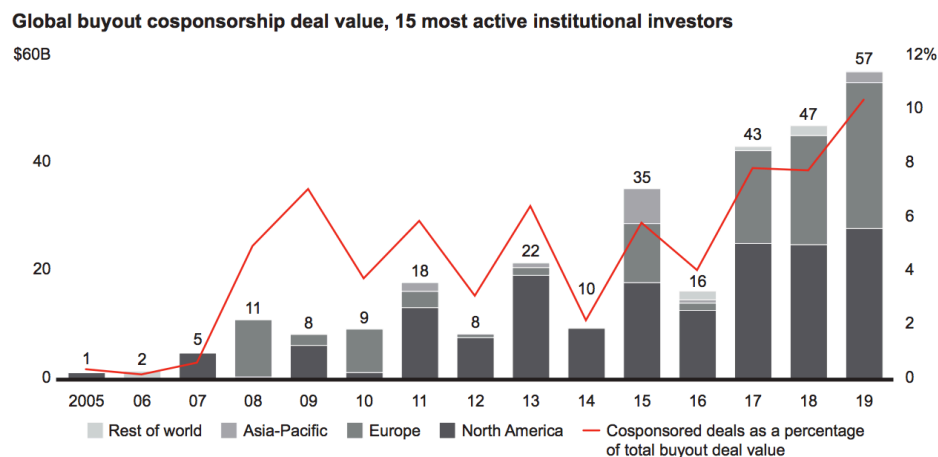
**Figure 8**  
*Development of PE capital not yet deployed*



Source: Bain Global Private Equity Report 2019

Another current trend in the PE industry is that LPs co-sponsor more deals, in order to increase their exposure to PE and to gain access to larger deals. Co-sponsored deals have increased substantially in the last five years and made up 10% of total deal value in 2019. Another attractive feature of co-sponsored deals is the lower fees paid by the LPs (Bain, 2019).

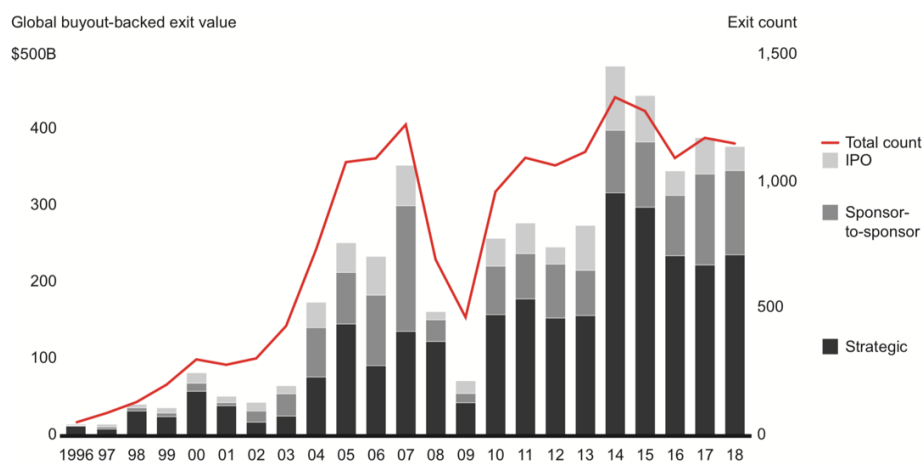
**Figure 9**  
*Development of PE co-sponsored deals*



Source: Bain Global Private Equity Report 2019

Strategic deals with corporate buyers having plenty of cash on the balance sheet has been the clear dominating exit route over the last decade. However, sponsor-to-sponsor deals have grown and constitute an important exit channel for PE backed companies (Bain, 2019), which could potentially be an effect of the increasing dry powder and hence need to find investments.

**Figure 10**  
*Presentation of PE exit channels*

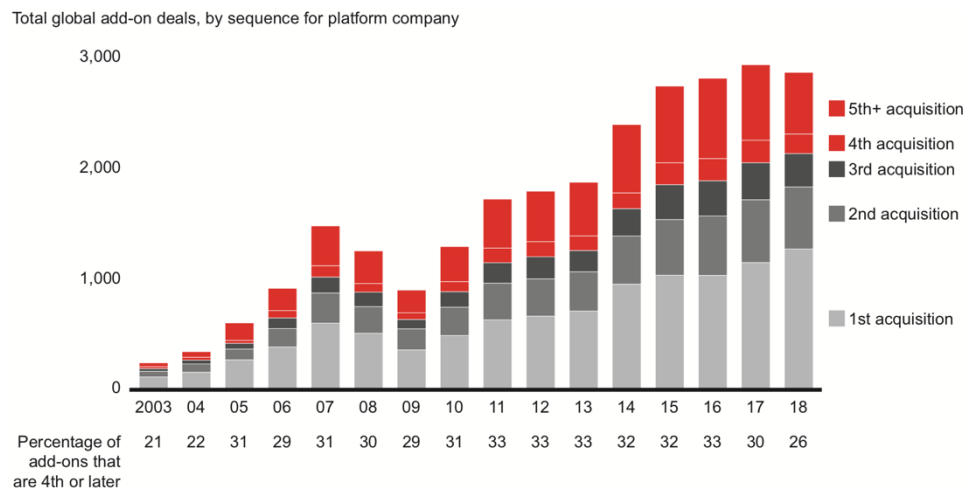


Source: Bain Global Private Equity Report 2019

In the market climate that dominated during more than a decade after the financial crisis, with ever increasing deal multiples, falling interest rates and stable GDP growth, acquiring a strong

platform company and executing a buy-and-build strategy became one of PE partners' favorite tools to create value. In 2003, only 21% of all add-on acquisitions were the fourth transaction conducted by the platform company. Since then the share has grown remarkably and in 2018 the number corresponded to 30%, and in 10% of all cases the platform company had conducted more than ten add-on acquisitions (Bain, 2019).

**Figure 11**  
*Frequency in buy-and-build strategies*



*Source: Bain Global Private Equity Report 2019*

## 2. Literature Review

### 2.1 Private Equity Performance

Several studies have been done comparing the returns of PE to public equity markets (Gompers and Lerner, 1997; Sorensen and Jagannathan, 2015; Brown and Kaplan, 2019). Many studies argue that PE returns outperform even on a risk-adjusted basis and net of fees (Kaplan and Schoar, 2005; Sensoy et al., 2014; Harris et al., 2014; Korteweg and Sorensen, 2017; Korteweg, 2019). However, the abnormal returns could be a result of favorable industry and debt market conditions (Gompers and Lerner, 2000; Wang, 2012; Axelson et al., 2013; Jenkinson and Sousa, 2015). Macroeconomic factors also influence fund performance and returns correlate with public equity market conditions (Axelson, et al., 2013; Haddad et al., 2017). Bernstein et al. (2017) show that industries with PE presence exhibit more operating growth and their findings hold for several different geographies, including the United States, the United Kingdom and continental Europe.

The operating performance of PE funds has not only been studied on fund level but also by comparing individual portfolio companies to relevant peers. Acharya et al. (2013) studied PE backed deals and found that on average these companies show a positive abnormal performance in terms of sales and operating margin improvements compared to listed peers. Wilson et al. (2012) investigated performance for buyouts relative to comparable firms in the United

Kingdom, before and during the global financial crisis. The authors found that PE-backed buyouts outperformed across several metrics, including growth, productivity, profitability and working capital management.

Not all papers find PE performance as impressive as some previous research and industry reports claim. Phalippou and Gottschalg (2009) study cashflows and NAVs (net asset values) of 852 funds between 1980 and 2003 and find that the average annual fund returns net of fees is 3% lower than returns of the S&P 500. By introducing a new benchmark consisting of a small cap index to better mimic a PE portfolio, Phalippou (2010) further concluded that the median buyout fund underperforms the equivalent public market portfolio returns with 3.1% per annum. However, these results are dependent on the author's conclusion that buyout funds typically invest in small cap companies. In addition, investing in a small cap index does not support the volumes invested by PE funds.

One problem when measuring returns is the inherent illiquidity of the equity in portfolio companies, which makes it difficult to objectively mark investments to market benchmarks except when an investment is made or exited (Kaplan and Sensoy, 2015).

Private equity faces two illiquidity issues that make evaluation of returns even harder, i) investments in unlisted equities mean investors face market illiquidity, ii) LPs commit capital over a long period of time which gives rise to funding illiquidity (Brunnermeier, 2009). Many researchers argue both theoretically and empirically that investors in PE need to be compensated for this illiquidity and the additional risk that comes with it (Franzoni et al., 2012; Korteweg and Sørensen, 2017; Buchner et al., 2016). Maurin et al. (2020) argue that GPs prefer LPs with a lower sensitivity to liquidity risk, as they can supply capital at a lower cost and are more likely to honor their commitment. This means that when preferred LPs are in low supply, GPs pay a premium to attract them.

As the competition for deals within the PE industry increases, more and more funds try to distinguish themselves through different focused strategies. These investors are commonly known as specialized investment firms, as opposed to generalist investment firms, foremost focusing on certain sectors, deal sizes and a variety of operational strategies. Some researchers argue that strategies like geographic and industry differentiation can increase fund returns and find that specialized investment firms have a competitive advantage, resulting in better performance (Cressy et al., 2007; Humphery-Jenner, 2013). Gompers et al. (2009) similarly argue that venture capital generalist investment firms tend to pick portfolio companies more poorly, as well as allocate funding more inefficiently across industries. Furthermore, the authors conclude that specialized investment firms tend to be more successful in exiting portfolio companies.

When PE funds deliver positive results in early funds, they often grow their operations by increasing the size of later funds. Larger fund sizes are not always related to future abnormal returns and historical top performance is often difficult to replicate (Kaplan and Lerner, 2010). Some papers argue that larger fund sizes and invested capital might lead to diseconomies of scale and are negatively correlated with returns (Kaplan and Schoar, 2005; Lopez-de-Silanes et al., 2015).



Performance persistence among mutual fund managers in public equity markets, which is not explained by common factors and transactions costs, is very low (Carhart, 1997; Wermers, 2011). However, empirical studies consistently show persistence in performance among VC funds, where past performers are likely to keep delivering better exit possibilities and returns (Phalippou and Gottschalg, 2009; Harris et al., 2014; Ewens and Rhodes-Kropf, 2015; Nanda et al., 2020). Looking at the PE industry there is some correlation between past performance and future fund returns, but not as significant as for the VC funds (Harris et al., 2014; Korteweg and Sorensen, 2017). Braun et al. (2017) show that as the PE industry matures and becomes more competitive the level of performance persistence decreases.

## **2.2 Value Creation in Private Equity**

Private equity firms buy portfolio companies in which they identify opportunities for improvements, implement the value creating strategies of their business case and sell the company, historically after three to seven years. The main ways in which PE adds value to portfolio companies can be divided into three themes: operational engineering, governance engineering and financial engineering (Døskeland and Strömberg, 2018).

### **2.2.1 Operational Engineering**

Døskeland and Strömberg (2018) define operational engineering as operational improvements in a portfolio company. The authors state that common operational improvements include lowering costs, enhancing productivity, changing strategy, changing management and pursuing acquisition opportunities. Other nonoperational ways in which PE firms add value are through deal sourcing and sales processes. They spend resources on monitoring firms in their prospective size segment, which can lead to generation of proprietary deals, or alternatively that they are more prepared once a company becomes up for sale.

As competition in the PE industry has increased, operational engineering has become an increasingly important component of value creation in order to stand out (Harris et al., 2014; Gompers et al., 2016; Næss-Schmidt et al. 2017). Kaplan and Strömberg (2009) also emphasize the increased importance of creating value through operational engineering which is further supported by Achleitner et al. (2010) and Guo et al. (2011). This shift in the PE market climate indicates that firms will likely become more involved in operations and drive value through improvements (Døskeland and Strömberg, 2018). This view is supported by Bernstein and Sheen (2016) who mean that PE firms bring in industry experts in order to improve operations in portfolio companies. A survey by Gompers et al. (2016) highlight a trend in PE where fund managers are emphasizing the importance of revenue enhancement strategies, while attributing less importance to cost cutting measures.

A report from Kearney (2014) states that PE firms are increasingly creating and using their own teams focused on operations, often composed of people from consulting or with an industry background. The article further states that underperformance for portfolio companies increases the probability of management replacement and operating teams being deployed. Bringing in an external operations team might not always be received well from the portfolio

company management. In order to reduce frictions, the study suggests the importance of involving the operations team early in the process, whereas two thirds of all teams are brought in long after the transaction closes. The authors further highlight the importance of setting up clear rules of engagement from the start, making sure the CEO does not feel powerless and letting management take full credit for improvements in the company.

### **2.2.1.1 Add-on Acquisitions**

Add-on acquisitions refer to additional acquisitions by a portfolio company after a buyout transaction has been made, essentially M&A executed by PE backed portfolio companies. The strategic rationale behind these transactions is in most cases similar to other corporate M&A, where the literature often refers to synergies as the main rationale (Healy et al., 1992; Maquieira et al., 1998; Andrade et al., 2001; Mukherjee et al., 2004; Hoberg and Phillips, 2010).

Fueled by the increased competition in the LBO (leveraged buyout) market, PE funds came up with a new hybrid strategy that combined the financial synergies of LBOs while at the same time benefitting from the long-term synergy focus utilized by strategic buyers (Braun et al., 2017; Sensoy et al., 2014). This is commonly known as a buy-and-build strategy, where a PE fund acquires a platform company and subsequently makes bolt-on acquisitions, aiming to achieve both economies of scale and multiple expansion. In some buyouts there is a decided strategy to buy-and-build before the transaction takes place (Loos, 2006), where the PE firm aims to consolidate a fragmented industry in order to realize economies of scale (Bhattacharyya and Nain, 2011). The add-on acquisitions are often made at relatively low valuations (Døskeland and Strömberg, 2018). By analyzing operating outcomes across different acquisition strategies, Bansraj et al. (2019) find that companies undertaking buy-and-build strategies perform better, in terms of profitability, compared to an equivalent portfolio consisting of relevant peers for the platform company and add-on companies, which have not been acquired.

Add-on acquisitions might occur in larger more concentrated industries as well as small and medium sized industries with a higher degree of fragmentation. In highly fragmented industries without significant differences in companies' market shares, add-on acquisitions might be motivated by so-called rollup strategies (i.e. when the add-on acquisition of the target leads to a higher overall multiple for the group). In concentrated industries, add-on acquisitions are instead most likely motivated by economies of scale and scope (Hammer et al. 2014). The consolidated company can benefit from a stronger bargaining power against buyers and sellers, which has been shown in particularly horizontal mergers (Bhattacharyya and Nain, 2011). Hammer et al. (2014) argue that not all PE buyouts are suitable for a buy-and-build strategy. The authors state that the industry, the competitive environment and the nature of business are factors influencing the rationale behind add-on acquisitions.

Hammer et al. (2017) find that add-on acquisitions are more common in financial buyouts, though only if the previous PE owner made add-on acquisitions. The authors also find that add-on acquisitions are more likely if the portfolio company is in a moderately fragmented industry, if it has M&A experience and if debt market conditions are favorable. In addition, the

probability for add-on acquisitions is higher if the PE owner is experienced and has a good reputation. Only 43% of PE firms engage in any add-on acquisitions and the activity is concentrated, with 16% of PE firms being responsible for 80% of all add-on acquisitions. As for geography, 65% of deals including add-on acquisitions make only domestic acquisitions, whereas 35% make one or more international add-on acquisitions.

Several previous studies suggest that PE firms do not pay for synergies, as they are unable to realize any in the way that strategic buyers can. However, these studies focus mainly on public-to-private transactions which are seldom connected to a buy-and-build strategy. A recent study from Hammer et al. (2018) suggests that PE firms pursuing a buy-and-build strategy might be able to create synergies by making add-on acquisitions within the same industry as the platform company. The authors find that PE firms pay an EV/sales premium of 15-20% for add-on acquisitions which occur within two years from the initial transaction, when controlling for a wide range of common factors which affect pricing in buyouts.

Nikoskelainen and Wright (2007) and Valkama et al. (2013) find outperformance in terms of internal rate of return for deals which include add-on acquisitions, compared to deals without any add-on acquisitions. Acharya et al. (2013) find that deals with add-on acquisitions outperform in terms of margin and multiple expansion, i.e. receiving a higher EV/EBITDA ratio when selling the company compared to the purchase transaction.

#### **2.2.1.2 Cost Reductions and the Effects of PE Ownership**

Reducing costs is another strategy used by PE firms in order to create value. Having expertise in restructuring organizations allows for cost reductions as organizational efficiency is increased, which gives PE an advantage compared to strategic owners (Jensen 1989; Cressy et al., 2007; Demiroglu and James, 2010). Another advantage for PE firms is a lower cost of debt, enabled through established relationships with banks (Ivashina and Kovner, 2011; Huang et al., 2016).

The combination of market preemption and superior experience may provide PE backed companies with a first mover advantage to identify cost reduction opportunities earlier than the competition (Clark, 2009). McNamara et al. (2008) argue that the early mover may benefit from cost advantages before the competition realizes its true value. New evidence also shows that having PE presence in an industry leads to productivity gains, best practices and higher profitability among public peers (Aldatmaz and Brown, 2020).

Cost savings could lead to higher capital efficiency through improved management of working capital, accounts receivables and a more effective allocation of the workforce (Singh 1990; Easterwood et al. 1989; Davis et al, 2014). Holthausen and Larcker (1996) find that PE portfolio companies have lower amounts of working capital in comparison to industry peers. However, critics argue that these cost saving initiatives are also related to negative consequences for the portfolio companies. Easterwood et al. (1989) conclude that workforce reductions are more common in PE owned companies. Davis et al. (2014) find, in a sample of leveraged buyouts in the US, that buyout transactions lead to only modest net job losses but

total factor productivity gains at target firms. These findings are supported in Sweden by Olsson and Tåg (2017), who show that PE ownership leads to a higher job security. Antoni et al. (2019) find that PE buyouts in Germany are followed by a reduction in overall employment and an increase in employee turnover. Davis et al. (2011) find that PE ownership leads to more job losses but also to more creation of new jobs, concluding that the net job loss is less than one percent in target firms. Bansraj et al. (2019) investigates buy-and-build strategies and finds that they do not seem to significantly change employment levels.

Some papers claim that PE ownership leads to less focus on growth and innovation, and instead restructuring efforts through layoffs, cost-cutting and other financial engineering measures (Dutia, 2012). The reduction of working capital is often combined with saving programs targeting R&D and other growth-related capital expenditures (Smith, 1990; Bull, 1989; Kaplan, 1989). Muscarella and Vetsuypens (1996) find that leveraged buyouts reduce investments in the post buyout period. To examine the impact of PE ownership on long-term investment, Lerner et al. (2011) investigate innovation in the form of patenting for 472 PE owned companies, before and after the buyout. The authors find that the quantity of patents does not seem to change significantly. However, they find that the quality of patents, as measured by the frequency of patent citation, increases after the investment. Link et al. (2014) support the view that PE has a positive impact on innovation performance. Empirical evidence shows that the quality of innovation is lower in publicly listed companies (Bernstein, 2015) and that managers risk cutting off valuable R&D activities in order to meet quarterly goals (Graham et al., 2005).

The discussion of the impact of cost strategies can be connected to the wider criticism of PE as being short-term focused, putting too much emphasis on short-term performance and neglecting the long-term potential and competitiveness of the company (Døskeland and Strömberg, 2018). However, Kaplan and Strömberg (2009) discuss previous studies with different views on the matter and conclude that they do not consider the empirical evidence to agree with short-termism. Lerner et al. (2011) support this view and mean that PE owners more efficiently turn non-core assets into cash that can be used for innovative R&D projects.

### **2.2.2 Governance Engineering**

In general, there is a tradeoff between strong company governance and diversification. The PE context and its concentrated ownership makes it easier to enforce tighter governance but increases risk due to lack of diversification. One of the main ways in which PE creates value through governance engineering is by giving substantial incentives to management and other key individuals, in schemes where they receive a higher ownership share than their investment corresponds to (Døskeland and Strömberg, 2018). Similarly, Jensen (1989) states that PE ownership leads to improved governance through high equity stakes for management, high-powered incentives for the PE firm professionals and a more efficient organization. This is reinforced further in recent research by Gompers et al. (2016) who interviewed PE investors, concluding that they prioritized putting in place strong equity incentives for management.

Cornelli and Karakas (2008) investigate changes in terms of size and composition of boards in public-to-private transactions. The authors find that the board size tends to be reduced significantly and outside directors are frequently replaced by members of the PE firm. Acharya et al. (2009) and Gertner and Kaplan (1996) find that PE boards meet more regularly and are made up of fewer members. The research of Acharya et al. (2009) suggests that PE boards are more efficient than public company boards. The authors state that capital markets communication and the need for equal information across stakeholders serve as a constraint in public company boards. Private equity boards were particularly deemed to perform better in terms of adding value to the business, strategic leadership, performance management and key stakeholder management. Within performance management PE boards identify and actively monitor different key performance indicators (KPIs). In addition to being more explicitly stated, the KPIs used are more focused on cash metrics. Cornelli et al. (2012) support the notion that PE boards actively engage in monitoring and find that they in addition to relying on hard information, also collect and act on soft information.

In PE, the replacement rate of CEOs and management is high (Cornelli and Karakas, 2008; Gompers et al., 2016), which is a common action in order to improve performance (Døskeland and Strömberg, 2018; Acharya et al., 2009; Berg and Gottschalg, 2005). Cornelli and Karakas (2015) find that the CEO replacement rate is significantly higher in connection to the transaction for public-to-private deals, compared to the period after the transaction. The authors even find that CEO replacement in the post transaction period is slightly lower than in peer companies which remain public. Guo et al. (2011) find that operating cash flow improvements are larger for companies where the CEO is replaced by the PE firm during, or shortly after, the transaction. Cornelli et al. (2012) also find that more informed boards and a higher level of CEO replacements leads to significantly improved performance.

### **2.2.3 Financial Engineering**

Financial engineering refers to value creation by using leverage, which tends to be much higher in PE transactions than in portfolio companies beforehand (Axelson et al., 2009b). The two main advantages of debt, besides the explicit effect of leverage on equity returns, are tax deductibility of interest and the incentive benefit of leaving managers with less free cash flow available for unnecessary spending (Jensen, 1989). During the 1980s a common PE strategy was to acquire conglomerates using high leverage, divest non-core assets and pay down debt in order to generate returns (Davis et al., 1994). According to Hotchkiss et al. (2011) PE firms are also efficient in handling financial distress, and the ability to make additional equity investments when facing the risk of bankruptcy allows for taking on higher leverage. The degree of leverage in PE transactions is highly dependent on the credit cycle, and firms use more leverage when credit spreads and interest rates are low (Axelson et al. 2013).

Acharya et al. (2013) find a correlation between the background of the PE partners and the value enhancing strategies they conduct in order to create value in target companies. The authors show that a partner with a background in consulting or an industry role is more likely to outperform in creating value through organic strategies, whereas a partner with a financial background (e.g. investment banking) is more likely to outperform in driving acquisition-based

strategies. Gompers et al. (2016) also note that financial engineering tends to be used to a higher extent if the PE firm founders have a financial background.

Huang et al. (2016) mean that some value creation comes from the ability to lower the cost of debt. This is supported by Demiroglu and James (2010) who find that reputational capital for PE firms show positive correlation with buyout leverage, as well as loan maturities. The authors argue that reputational capital may also be related to the likelihood of financial distress, with high reputation firms less likely to experience it. Having debt mitigates managerial agency costs (Stulz, 1990) and some mean that avoidance of debt indicate management entrenchment and/or lack of monitoring (Berger et al., 1997). However, Devos et al. (2012) dismiss the notion that low leverage levels stem from managers trying to avoid the discipline incurred from debt.

#### **2.2.4 Secondary Buyouts**

Secondary buyouts refer to the sale of a portfolio company owned by a PE firm to another PE firm. This type of transaction has become increasingly common and accounts for 24 percent of all leveraged buyouts. Thereby, an SBO is the second most frequent exit route, after sale to a strategic buyer, which accounts for 38 percent of all leveraged buyouts (Strömberg, 2008).

Achleitner and Figge (2014) find no evidence to support the hypothesis that secondary buyouts yield lower equity returns or less operational value creation than primary buyouts<sup>3</sup>. However, they do find that the share of debt financing tends to be higher in secondary buyouts, which use 28-30 percent more leverage than primary buyouts. In addition, they find that secondary buyouts are six to nine percent more expensive than primary buyouts. Arcot et al. (2015) support the fact that secondary buyouts use more leverage and attribute it to lower information costs for the supplier and the reassurance from knowing that a portfolio company carried high debt in the primary buyout. Secondary buyouts occur more frequently when the costs of debt financing are low (Axelson et al., 2013; Bonini (2012); Wang (2012); Achleitner et al., 2012).

Bonini (2012) finds that primary buyouts abnormally improve operating performance and the effect is large and statistically significant. However, the author finds that secondary buyouts do not differ from primary buyouts in terms of operating growth. According to Degeorge et al. (2016) a secondary buyer with skills and knowledge complementary to those of the first buyer should be able to create value, though the authors note that the literature on what these might be specifically is very limited.

Interestingly, funds under pressure are more likely to engage in secondary buyouts. Buyers under pressure tend to pay higher multiples, use more equity and not syndicate to the same extent as others. Funds who invest under pressure create lower equity returns than those who are not under pressure. Oppositely, sellers under pressure receive lower multiples at sale and have shorter holding periods than other sellers. In the case of two parties, both under pressure, the resulting multiple depends on the relative bargaining power (Arcot et al., 2015). Degeorge et al. (2016) find evidence that buyers under pressure in secondary buyouts underperform and destroy value for investors. Axelson et al. (2009a) state an incentive for fund managers to

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<sup>3</sup> Primary buyouts refer to transactions where the target company for the first time is acquired by a financial sponsor.

engage in worse deals at the end of the investment period, since deploying capital will increase their fees. As the information cost is lower in secondary buyouts, they are more likely to occur in this scenario.

### **2.2.5 Exit Strategies**

There are three main exit strategies in PE, sale to a strategic buyer, IPO, or a sale to a financial buyer, i.e. secondary buyout. In addition, 6% of all deals end in bankruptcy or reorganization (Kaplan and Strömberg, 2009). Brav and Gompers (1997), Cao and Lerner (2009), and Levis (2011) find that PE backed IPOs outperform other new listings for both buyout and VC backed portfolio companies. However, following the IPO these firms show operating underperformance, as a result of the previously favorable market conditions with high industry valuations (Cao, 2011). The strategic buyers usually consist of competitors, suppliers, or customers who aim to integrate the PE owned company into their existing organization and create long-term operational synergies. This type of exit strategy is a favorable exit route for a PE firm, since the synergy estimations increase the price that the strategic buyer is willing to pay (Bansraj et al., 2019).

For a long time, PE firms favored exits through an IPO or strategic sale rather than exiting to a financial sponsor. However, more recent data shows an increased volume of secondary exits in the industry (Kaplan and Strömberg, 2009). When considering an exit through a secondary buyout, there is a tradeoff between realizing the full potential of the portfolio company and leaving some potential for value creation for the next owner (Hammer et al., 2017). The authors further explain that in terms of add-on acquisitions there is an incentive to not fully realize the potential, as this would likely prolong the holding period. The perception that some GP's choose to exit portfolio companies prematurely (i.e. leave money on the table), is a puzzle academics have been trying to solve for a long time. One potential explanation is to ensure participation of the most liquid LPs in the fund (Maurin et al., 2020) and another one is based on asymmetric information in terms of attracting new LPs based on performance persistency (Hochberg et al., 2014). Secondary buyouts are more common under certain conditions, when the debt market conditions are favorable, when liquidity is in high demand for sellers and equity market conditions are unfavorable (Sousa and Jenkinson, 2012). Wang (2012) finds that 77.6% of all exits under the specific circumstance of favorable debt, and unfavorable equity, market conditions are secondary buyouts. Oppositely, under unfavorable debt- and favorable equity market conditions, the share of secondary buyouts is 32.1%.

As a result of the importance of favorable equity and debt markets when considering exit timing and route, new fund structures such as an evergreen fund can offset the dependence on capital markets for PE funds. By having an indefinite investment horizon, PE firms can hold assets until the optimal exit situation and therefore generate more stable and less risky returns (Espinoza, 2018). Another common way of solving the market timing issue is through extending the fund's lifetime, from the typical ten years, with an additional two to three years upon approval from the LPs (Døskeland and Strömberg, 2018).

### **2.2.6 Agency Problems Between LPs and GPs**

The traditional and most common PE fund structure has a limited life of usually ten years. This ensures discipline and the need to work quickly and efficiently to deliver returns to investors. Chung et al. (2012) argue that the possibility to raise future funds is an important incentive in PE, which forces GPs to act in the interest of LPs. The authors argue that reputation and past performance are important determinants of future fund raising and hence there is a discipline benefit of having regular fundraising. There are however negative effects of a limited fund life as well, which speak in favor of eg. extension funds. Several previous studies argue that the state of financial markets is a key determining factor when PE funds are looking to exit portfolio companies successfully (Gompers and Lerner, 2000; Jenkinson and Souza, 2015). Therefore, one rationale for allowing extension funds would be improved flexibility when facing a non-optimal exit climate (Espinoza, 2018), or to avoid leaving too much value creating activities on the table (Hammer et al., 2017). There is also evidence that pressured sellers generate lower returns (Arcot et al., 2015; Degeorge et al. 2016). Alternatively, critics could claim that extending investments are made on a non-LP friendly basis, for reasons such as avoiding disclosure of non-favorable IRRs (internal rate of returns) (Barber and Yasuda, 2017) or exploiting management fees (Phalippou, 2009; Axelson et al., 2009a).

According to Phalippou and Gottschalg (2009) misalignment of incentives may arise between GPs and LPs, as the former want to maximize fees rather than returns. In certain situations, GPs earn higher fees by selling good investments early and holding on to poor investments longer, which does not yield higher returns for the LPs. Some agreements allow for capital from investments lasting less than 18 months to be reinvested, incentivizing an early exit in order to effectively increase invested capital and hence management fees. Phalippou et al. (2018) mention other less apparent fees such as transaction and monitoring fees charged by the GPs to the portfolio companies. According to the authors these have historically been a conflict, but the use of such fees has decreased significantly due to complaints from LPs and SEC investigations into PE agreements.

In the PE context, an agency problem may arise from “window dressing” in connection to fundraising activities. Barber and Yasuda (2017) show that GPs with low reputational capital time their fundraising activities to a higher degree, so that the next fund is raised in connection to successful exits in the previous fund. Arcot et al. (2015) also show that pressured buyers, i.e. near the end of the investment period of the fund, tend to engage more in SBOs and that these deals generate lower returns. Robinson and Sensoy (2013) find that instantly when GPs achieve the criteria to receive carried interest, they tend to start exiting companies more quickly.

Robinson and Sensoy (2013) find no empirical support that higher fees charged by PE fund managers lead to lower performance in terms of returns to LPs net of fees. Instead they suggest that higher fees lead to managers delivering higher returns on a gross basis. However, for large, high carry funds the outperformance is lower than for smaller high carry funds. As for the relationship between GPs and LPs, according to Gompers et al. (2016) PE investors believe that LPs use absolute performance rather than relative performance as the main basis for



evaluation. Ivashina and Lerner (2019) show that the share of carried interest received by individual partners is very dependent on whether they are founders or not, rather than their previous performance. The authors further conclude that unequal distributions of carried interest lead to more senior partner departures and this in turn affects the ability to raise capital in subsequent funds negatively.

### **3. Quantitative Analysis of Extended Funds**

In this section we present the methodology and data used for our quantitative analysis of the performance of extended funds, as well as the results found and a concise discussion which is further elaborated in the discussion of section 7.

#### **3.1 Introduction**

Previous literature on PE is quite exhaustive and multiple papers have studied PE fund performance. Frequent research can essentially be divided into four categories: i) PE returns compared to public equity markets, ii) what factors drive PE fund performance, iii) performance of primary buyouts versus secondary buyouts, and iv) the performance persistence among PE funds (Gohil, 2014) (see *section 2.1 Private Equity Performance* for an overview).

However, to the best of our knowledge, no studies on the performance of extension funds exist. In this paper, we aim to contribute to the area by studying the performance of funds with longer investment horizons, as well as analyzing the incremental returns from extended funds specifically.

#### **3.2 Definitions**

The literature often divides PE into venture capital and buyouts, where venture capital is viewed as early, seed, and growth investments. In this paper we will only study the performance of buyouts. Funds are classified as buyout funds if most investments made were buyouts with majority ownership in the portfolio company.

When comparing and evaluating performance of PE funds, researchers and practitioners generally look at performance through two measurements, IRR and CM. In this study we compare the returns and cash flows to LPs net of all fees, management fee plus carried interest and portfolio company fees.

The typical fund tends to have a lifetime of ten years, which can be extended two to three years (Phalippou and Gottschalg, 2009). Therefore, we choose to define ten years as the threshold between “normal” funds and “extended” funds, which hereafter will be referred to as such.

#### **3.3 Methodology**

In order to conduct the study of extended fund performance we adapt two different methodologies. In the first step we use a simplified method similar to the one suggested by

Gohil (2014), while we in the second phase more directly examine the cash flows from the extended funds. Both methodologies are presented below.

In the first step, fund performance is compared using the traditional PE fund measurements of IRR and CM, looking at both equally weighted and size weighted returns. The critical assumption to be made is the definition of extended funds, which will result in the categorization of funds as either normal funds or extended funds. Phalippou and Gottschalg (2009) claim to eliminate extension and evergreen funds by filtering them out from the data set. By using a data set from Thomson Venture Economics with fund performance between 1980 and 1993 the authors filter out extension and evergreen funds by excluding all funds from the sample that cannot be considered liquidated after ten years. We adapt the same technique, but in reverse, with the goal of creating a subsample consisting *only* of extended funds. In order to check if our findings are statistically significant, we perform a two-tailed t-test with the null hypothesis of equal returns and a significance level of 5%. We assume unequal variances and that the returns approximately follow a normal distribution.

In the second analysis, we study the theoretical incremental investment of buying the PE fund for the NAV recorded ten years after its inception. The analysis relies on the assumption that NAV in year ten is the true value of the fund at that point in time. In the proceeding step we compare this to the following cash flows, consisting of capital calls and distributions (net of fees). From these cash flows we then get fund performance by calculating the IRR and CM for a theoretical portfolio consisting of all extended funds for each individual vintage. For comparison the performance between year one and ten is defined as all the cash flows up until year ten and the same NAV used in the incremental investment is discounted back as a final pay out.

In order to evaluate the performance of extended funds not only in absolute terms but also on a relative basis, we find public equities to be an appropriate comparable investment strategy. In accordance with Kaplan and Schoar (2005) we use PME (public market equivalents) to compare returns, since neither the IRR nor CM offers a direct comparison to public markets. The PME matches the investment into the PE fund with an equivalent and simultaneous investment in a public market portfolio. The calculation discounts all cash outflows (capital calls and distributions) from the fund at the total return of the market portfolio and divides that result with the NAV, which serves as the investment proxy. For LP's the PME could be viewed as a market adjusted CM net of all fees, meaning that a fund with a PME greater than one has outperformed the public equity market during that time period. When calculating PMEs, we use the daily corresponding S&P 500 index as a proxy for the public market. This is arguably an appropriate standard of comparison for institutional investors (Harris et al., 2014).

A more detailed presentation of the methodology is found in *Appendix A Exhibit 1.1-1.4*.

### **3.4 Data**

Fund performance and cash flow data was retrieved from Preqin. The Preqin data set is based on reporting of fund performance by PE firms' GPs, as well as LPs in the funds. Since

performance reporting is conducted by both GPs and LPs the validity of our data set appears to be more robust. However, we can do little to verify the degree of dual reporting for our specific sample. The data set is comprehensive but should not be considered exhaustive and some funds with missing data for returns or cash flows have been excluded from the study.

In accordance with Kaplan and Schoar (2005) we only include funds that are either officially liquidated or have unchanged returns reported for the last eight quarters. Since we eliminate all funds that have not been completely liquidated, we also avoid the risk of “looking ahead bias” described in Carhart et al. (2002). Funds with less than USD 50 million in capital commitments are excluded and the data set consists only of funds primarily located and invested in the United States and Europe (Kaplan and Scholar, 2005).

The motive for using only liquidated funds is to enable analysis of real fund returns rather than estimated values. Previous researchers have made two different assumptions about the treatment of NAVs. Kaplan and Schoar (2005) assume NAVs to be unbiased and a fair assessment of the true market value of the fund and treats the last NAV as a cash inflow at the end of the sample period. The alternative way is to write off NAVs completely (Ljungqvist and Richardson, 2003; Phallipou and Gottschalg, 2009). Since PE funds self-report valuations for ongoing investments (NAV) these numbers are not as accurate as true returns. National Venture Capital Association provides guidelines on how PE funds could mark-to-market the portfolio companies’ values, but funds tend to adjust their NAVs slowly (Ewens et al., 2013). By only selecting funds that are officially liquidated, the NAV is therefore not a problem in our data set.

To be able to perform the incremental analysis of extended fund performance, we must still treat NAV as the true value of the theoretical investment. This assumption is clearly debatable especially considering our previous argumentation around NAVs. However, without the assumption the additional analysis, using our methodology, would not be possible to conduct.

The data we use might also suffer from a sample selection bias arising from the fact that investors might not be as committed to report performance data when funds have underperformed. There is a possibility that our data sample is not representative for the whole PE industry as returns usually vary a lot between different funds. This has earlier been highlighted by Lerner et al. (2007) who documented large discrepancies between the performance of different PE investors.

The comprehensive data set consists of 384 funds with vintage years between 1993-2002. The largest discrepancy between the two subsamples can be found in the difference in total fund sizes, where normal buyout funds had total capital raised of USD 201,506 million while extended funds only had USD 69,717. For the analysis of the incremental performance of extended funds the same data set is used. However, 13 new funds which were previously excluded due to missing return data were included and some funds with missing cash flow data excluded, resulting in 158 funds. See *Table 1* below for presentation of the data set.

**Table 1: Details of Data Sample**

*This table shows the breakdown of the final Prequin sample data set consisting of return and cash flow data from all American and European funds between 1993-2002. Non-liquidated funds and funds with missing values have been removed. Normal funds are defined as funds liquidated within ten years and extended funds as funds liquidated after more than ten years.*

	Normal Fund	Extended Fund	All Funds
	<i>Less than 10 years</i>	<i>More than 10 years</i>	
Number of Funds	220	164	384
Total Capital Raised (in mn USD)	\$201,556	\$69,717	\$271,273
Number of US Funds	164	103	267
Number of European Funds	56	61	117
Number of First Time Funds	66	80	146

### 3.5 Results

The results for the comparison of fund performance of normal funds and extended funds are presented in *Table 2*. The first column shows the returns, in terms of IRR and CM, for normal funds. The second column shows the same return metrics for extended funds. In the table, a clear mean outperformance for extended funds can be observed, as illustrated in the third column. Performing a two-tailed t-test with the null hypothesis of equal returns, assuming unequal variances, validates that the difference in mean IRR and CM is statistically significant at the 5% level. See *Appendix A Exhibit 2* for a more detailed overview of the t-tests. The standard deviation among extended fund returns is considerably higher than for normal funds, resulting in a quite similar median return.

**Table 2: Performance Comparison by Type of Funds**

*This table shows the overall performance of the different fund categories throughout the whole sample period. Mean returns in terms of IRR and CM have been calculated both as equally weighted and size weighted returns. The difference column is calculated as extended fund returns minus normal fund returns. The size of the total fund is based on the total fund size in US dollars.*

	Normal Fund	Extended Fund	Difference	All Funds	t-test statistic*	Critical t value
	<i>Less than 10 years</i>	<i>More than 10 years</i>				
<b>IRR</b>						
Mean	15.44%	21.75%	6.31 p.p.	17.63%	-2.36	+/-1.97
Mean Size Weighted	15.42%	19.43%	4.01 p.p	15.88%		
Median	14.22%	16.20%	1.98 p.p	14.63%		
Standard deviation	17.15%	30.77%	13.62 p.p	23.76%		
Distribution (25th; 75th)	5.98% ; 23.86%	8.95% ; 27.07%		6.50% ; 23.70%		
<b>Cash Multiple</b>						
Mean	1.76x	2.07x	0.31x	1.89x	-3.06	+/-1.97
Mean Size Weighted	1.76x	1.88x	0.12x	1.80x		
Median	1.76x	1.88x	0.12x	1.80x		
Standard deviation	0.73x	1.10x	0.37x	0.93x		
Distribution (25th; 75th)	1.28x ; 2.19x	1.46x ; 2.42x		1.32x ; 2.29x		

\* Two tailed t-test assuming unequal variances, alpha = 0.05

In Table 3, return data by vintage year is presented. As can be seen in the table there is a quite strong correlation of 0.65 between normal and extended funds with better performance, occurring for similar vintages. The early and later vintage funds have on average performed best in terms of IRR and CM, both when looking at equally and size weighted means. The extended funds clearly outperform normal funds during six of the ten years, whereas two years are more or less similar and during the remaining two years extended funds underperform compared to normal funds.

**Table 3: Performance of Funds per Vintage Year**

*This table shows mean IRR and CM by vintage year. All return numbers are based on means for that particular fund and vintage year, where we display both equally and size weighted returns. Number of funds per vintage year as well as the size in US dollars of the total fund is presented. The difference column is calculated as extended fund returns minus normal fund returns. All funds\* refers to the average returns throughout the whole sample period.*

Normal Fund							Extended Fund						Difference	
Less than 10 years							More than 10 years							
Equally weighted mean							Equally weighted mean						Equally weighted mean	
Size weighted mean							Size weighted mean							
Vintage year	No	Size mUSD	IRR	CM	IRR	CM	No	Size mUSD	IRR	CM	IRR	CM	IRR	CM
1993	7	2 672	20.86%	2.08x	21.71%	2.19x	9	1 910	32.32%	2.52x	31.86%	2.52x	11.46 p.p	0.44x
1994	13	8 600	24.15%	2.06x	23.51%	2.11x	20	14 031	40.40%	2.41x	37.88%	2.20x	16.25 p.p	0.35x
1995	15	9 622	12.97%	1.52x	15.47%	1.64x	13	6 164	19.70%	1.93x	16.37%	1.83x	6.73 p.p	0.41x
1996	19	7 532	12.86%	1.69x	14.41%	1.71x	13	3 682	23.14%	2.14x	15.07%	1.69x	10.28 p.p	0.45x
1997	21	23 330	12.42%	1.65x	14.93%	1.77x	22	8 711	11.80%	1.62x	8.67%	1.47x	-0.62 p.p	-0.03x
1998	35	36 232	5.60%	1.41x	4.61%	1.32x	20	10 464	14.84%	1.88x	13.01%	1.84x	9.24 p.p	0.47x
1999	32	29 087	7.02%	1.48x	9.84%	1.60x	14	5 245	13.84%	1.85x	11.97%	1.71x	6.82 p.p	0.37x
2000	37	50 122	19.40%	2.03x	17.94%	1.93x	23	5 480	19.30%	2.22x	21.16%	2.29x	-0.1 p.p	0.19x
2001	19	17 606	28.57%	2.15x	27.25%	2.15x	17	7 204	24.06%	2.22x	22.98%	2.04x	-4.51 p.p	0.07x
2002	22	16 754	24.31%	2.03x	24.42%	1.87x	13	6 995	21.70%	2.02x	21.56%	2.04x	-2.61 p.p	-0.01x
All funds*	220	201 556	15.44%	1.76x	15.42%	1.76x	164	69 717	21.75%	2.07x	19.43%	1.88x		

Correlation equally weighted IRRs 0,65

For the incremental investment analysis, we observe that the data sample becomes a bit smaller with a total of 158 funds fulfilling the requirements outlined in the methodology. Over the first ten years, the mean IRR equals 13.92% and the mean CM 2.21x for the extended fund (although not yet extended) assuming NAV year ten as a final pay out. For the remaining period, where the same NAV is used as the investment into the extended fund, the mean IRR equals 9.14% and the mean CM 1.25x. The PME indicates slight outperformance compared to S&P 500, with a mean value of 1.09.

**Table 4: Incremental Performance of Extended Funds**

*This table shows the incremental return based on IRR, CM and PME of investing into buyout funds by vintage year, ten years after the inception of the fund. The incremental investment is the sum of all funds' NAV that are not yet liquidated and has reported fund activity within eight quarters of the ten-year inception point. Capital calls and distributions for the following years are then considered to get an IRR and CM for each vintage year. For comparison the performance between year one and ten is also calculated. The PME ratios are calculated by comparing PE returns to equivalent-timed investments in the S&P 500.*

Vintage Year	Obs.	Year 1-10			Extended Year	> Year 10		
		IRR	CM	PME		IRR	CM	PME
1993	8	22.29%	n.a	3.86	2003	47.26%	1.80x	1.64
1994	15	22.46%	4.16x	1.76	2004	9.58%	1.17x	1.10
1995	12	6.45%	2.39x	1.25	2005	32.27%	2.38x	2.25
1996	20	9.75%	3.69x	1.93	2006	-0.20%	0.99x	0.98
1997	20	8.08%	1.20x	0.83	2007	-2.15%	0.93x	1.05
1998	26	7.99%	1.20x	1.45	2008	9.15%	1.29x	0.91
1999	23	8.95%	1.74x	2.05	2009	7.16%	1.23x	0.85
2000	20	18.53%	1.04x	1.30	2010	12.56%	1.35x	1.06
2001	7	12.60%	2.47x	2.44	2011	-20.42%	0.44x	0.44
2002	7	22.14%	2.00x	0.63	2012	-3.85%	0.92x	0.63
Average	158	13.92%	2.21x	1.75		9.14%	1.25x	1.09

### 3.6 Analysis

The results in *Table 2* and *3* clearly demonstrate an outperformance for extended funds, with equally weighted and size weighted returns higher than for the normal funds. Our findings could support those of Espinoza (2018), that a more flexible exit strategy increases fund returns. The less significant difference in median returns indicate that extended funds are more variable in their returns compared to the normal lifetime funds. As there is outperformance in both measures, but less so for the median, this could potentially indicate that the most successful funds tend to keep companies longer. An alternative explanation for the outperformance of extended funds could be that better-performing funds are more likely to be granted extensions from their investors and therefore able to benefit from more flexibility and time favorable market conditions when exiting portfolio companies.

We can also observe a clear connection between the returns presented in *Table 3* and the general health of financial markets as demonstrated in prior research (Gompers and Lerner, 2000; Jenkinson and Souza, 2015; Haddad et al., 2017). In *Appendix A Exhibit 3* a graph of credit spreads throughout the period is displayed. By comparing the returns of the different fund vintages and their corresponding exit cycle with the credit spread for that period we can see that lower interest rates tend to generate better performance.

Although the chosen first methodology gives us some insights into what performance looks like among normal and extended funds, it is hard to make any generalized conclusions based on the results. The primary limitation of the first stage analysis is that the differences in return data does not necessarily mean a better performance during the extended years. Instead the

higher IRRs and CMs observed might as well be the result of better performance for these funds between year one and year ten.

Therefore, we consider the second methodology to add additional depth to our analysis. By analyzing the incremental investment of buying the PE fund after year ten, the returns during the extended years can be isolated. The performance of the extended funds can then be compared to the performance of the same funds during the initial ten years with the assumption of NAV as a liquidating distribution. The results illustrated in *Table 4* reveal a different story about the returns generated in the extended periods. Even though some of the earlier vintages generated higher returns during the extended years, the average IRR is almost five percentage points lower compared to the first ten years. Comparing the IRRs of only the extended part of extended funds, with the results for extended funds in *Table 3*, almost all vintages generate worse IRRs and, in some cases, even negative returns. However, it should be noted that there seems to be a quite substantial difference between extended fund performance in *Table 3* and *Table 4* even when considering returns between year one and ten. This may indicate that the funds excluded due to missing data performed well above average, but no conclusion can be drawn about which period contributed the most. Alternatively, the 13 funds added in the second stage analysis might have performed well below average. The poor performance of the incremental investments, compared with the total fund return, does not necessarily mean that LPs are worse off. The positive average of 1.09 for the PME portfolio indicates that LPs were better off investing in the extended funds compared to the public equity market.

### **3.7 Potential Biases and Limitations**

Several potential biases and limitations exist in this study that unfortunately were not possible to eliminate. Firstly, the sample size had to be reduced due to missing performance metrics for some funds. Moreover, the vintage years covered in the study were to a certain extent picked based on data availability and the number of funds matching our criteria.

In our study we have assumed that the Preqin data provide an unbiased sample of PE performance. However, we believe that if a bias exists it would most likely take the form of underreporting by the worse performing PE funds, with GPs and LPs not as eager to report weaker returns. In turn, this yields a risk that the return data is overall above true averages. The observed performance for extended funds goes down when a few new funds are added in the cash flow analysis, which were excluded earlier due to missing returns data. This could potentially stem from the mentioned bias, although in accordance with Brown et al. (2019) we deem the risk of such a bias relatively low.

The general perception has for a long time been that a normal PE fund has a finite lifetime of ten years. However, in recent years data shows that the average fund life exceeds 13 years (Phalippou and Gottschalg, 2009). Given the period of time included in this study, we nonetheless consider ten years to be a fair assumption. Moreover, we cannot neglect the fact that some buyout funds included in our sample might have a longer investment horizon strategy rather than being explicit extension funds, which is why we instead chose to define the

subsample as extended funds. This concern extends to evergreen funds as well, which we aim to exclude by only looking at liquidated funds.

For the incremental investment analysis, we rely on the NAV year ten as the true value of the PE fund. This assumption is debatable but there is some academical support for NAV on average not being overly inflated but instead conservative (Brown et al., 2019; Jenkinson et al., 2015; Barber and Yasuda, 2017). Lastly, as NAV is recorded at one specific date, there is a risk of deviation due to timing, whereas the S&P returns used to calculate the PME are recorded daily over the entire period.

## **4. Case Study Methodology**

In this section, we present our choice of methodology and data collection for the qualitative part of this thesis. We also discuss the research quality of our approach in terms of reliability and validity.

### **4.1 Empirical Methodology and Data Collection**

Given the complex nature surrounding the matter of interest, we believe a case study is the best possible methodology to study the outlined research questions around PE value creating strategies and exit dynamics. Multiple researchers have favored this methodology in situations when faced with unique and complex real-life circumstances, where other research methods are unable to establish causality (Eisenhardt, 1989; Siggelkow, 2007; Dubois and Gadde, 2002). For studying a specific situation, a case study hence might be a better alternative to reveal specific insights and understanding of phenomena by examining activities in a real-life context (Idowu, 2016). Miller (1977) argues that most financial decisions involve a high degree of psychological and social factors, which through cases can be far more accurately recited compared to other scientific methods. In this thesis, we use the same methodology as Yin (2014) presented, which suggests the use of interviews as the primary source of data when the purpose is to in-depth analyze complex business situations. With the ultimate goal of providing the corporate finance and PE faculty with teaching material for students, we have been inspired by similar work in this area (Gompers et al., 2019).

In order to establish a comprehensive understanding of the Anticimex case, we interviewed several key individuals involved in the transaction, transformation as well as maintenance of the company throughout the period of interest. Interviews have primarily been selected based on the individuals' relevance as decision-makers in their positions. However, we have complemented this with one interview of an independent party. The aim is to make sure that we have acquired all relevant information surrounding the case, but also to reduce the risk of being overly influenced by dependent parties with a potential bias. Moreover, we have put additional emphasis on individuals that are close to the core of the case. Therefore, we interviewed two people from EQT's deal team, one being the leading partner in the Anticimex transaction. An interview was also held with a former investment director at Ratos, actively working with Anticimex during the entire ownership period and responsible for the holding 2009-2012, to gain multiple perspectives. To get a more detailed understanding of the



operational value creating activities which EQT undertook in Anticimex we interviewed both the CEO of Anticimex from 2013 to 2015, as well as the successor. To gain insights into the different governance engineering techniques used, as well as a more complete understanding of the case overall, additional interviews were also held with key management personnel who were present during Ratios as well as EQT's tenure.

**Table 5**  
*Overview of interviewees*

<b>Interviewee</b>	<b>Company and role during case</b>	<b>Current company and role</b>	<b>Dependence</b>
Per Franzén	EQT – Partner	EQT – Partner	Dependent
Carl Johan Renström	EQT – Director	EQT – Partner	Dependent
Olof Sand	Anticimex – CEO and President	Zington/Regin – Chairman	Dependent
Thomas Hilde	Anticimex – VP Region North	Anticimex – President Region Europe	Dependent
Mats Samuelsson	Anticimex – Managing Director Insurance	Anticimex – President Insurance	Dependent
Alexander Storckenfeldt	Anticimex – Regional Manager	Anticimex – CEO Sweden	Dependent
Jarl Dahlfors	Loomis/Anticimex – CEO and President	Anticimex – CEO and President	Dependent
Vidar Andersch	AP6 – Investment Director	AP6 – Investment Director	Dependent
Henrik Joelsson	Ratos – Investment Director	Independent strategic advisor	Dependent
Bengt Hellström	AP3 – Head of Alternative Investments	AP3 – Head of Alternative Investments	Independent

Given that interviews serve as the foundation around which the case study is built, we have put a lot of work into preparing, conducting and subsequently documenting the interviews. The interview technique used can be described as semi-structured (Merriam, 2015), in the sense that we did not exclusively stick to a predetermined interview guide, but also adapted to the situation. Each interview was an opportunity to develop a better understanding of the case and see the business dynamics from multiple angles, hence we used follow-up questions in order to maximize the benefit.

Throughout the interviews with individuals from EQT, Anticimex and Ratios, some of the questions were the same or similar, where interviewees spoke freely about their experiences and impressions. However, some questions were more specifically designed with regards to the individual's role in the case. At least one week before any meeting, a short document with questions was sent over to interviewees, allowing them to prepare and revisit their memories, as some time had passed since the period of interest. The interviews took place in February and March of 2020 and the length of interviews ranged between 30 and 90 minutes. Most interviews were intended to be held in person, except for two where the interviewees lived in another city or country. However, due to the outbreak of Covid-19, several interviews changed format to video calls instead. The recorded material of all interviews was transcribed within 24 hours in order to retain impressions and then discussed by both authors. All interviewees agreed to

answer any follow-up questions, an opportunity which was used in several cases, in order to enhance understanding of a specific situation or to collect complementary data.

To complement the interviews, we also used secondary data sources consisting of two confidential industry reports from two different consultancy groups, which we received from EQT. The reports were mainly industry analyses, including size and key drivers, customers and competitors. In addition, there were management projections as well as forecasts and conclusions from the consulting firms. The content of these materials is described in some parts of the case study but cannot be published due to their confidential nature. These documents helped us to both challenge statements and ask follow-up questions during our interview sessions. Public documents were also considered to get a more objective and multicolored picture of the case. Public documents foremost included Anticimex' financial reports and press releases, but we also used tertiary data from FactSet and Capital IQ, as well as general media coverage.

## **4.2 Research Quality**

The choice of a case methodology affects the research quality of this thesis in several ways. Conducting a single case study limits the ability to yield generalizable results. Therefore, researchers have continuously criticized case studies for not being a proper scientific method, and in many cases providing the reader with too specific details, rather than more generalizable and applicable results (Abercrombie et al., 1994; Yin, 2014). The reliability of the case study is heavily influenced by the setting of the interviews as well as the interaction between interviewers and interviewees. Moreover, the generated data set from interviews is subject to interpretation by the researchers and is highly subjective. Taking these factors into account, we cannot conclude that any replicating study of the case would necessarily lead to the same results.

In this thesis we use a technique often referred to as triangulation in the literature, where researchers analyze the case through multiple sources of information, in order to increase the validity (Stenbacka, 2001; McMillan and Schumacher, 2010). We conducted in-depth interviews with all major decision makers at the time of the case. Apart from interviewing dependent parties we also interviewed one unrelated party in the hope of providing a more nuanced picture of our research questions. Furthermore, both researchers were present during all interviews, one being primarily responsible for conducting the interview, while the other took notes and added follow-up questions.

We have tried to be as impartial as possible when analyzing the case as well as conducting interviews. But knowing, ex-post, that this particular deal has been very successful might bias interviewees as well as the researchers. Therefore, we believe that this case study is not representative for the average PE deal and should rather be viewed as a "best practice case". Even though the case is applicable only to EQT and Anticimex, we believe it can serve as motivation for future research, especially within the novel phenomenon around PE buy-and-build cases and why PE firms choose to prolong investments.

## 5. Case Background

In this section we provide some useful context for our case study, including an overview of the Swedish PE market and its main actors, as well as an overview of EQT and Anticimex.

### 5.1 Development of the Swedish PE Industry

The Swedish PE market emerged in the late 1970s, where the stagnation in industrial development paved the way for venture capital as an important catalysator for entrepreneurial innovation and growth (Karaomerlioglu et al., 2000; Isaksson, 2006). The buyout fund market developed in parallel with the VC market, where the initial Swedish buyout funds almost exclusively were founded as in-house projects by either banks, insurance or investment companies. During the 1980s the industry experienced strong growth due to the increased interest in Swedish equity markets and general positive sentiment towards PE. The development was abruptly paused by the Swedish banking crisis in the early 1990s. However, as Sweden later recovered from the crisis, the industry returned to the upwards sloping trajectory. The amount of institutional capital invested in Swedish PE funds increased fivefold for the period 1994-1997, compared to the period 1983-1993 (Söderblom, 2011). Historically, Swedish PE funds have had strong international reputations and delivered above industry average returns to its LPs. Many of the LPs are international, originating from especially the US and other Nordic countries (Næss-Schmidt et al., 2017).

By the end of 2019, the Swedish PE market was not only the largest market in the Nordic region but also the fastest growing. Since 2007 a total of SEK 266 billion has been invested in a variety of portfolio companies all over Sweden. These cross-industry investments consisted of 1,160 portfolio companies as of 2019, which employed about 170,000 people, representing 3.38% of total Swedish employment (SVCA, 2020).

### 5.2 Overview of the Swedish PE Market in 2012<sup>4</sup>

In 2012 there were five main Swedish PE houses of considerable size, having raised funds larger than one billion EUR; EQT (see *EQT overview*), IK Investment Partners, Nordic Capital, Altor Equity Partners and Triton. In addition, there was the publicly listed investment company Ratos, also investing in PE but as a listed company. IK was founded in 1989 by Björn Savén as the first Nordic PE firm (IK, 2020). The firm had raised six prior funds in 2012 and the most recent fundraising (2007) amounted to 1,675 million EUR. IK invested in many industrial companies in their earlier funds but progressed to a more even split over time, including business services and consumer goods, as well as some healthcare investments in addition to the industrials. Nordic Capital was founded in 1989 by Robert Andreen and Morgan Olsson (Nordic Capital, 2020). The firm had raised seven prior funds in 2012 and their most recent fundraising amounted to 4,300 million EUR (2008). Nordic Capital had a significant focus on industrial goods in their early funds but starting with the fourth fund healthcare became a large share. The consumer sector was the largest in terms of number of investments for the seventh

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<sup>4</sup> All fund information in this section was retrieved from the Preqin database.

fund. Both IK and Nordic Capital were preparing to raise new funds in 2013. Altor Equity Partners was founded in 2003 by Harald Mix, former partner at IK, and Fredrik Strömholm, focusing only on Nordic investments and often complex business situations (Altor, 2020). Altor had raised three prior funds in 2012 and the last fundraising in 2008 amounted to 2,000 million EUR. Triton was founded in 1997 by Peder Pråhl, focusing on mid-market investments across Europe within the industrial, business services and consumer / health sectors. Triton had raised three earlier main funds, the latest amounting to 2,400 million EUR in 2009, and were preparing to raise a new fund later during the year of 2012. See *Appendix A Exhibit 4–7* for a complete fund history of the main Swedish PE firms.

On an aggregate level, the PE deal value in Sweden was 1,993 million EUR in 2012 (Statista, 2019). The Swedish PE market is prominent and in 2012 there were a little more than 100 PE funded companies and these companies had approximately 20,000 employees. Total PE funding in Sweden amounted to 150% of GDP in 2012, which was several times higher than the Nordic average (Næss-Schmidt et al., 2017). See *Appendix A Exhibit 8* for historical development of the European PE market.

### 5.3 EQT Overview

EQT was founded in Stockholm in 1994, as one of the first PE firms in Northern Europe, by Investor AB, AEA Investors, SEB and several individuals including Conni Jonsson and Thomas von Koch. The firm was set up to be completely independent from Investor. In 1995 the first fund was launched, EQT I, focusing on Nordic buyouts (See *Table 6* for complete EQT main fund history). As of 2020 EQT has more than 700 employees and offices in 15 different countries, in Europe, APAC and North America. Since the start, EQT has raised approximately EUR 62 billion in capital and the firm currently has around EUR 41 billion in assets under management, spread among 19 active funds. EQT Partners serve as advisors to each individual EQT fund (EQT, 2020a).

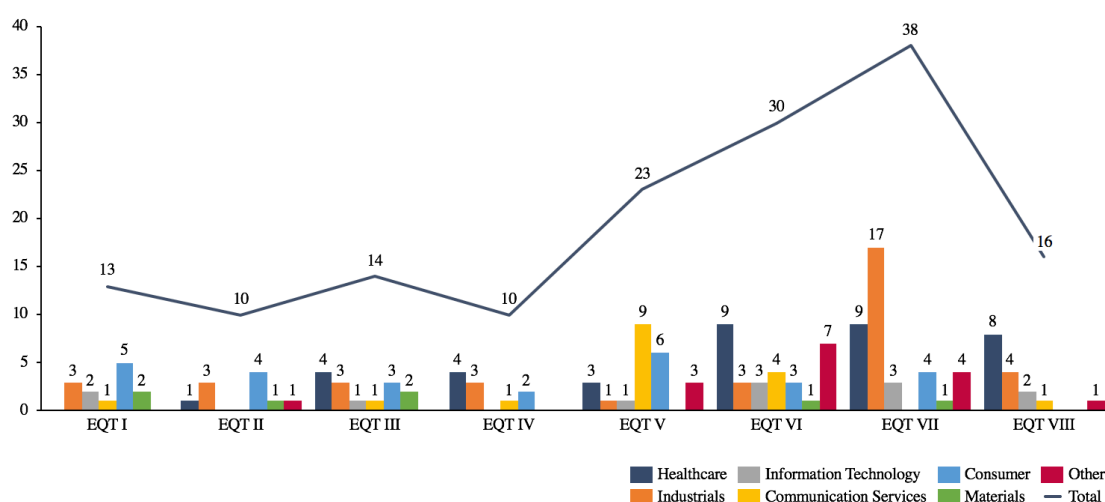
EQT currently divides their operations into three distinct segments, private capital, real assets and credit. The firm can be described as generalists, as they mix different sectors and strategies across different geographies. One thing that enables this broad strategy is the EQT Network, a composition of industry experts across a wide range of sectors, which EQT brings in for advice and/or management of companies. However, the core sectors of interest for EQT are healthcare, TMT, services and industrial technology (EQT, 2020b). See *Figure 12* for complete EQT main fund sector overview. EQT focuses on investments where they gain control, or at least co-control of portfolio companies, in the mid cap (40-125 EUR million) and large cap segment (125-1,000 EUR million) (EQT, 2020a). Besides the traditional buyout funds EQT has raised four infrastructure funds, two real estate funds and two venture funds. EQT Infrastructure invests in the Nordic region, Continental Europe and North America, in the range of 200-800 million EUR. EQT Ventures is a combination of a VC firm and a startup, with a project called Motherbrain which aims to identify technology trends and opportunities, along with the VC funds (EQT Ventures, 2020).

After the acquisition of a portfolio company, EQT appoints a board of directors and a chairperson, where the chairperson is an EQT advisor. One characteristic for EQT and their handling of portfolio companies is the TROIKA model. This refers to more informal meetings which are held on a continuous basis, between a trio consisting of the chairperson, the CEO and the responsible EQT partner.

On 24<sup>th</sup> of September 2019 EQT was listed on Nasdaq OMX with a free float of approximately 20% (Investor, 2019). The stock price rose more than 25% during the first trading day, giving the company a market capitalization of more than seven billion EUR (Financial Times, 2019).

**Figure 12**

*Number of investments per sector in EQT main funds*



*Source: CapitalIQ*

**Table 6**

*EQT main fund history*

Fund	Million EUR	Description	Year of closing
EQT I	300*	Focus on Nordic buyouts	1995
EQT II	676	Invests in a diverse range of sectors	1998
EQT III	2,000	Specializes in buyouts, buy-ins and joint ventures with a focus on mid cap companies in Northern Europe	2001
EQT IV	2,500	Specializes in buyouts, buy-ins and joint ventures with a focus on mid cap companies in Northern Europe	2004
EQT V	4,250	Specializes in SBOs, acquisitions, public-to-private transactions, spinoffs and international expansion for mid- and large cap in Northern Europe	2006
EQT VI	4,750	Focus on Northern and Eastern Europe. Also makes secondary investments in Central Europe. Operates in both the mid- and large cap segments	2011
EQT VII	6,750	Focus on Northern and Eastern Europe in the mid- and large cap segments. 17 out of 38 investments in industrial sector	2015
EQT VIII	10,750	Focus on buyouts in healthcare, TMT and service sector	2018

Note: \*EQT I fund size quoted in USD. Average of EUR/USD FX rate 31/12 2014 and 31/12 2015 used to convert into EUR.

*Source: CapitalIQ and fxtop*

## 5.4 Anticimex History

Anticimex was founded in 1934 as a family owned enterprise, focusing on pest control. In Sweden during the 1930s almost half of all apartments had bedbugs, much due to increasing urbanization. At that point in time the local pest control workers would come to the residence, clear it from bedbugs and charge a fee for their services. Anticimex disrupted this transaction-based business model by instead focusing on the landlords. They promised the landlords to deal with any pest problems, as many times as needed, against a fixed yearly fee paid in advance. In other words, they changed the pest control service from being a traditional craftsmanship to a subscription-based model.

Already in 1936 Anticimex set up a franchise model, which at the time consisted of 15 different offices. This contributed to creating the decentralized structure which has been present in Anticimex over the years. In the 1940s Anticimex broadened its offering to include mice and rats and started targeting customers living in detached houses as well. As awareness of the pest problem increased, Anticimex set up an insurance division allowing customers to insure themselves against pest problems. In the early days Anticimex provided the insurance, but since then this has been taken over by the insurance companies and is now part of the home insurance provided by Swedish companies. See section 5.8.1 *Anticimex Insurance model* for a more detailed description. In 1973, the first international expansion took place, as Anticimex started operations in Norway. The company later diversified, in the 1980s, and started offering solutions for moisture, mold and food hygiene. Expansion of the food hygiene solution continued in the 1990s, where Anticimex developed a solution enabling restaurants and grocery stores to meet regulatory requirements (Anticimex, 2020).

Anticimex has had several different owners throughout its history. Founded as an entrepreneurial company it was at one point in time owned by its partners or customers, the insurance companies. It has also been listed on the Swedish stock exchange. In 1992 Anticimex was acquired by Nordic Capital, one of the first PE houses in the Nordics, and later sold to the American pest control industry competitor ServiceMaster in 1995.

## 5.5 Anticimex Under Nordic Capital

In 2001 ServiceMaster decided to divest Anticimex together with part of the operations of industry competitor Terminix, as a part of a strategic shift to focus more on domestic operations, divesting many non-US operations (Crain's Chicago Business, 2001). Nordic Capital, familiar with Anticimex from previous ownership, saw an opportunity to develop the company further and bought it for approximately USD 100 million (SEK 1 billion). The combined Anticimex group then had around 1,400 employees and annual revenues of SEK 900 million, with a market leading position in Sweden and Norway. The vision Nordic Capital had was to implement the product offering and business model of Anticimex in all subsidiaries of the group, especially in Germany and the Netherlands. In addition, there was a plan for continued expansion in Europe through acquisitions, with a key interest in the markets of France, Italy and Spain. The markets in the rest of Europe were fragmented and Nordic Capital

saw the potential to, in the longer term, take over the position as market leader in Europe from Rentokil. The main intended exit strategy at the time of the purchase was through a re-listing of Anticimex on the Swedish stock exchange (Dagens Industri, 2001).

## **5.6 Anticimex Under Ratos**

In 2005, media reported that Ratos was acquiring Anticimex from Nordic Capital for SEK 1.65 billion (Svenska Dagbladet, 2005). Ratos is a publicly listed investment company focused on mid cap companies with a Nordic headquarter and market leading position, or potential to achieve it. The evolution of Ratos traces back to the founding of a steel wholesaler in 1866, then called Söderberg & Haak. Ratos has three core principles which guide its actions as owner; simplicity, speed in execution and “it’s all about the people” (Ratos, 2020a; Ratos, 2020b). Nordic Capital saw an opportunity to exit the company successfully after four years of ownership. At the time, Anticimex was the largest provider of pest control services in the Nordics and had recently started to gain traction in other areas such as building environment services and hygiene services. The business model, which in large consisted of pre-paid service contracts was one of the key rationales for the transaction from Ratos’ side. Another favorable characteristic of Anticimex was the experienced management team already in place. Many of the key executives, including the long-time CEO Peter Carrick, chose to stay on with Anticimex after Ratos acquired the company. Maybe even more importantly, they reinvested substantial amounts in newly issued stock, which brought the management stake in the company to 15% (2011) and aligned incentives. A benefit of buying from a financial sponsor was that the management team was already familiar with the tight governance systems usually deployed in the PE industry. Previous investment director Henrik Joelsson explains his take on secondary buyouts and the vision that Ratos had,

*“I believe it is widespread in the industry that one would rather acquire a company that has not been previously owned by a PE company. In a company that has been owned by entrepreneurs, there is usually way more value to add for an active owner [...] Long story short, the case was about continuing the Nordic development and more specifically to increase the product offering in Sweden and at the same time deploy more of the Swedish service offering into neighboring countries”* (Henrik Joelsson 14.02.2020).

Among other governance initiatives, Ratos set up an independent board of directors with an independent chairman and regular non-formal meetings between the CEO, chairman and one industry expert. At this point in time, Anticimex consisted of several local franchises and during Ratos’ ownership a buyback program was launched to tie the group closer together. What evidently differentiated Ratos from the other major Swedish PE houses was the type of capital they had under management. Ratos was publicly listed on the Stockholm Stock Exchange and controlling ownership still remained among the founder’s descendants through various holding companies, trustees and foundations. This type of capital structure enabled Ratos to have a somewhat different investment view than the competition.

*“Ratos is not built up through a fund structure but invests from its balance sheet, the owner perspective was that you could hold companies for a very long time, but it was still an active exit strategy” (Henrik Joelsson 14.02.2020).*

During Ratos tenure several operational initiatives were launched. Having strong Swedish customer contracts in place and a recurring revenue model that supported growth, Ratos saw an opportunity to further leverage the market leading position of Anticimex in Northern Europe by expanding the product offering. The goal was to strengthen the customer relationships by offering a wider range of products and services in addition to pest control. Anticimex also made some acquisitions to gain a stronger foothold in markets such as Finland, Holland and Germany. Operations developed nicely under Ratos, with revenue increasing by 7% annually and EBIT margin increasing by one percentage point over the holding period. Henrik Joelsson emphasizes the company culture as a long-term key success factor for Anticimex,

*“A dedicated customer focus, which is in no way only driven from the top [...] The company culture was very customer centric and that attracted employees who truly enjoyed helping customers solve problems. The culture was reinforced by ‘stories’ about how Anticimex already from the foundation in the 1930’s was dedicated to solving customers’ bedbugs problems in ways that no other company did. The culture has been maintained over the decades, in spite of strong growth and many different types of owners” (Henrik Joelsson 14.02.2020).*

In 2012 EQT made a bid for the company, as a part of a sale process initiated by Ratos and after negotiation the parties agreed on a SEK 2.9 billion transaction. For Ratos the investment was successful and yielded an IRR of 24%,

*“At Ratos we had a three to five-year plan for the companies we invested in, which was often extended [...] In the case of Anticimex we extended the investment horizon at least one time, but in the end, it is all about if you still believe you can achieve your return targets based on a market valuation. Is there enough to develop and do and are we the best owner going forward?” (Henrik Joelsson 14.02.2020).*

## **5.7 Evaluation of Pest Control Market in Early 2012<sup>5</sup>**

In 2012, the USD 13.6 billion global pest control industry had many attractive characteristics for a PE buyer. The industry had historically been not only stable and resilient, but also showed an underlying growth that was higher than GDP. Even with the prominent growth, the industry showed low correlation with GDP development, but some correlation with the hotel, restaurant and manufacturing sectors. In Sweden, the pest control market was expected to grow by 3-6% annually going forward. The growing demand for pest related services was mainly a result of several mega trends, including urbanization, climate change, globalization and traveling. Traveling, which increases the demand for pest control as people often bring bedbugs with them home from vacations, was growing at a rate of 4% annually and both global trade and the middle-class population were growing at a rate of 5% per year. Pest incidence was growing

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<sup>5</sup> Part of the information disclosed in this section is based on confidential industry reports.



fast, with bedbugs and cockroaches exhibiting 52% and 71% annual growth respectively during 2006-2010. This however only translated into approximately 1% pest control market growth. In *Appendix A Exhibit 9–11* supporting trend data is provided.

Compared to most other service industries, pest control enjoyed high margins. While security, logistics and facility maintenance on average had EBIT margins of 2-9%, the pest control industry on average achieved 10-20%. The higher profitability within pest control was attributed to several factors. On the revenue side, one key driver was the typically high urgency and large downside associated with not getting the services in time, which in turn reduced customer price sensitivity. The industry also benefitted from low price transparency since each infestation problem was unique and it was therefore difficult to compare prices between different providers. Another beneficial aspect was the fact that the service required a certified pest control technician. On the cost side, most of the costs came from the local offices where personnel and COGS were the major elements. There were primarily two distinct customer groups, residential and commercial, and the two varied a lot between different markets. Globally, the US was the only market where the residential group made up the majority, representing 70% of revenues. In other markets like Europe and Australia, residential customers made up 10-40%. While termites were a major concern for US and Australian residents, the European markets predominantly suffered from rodents and insect infestations. Alexander Storckenfeldt (CEO, Anticimex Sweden) explains his view of the industry,

*“Anticimex operates in an industry which has quite low cyclicalities. The customers always have a need for the provided services and the relatively low price means they are not very price sensitive. Prepaid contracts with customers reduce business risk and make it easier to plan for the necessary supply capacity”* (Alexander Storckenfeldt 09.03.2020).

The international pest control industry was highly fragmented, with no single global player having a market share higher than 10%. This was the case although global market leaders, especially Rollins, were pursuing an active acquisition agenda in large part motivated by increased customer density. Rollins grew at an annual rate of 6-7% during 2001-2010 but excluding acquisitions the rate was only 3%. The company maintained a positive market outlook and expected further value extraction through multiple expansion, by a ramped-up acquisition strategy and a more focused product offering. Close to 100% of Rollins revenue came from the US, where they were number two after ServiceMaster but the fastest growing actor. There were two more notable global players, Rentokil and Ecolab who were smaller than Rollins and ServiceMaster in terms of pest control market share (see *Appendix A Exhibit 12* for peer description). The US pest control market was worth approximately 6.5 billion USD, the single largest market representing approximately 48% of the total global market. The vast majority of total global pest control revenue still came from small local or regional pest control offices.

## **5.8 Evaluation of Anticimex in Early 2012**

In Sweden, Anticimex was the clear number one pest control company with a strong brand and a market share of 80% both in the business-to-business and the business-to-consumer segment.

However, since 2004 the company had started losing a little bit of its market share to the smaller but growing Swedish competitor Nomor. Anticimex also had operations in Norway, Finland, Germany and the Netherlands. In Norway, Anticimex had a strong position with approximately 40% market share within business-to-business pest control services. Anticimex was also the market leader in Finland with approximately 10% of the total pest control market. The potential for further expansion in Germany and the Netherlands was questionable, as most pest control needs were already covered by municipalities and existing insurances.

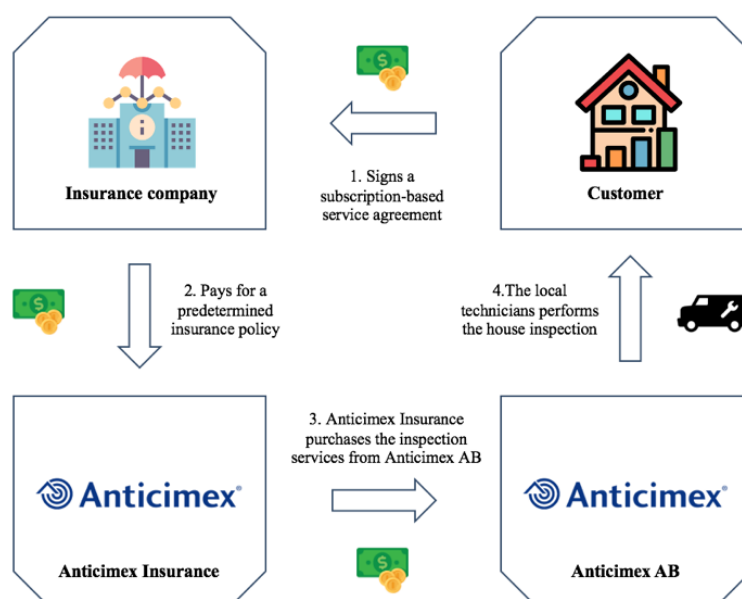
Total company revenue was approximately 1.9 billion SEK (FY 2011), with 85% of contribution coming from Sweden and Norway. Pest control made up 45% of total revenue and 80% of pest control revenues were contract based (usually three to six years) recurring revenue. The second largest segment, building environment made up 40% of total revenue. There were also three smaller segments, hygiene at 9%, energy at 3% and fire protection at 3% of total revenue respectively (Ratos, 2012). See *Appendix A Exhibit 13* for information about service segments. The largest cost for Anticimex, as for other industry players, was personnel which made up slightly less than 40% of the total cost base. Anticimex delivered an EBITDA margin of approximately 12%, which was considerably lower than the leading international pest control peers. Best in class was Ecolab at 19%, while Rollins and Rentokil exhibited an EBITDA margin of approximately 17%. See *Appendix A Exhibit 14* for more information about peer financials. Some of the key business risks for Anticimex included potential impact of activity in the housing transaction market on insurances and dependence on hygiene regulations, which if relaxed would have a negative business impact. In addition, a large fraction of revenue came from a few insurance companies, but this risk was somewhat diminished by the strong bargaining power of Anticimex in these partnerships.

### **5.8.1 Anticimex Insurance Model**

Compared with industry peers, the clearly differentiating factor Anticimex enjoyed was the business model in Sweden (and to some extent other Nordic markets), which came to life in the 1950s when the country was struggling with old house borer and wood insect infestation. As the pest problems grew more and more severe, several of the largest insurance companies felt that something had to be done and started investigating various solutions. Since the insurance companies lacked the necessary competence and organization for handling these types of problems, they approached Anticimex. In 1958 Anticimex established their own insurance company, as a separate entity but still within the Anticimex group. The idea was that Anticimex, on behalf of the insurance companies, would inspect houses and afterwards grant customers an insurance against future infestation problems. Since then, the insurance part of Anticimex has evolved into new practices and products, but the foundation of the business model remains unchanged and the majority of revenues still comes from Swedish insurance companies. See *Figure 13* for an illustration of the value chain.

**Figure 13**

*Anticimex Insurance Solution*



The most important feature of Anticimex Insurance business model is the high density in Sweden. Having such a strong market position leads to high barriers to entry and a lower threat from existing competitors, as well as lower threat of forward integration by the insurance companies. Mats Samuelsson<sup>6</sup> (President, Anticimex Insurance) points out the competitive advantage of the insurance model,

*“The insurance companies want to purchase a good customer experience and if someone can deliver that experience, most insurance companies are willing to pay for that [...] They could more or less deliver the same services in-house, the major difference is that they could never be as cost effective as we are. The key is density; they might be able to deliver two inspections per work while we would deliver more because of our great density.”* (Mats Samuelsson 11.03.21).

Another important feature is that Anticimex can use a predetermined price for their services and knowing the costs beforehand is highly appreciated within the insurance industry. Insurance companies act as underwriters and by having predictable costs they can better assess the overall riskiness of their insurance portfolio. Anticimex also calculates monetary risks but the core of the insurance model still relies heavily on the inspections and specialized insurance products which other actors cannot offer. The unique business model enables more control and less risk, which in turn leads to more predictive and stable cash flows for the group. Mats Samuelsson reflects on the difference,

<sup>6</sup> See Appendix A Exhibit 15 for interviewee background.

*“We call ourselves the upside-down insurance company because of the cost structure [...] For example, if damage increases in a traditional insurance company by 10%, it hooks up 7% of the profits while for Anticimex only 2%. Add to that the advantage of having two revenue streams; we are making money through Anticimex Insurance and we are making money in Anticimex AB who perform the inspections. In the end we want more control than a traditional insurance company, this makes our profits become less volatile” (Mats Samuelsson, 11.03.21). See Appendix A Exhibit 16 for a visualization of the financial model.*

For the full year 2011, Anticimex Insurance posted sales of SEK 560 million, of which 440 were related to pest control and the rest to dehumidification. Almost all revenue came from Sweden even though the insurance model had started to get a foothold in the rest of the Nordics, especially in Norway.

## **5.9 The Transaction**

Anticimex ended up on EQT’s radar as they had recently made a successful investment in Securitas Direct (Swedish corporate alarm company) which they exited in 2011. EQT wanted to find another investment in a service sector, which had similar business characteristics. The sourcing plan was to identify a company which was well aligned with EQT’s way of adding value, where they could drive consolidation of a non-cyclical industry and implement new technology to enhance the business model. Per Franzén<sup>7</sup> (Partner, EQT), lead partner for Anticimex, explains the rationale behind the deal,

*“The more I looked at the pest control industry, I reached the conclusion that it really ticked all the boxes. In comparison to the corporate alarm industry, it was a bit less developed, less professionalized and more conservatively run. So, the potential for value creation was even greater. There was really only one company in the Nordics, which you could use as a platform to consolidate this industry and that was Anticimex” (Per Franzén 18.03.2020).*

EQT decided to proactively reach out to Ratos and made a bid for the company. At first Ratos turned EQT down, but EQT knew that Ratos was experiencing some troubles, in that they had not had a good exit in a while and the stock price developed poorly. Therefore, EQT continued the dialogue and continuously expressed their interest in the company. In the end, Ratos decided to start a sale process and since EQT had already spent at least six months monitoring the company, they were best positioned to complete the deal. It did take some time to agree on the price but in April, the parties signed the deal, valuing Anticimex at approximately SEK 2.9 billion.

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<sup>7</sup> See Appendix A Exhibit 15 for interviewee background.

## **6. The Case (2012-2017)**

### **6.1 EQT's Business Case**

The plan for Anticimex was to create a structure which could be used to roll out the business internationally, mainly through an active acquisition agenda motivated by higher density. One key element of the business case was to drive digitalization, both internally and for the service offering to improve cost efficiency. Increased digitalization would also create a better, more sustainable business model. EQT saw an opportunity to use their global network and digital capabilities to execute on the strategy. In addition, the non-cyclical, fragmented and profitable industry with a high share of recurring revenue and diversified customer base made it more attractive and less risky. See *Appendix B Exhibit 1* for a case timeline with key events.

### **6.2 Governance Engineering**

Anticimex had a long history of being owned by PE companies when EQT took over as owners, which meant there was less disruption to the organization than what might otherwise have been the case. There might be some skepticism and worry about PE owners and their agenda if it is not a familiar concept. Given the PE experience of Anticimex, it did not give rise to any tensions or conflicts in the organization. Olof Sand<sup>8</sup> (CEO 2013-2015, Anticimex) who has extensive background from entrepreneurial firms, publicly listed companies and financial owners elaborates on the subject,

*“Sometimes there is a lot of worry. That worry was not there. Anticimex had been owned by private equity for so long that it was more the normal status there”* (Olof Sand 13.02.2020).

In order to retain and attract key management personnel, EQT launched an incentive program where management reinvested more than 50% of their proceeds in connection to the transaction. Equity in the company was structured with common equity and preferred equity, where management received a higher share of common equity in order to make their returns more dependent on the company development. Given successful development, management would hit the ownership cap of 10%, which is the share that they hold in the company today.

#### **6.2.1 Organizational Development**

In addition to choosing the appropriate business model and management team for international expansion, the organizational structure put in place also contributed to success for Anticimex and its owners. For the initial phase, the company relied on a rather centralized structure but with strong collaboration and support between countries. A lot of decisions were made at headquarter level and many initiatives driven on a global scale, with the core work being made through the CEO, including driving acquisitions, while the branch managers were less visible. Different CEOs are appropriate for different stages of a company's development and very few candidates are the perfect fit for the entirety of a longer holding period. Per Franzén explains

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<sup>8</sup> See Appendix A Exhibit 15 for interviewee background.

the thought process behind appointing Olof Sand as CEO in 2013 and later Jarl Dahlfors in 2015.

*“Olof was very good at especially operating activities, with a background from IT. He was exactly the right CEO candidate to start the internationalization of the company with the growth acquisitions in our pipeline, and to also start up the digitalization of our business model. He executed this in a very good way and created a lot of value. We make continuous follow-ups internally for how our portfolio company investments are doing and for each one we make a so-called full potential plan; a value creation plan which shows all possible value creation levers [...] By the time we arrived in 2015, we came to the conclusion that in order to take the next step in the company's development and truly globalize it, implement the digital business model abroad and further accelerate the consolidation strategy, we needed a different type of leadership”* (Per Franzén 18.03.2020).

In 2015 Jarl Dahlfors was brought in as the new CEO. One of the motives behind the change of CEO was his structured process for identifying and tracking KPIs and his ability to standardize businesses. EQT viewed him as the perfect candidate to accelerate the internationalization and globalize the digital offering, as he had extensive experience from decentralized structures and service businesses. Under Jarl, the organizational strategy changed quite fast and Anticimex switched to a more decentralized structure, in line with the roots of the company. By having a flatter organization, Anticimex was able to get closer to the customers and better adapt to their needs. Jarl created a branch model, where suitable branch managers were identified and given a large responsibility. Several of the previous central functions, e.g. HR, were closed down, with the reasoning that as 90% of revenue in Anticimex came from the local offices, they should be the main priority. For each branch, the worst performing dimension was identified, e.g. planning or sales execution, and improving it was made a key focus. This process was facilitated through the spreading of best practices between branches. In the new organizational structure KPIs were highly emphasized and continuously tracked. Starting from the first of January 2016, a list ranking all branches on one single measure, EBITA margin, was sent out to the branches with comments on a monthly basis. The benchmarking was later expanded to include organic sales growth as well. Jarl Dahlfors<sup>9</sup> (CEO 2015-, Anticimex) explains,

*“You can say that all branches operate in their own unique market ‘microenvironment’. All the branches measure and focus on different things depending on their respective situation (maturity, size, competition etc.). However, all branches are included in a global evaluation each month, which measures EBITA margin and organic growth”* (Jarl Dahlfors 24.03.2020).

### **6.2.2 Board Structure**

The aim for EQT is to have a board with individuals who are relevant to, and have capabilities matching, the planned value creating initiatives at all times. Therefore, EQT never appoints more than two of its own people to the board. Furthermore, the structure of the board developed

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<sup>9</sup> See Appendix A Exhibit 15 for interviewee background.

over the case period. In addition to EQT partners Per Franzén and Carl Johan Renström, an expert on the insurance business has served on the board from the start, as it was at the core of Anticimex in 2012 and still plays an important role. The Anticimex board also holds a pest control expert, who had experience as COO at the competitor Rentokil. In connection to the investments in digital technology after a few years, an expert in the digital area was added to the board and when the company entered the US in 2016 an expert on US service businesses was brought in as well. See *Appendix A Exhibit 17* for background of board members. Thomas Hilde (President, Anticimex Region Europe), with experience from leading roles both under Ratos and EQT, explains his view of EQT,

*“I got a very different impression of EQT compared to all the other PE firms I worked with. They said that they would appoint an international board of individuals with different capabilities. So, the first thing was that they were talking from an international point of view, not only about Swedish or Nordic people on the board. It was a major difference right away. EQT had a clear strategy to roll out Anticimex internationally”* (Thomas Hilde 28.02.2020).

In addition to ordinary board meetings, EQT uses a structure called TROIKA, which means regular informal meetings between the portfolio company CEO, director of the board and the responsible EQT partner. The meetings are usually phone calls every, or every other week, and exist in order to allow a tight dialogue with the portfolio company on a strategic level. However, it is important to make sure not to diminish the importance of the actual board, which is why large decisions still require board approval whereas smaller ones can be made by the TROIKA to increase decision-making speed. Carl Johan Renström<sup>10</sup> (Partner, EQT), part of the deal team and member of the board in Anticimex, explains the dynamic,

*“All small add-on acquisitions up to a certain level, the TROIKA has mandate to complete without a decision from the board. [...] If you are doing more than 200 transactions over seven and a half years like we have done, then you cannot take a board call each time. Then instead, the TROIKA can make decisions up to a certain level and inform the board at the next meeting. We still have quite many extra board meetings in addition to the regular ones, where the decisions are large enough to require the board to be informed and involved”* (Carl Johan Renström 23.03.2020).

## **6.3 Operational Engineering**

### **6.3.1 Refocusing on the Core**

When EQT acquired Anticimex, there was some degree of split focus between different product categories, as described in more detail earlier in *Evaluation of Anticimex in Early 2012*. Anticimex chose to focus on the core business of pest control, which was the key profit contributor. The transformation process from service conglomerate to pest control expert resulted in some early divestments of subsidiaries in Norway, Finland and the Netherlands which did not have the desired focus. Under EQT the company tried to establish pride within

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<sup>10</sup> See Appendix A Exhibit 15 for interviewee background.

pest control and a sense that this was the core business, and the main source of money as well as most prominent career development. As a result of the focused strategy, pest control made up 79% of total revenue in 2016, with building environment at 15% of total revenue and the remaining 6% were attributed to hygiene. EQT was very clear about their agenda and how Anticimex would be able to reach success from the start. In comparison, the previous owner Ratos had been perceived as a bit more passive. Olof Sand highlights the service focus,

*“It was pest control that we made money from and that we were going to roll out internationally [...] We closed down some others, some non-core, even if we allowed Sweden to be a bit more diverse than the rest of the world”* (Olof Sand 13.02.2020).

### 6.3.2 The Nordics

A key feature which allowed successful execution of the buy-and-build strategy was the choice to treat Sweden as a separate market. There was a temptation to reuse the Swedish model as it was working well, but Anticimex instead chose to isolate Sweden and used a different approach for the rollout internationally. The main reason was that the Swedish market was quite unique with the prepaid insurance model, as described earlier in the section *Anticimex Insurance Model*. Part of the existing management team were made in charge of Sweden, while new people were brought in to manage the scale-up.

*“We used the best ones there to control Sweden and to a substantial degree, with very few exceptions, we primarily used new people to roll out internationally”* (Olof Sand 13.02.2020).

In Sweden, the Anticimex Insurance model clearly supported a lock-in effect of customers, having about 1.5 million Swedes on their pay plan. Even though the price of each insurance was low, the density and high penetration within Sweden made this a stable and predictive cash flow for Anticimex. The insurance model allowed relationship building with insurance companies, where there was a possibility to add new services to the partnerships over time. In 2016 revenue contribution had increased to SEK 960 million. Mats Samuelsson explains,

*“Pests are the core, wood borer and termites come later, followed by dry rot and in the end the share of risk agreements. We build relationships from the base year one and then replenish with products over time [...] We have added concepts that are well suited to the ones we are already providing to get further and further up the value chain. We want to be a partner to the insurance companies and not a supplier”* (Mats Samuelsson 11.03.21).

Even though Anticimex had an almost monopolistic position in Sweden with over 80% market share not every part of the operation was perfect. The margins in Sweden was well below those of for example the US competitor Rollins, even though the US market was much more fragmented. There was a sense of comfort that had led to a status quo and the adaption to the branch model was slower than in other countries, which concerned the management team. Jarl Dahlfors explains,

*“When I started in 2015, profitability targets used to be at 15% but considering competitors’ performance, the market share and density, I stated that it should rather be at least 20%, a*



*requirement that I now have increased to 22-23% and demand from all business units [...] We have tried to build an Anticimex culture that is based on best practices, regardless of country or office” (Jarl Dahlfors 24.03.2020).*

### **6.3.3 Buy-and-build**

The pest control industry’s high degree of fragmentation created an opportunity to drive industry consolidation through acquisitions. Increasing reporting requirements also made the business model less feasible for small providers with limited technological capabilities, as the industry became more professionalized. In addition, common standards and certifications within EU and among other national legislators and authorities made it easier to increase the level of operational standardization in providing pest control services. The higher level of standardization in turn made it possible to more easily achieve economies of scale and economies of scope.

The main acquisition rationale for Anticimex and the other companies pursuing M&A activities was achieving cost synergies, through higher density and scale benefits. Having higher density would lead to substantial cost advantages in terms of utilization rate and efficiency. The larger scale could also to some extent realize cost synergies through overhead costs being spread out over a larger base and therefore increasing margins. In addition, larger companies could to a greater extent pursue new technologies and innovation and thus improve their offerings. Even though the different geographic markets varied in terms of the exact service provided, with termites present in warmer climates, and more mice and rats in the Nordics, the business model was similar. A technician would visit the customer four to eight times per year and check for pest problems and this homogeneity was a prerequisite in order to scale up the company internationally.

*“Fragmentation is a prerequisite for a buy-and-build strategy. But in order for it to work in practice, there needs to be synergies in being a larger player as well. In this case, the large synergy is in increased density, which is the key to running a profitable route-based business [...] It also needs to be relatively easy to integrate the businesses and that is the case here. You can basically plug in the new contract portfolio in your existing systems, bring over some technicians and start planning the routes in a smarter way and with higher density. So, there are clear synergies in being a larger player with high local density” (Carl Johan Renström 23.03.2020).*

Less than one year after EQT acquired Anticimex, in March 2013, Anticimex announced the acquisition of the pest control division of ISS. It included operations in ten European countries, as well as Australia and New Zealand<sup>11</sup>. Behind ISS pest control were in fact eleven separate companies which had recently been acquired by ISS. Many of them had kept their own brand names and were not even called ISS, which meant it was essentially eleven unique acquisitions from an integration perspective. Nonetheless, the integration of ISS was successful for one main reason, the sense of importance which the acquired division experienced, enabled through

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<sup>11</sup> <https://news.cision.com/se/anticimex-ab/r/anticimex-forvarvar-delar-av-iss-verksamhet-och-skapar-en-international-koncern-inom-skadedjursbeka,c9386599>

the focus on establishing pride within pest control at Anticimex. ISS was a very large and diversified company, while pest control was a small fraction of the total and did not really align with the strategic focus. It was a non-core business and not granted the focus that it wanted in the company. At Anticimex, the pest control division was celebrated as the core to success in line with EQT's refocus of the company. The acquisition of ISS was not certain from the start but EQT had predetermined it as a good next step in the initial business case, and the fact that EQT owned ISS at the time improved the probability. As a result of the ISS acquisition, Anticimex approximately doubled in size overnight and gained a much broader international presence.

*"ISS was important, but it would not have changed the business case. The idea was that this is a fragmented industry and there are a ton of family owned companies to acquire going forward. So, if the ISS deal had not materialized, it would have taken us a longer time to get there and create the platform, but the business case would have remained intact. There was no guarantee that we would be able to acquire ISS pest control"* (Per Franzén 18.03.2020).

The Australian part of the ISS acquisition later served as the platform company for growing the foothold of Anticimex in the region through additional add-on acquisitions. One larger transaction that was made was the acquisition of Enviropest in the beginning of 2015, which allowed Anticimex to further scale up their presence in Australia. Enviropest was at the time the third largest operator in the country and the acquisition meant Anticimex became the Australian market leader in pest control.

Many of the targets which Anticimex acquired were private companies, where in most cases the counterparty was an entrepreneur facing a once in a lifetime transaction. This put relationship building at the center of the acquisition agenda. Some of the sellers could have a quite skeptical view on people from PE and lawyers, so there was a need for establishing trust. Therefore, the group CEO was very much present during the process and physically visited many of the target companies, especially during the initial phase of the buy-and-build strategy. From the perspective of the targets, they valued access to the international network that Anticimex had created and the strong collaboration between different countries. By becoming a part of Anticimex they received an international career and this sense of pride and career development, which was emphasized, contributed to the desirability of selling to Anticimex. In addition, there was a strategic appeal to becoming part of the group rather than having to compete with it.

*"Toxins are being prohibited more and more, and customers are demanding sustainable solutions [...] This means the industry is moving towards digital solutions and small players cannot afford to make these investments. Then they come knocking at our door and say that they want to become a part of the family"* (Carl Johan Renström 23.03.2020).

When Jarl Dahlfors was brought in as the new CEO in 2015, the M&A strategy became more decentralized. Thomas Hilde, having been involved in many of the European acquisitions, explains his view of the new M&A strategy implemented,

*"We have an M&A model which is very simple and with good structures that everybody internally understands. A clear model that you can explain also for the seller. The operational*

*responsibility is delegated locally. The local division runs M&A, e.g. the CEO in Italy should source targets and drive the process. When an LOI (Letter of Intent) has been signed, the group M&A division supports with their expertise but the ownership from the beginning is locally. Our competitors work with a much more centralized structure” (Thomas Hilde 28.02.2020).*

In 2016 Anticimex entered the US market, which makes up approximately half of the global market for pest control and made a key acquisition of Bug Doctor for an undisclosed amount. Jarl Dahlfors was familiar with the US market having lived there for several years and the entrepreneurial spirit of Anticimex resonated with smaller US firms. Bug Doctor was recognized as a good cultural fit and the company had a clear customer centricity. See *Appendix A Exhibit 18* for an overview of the US market. Anticimex also acquired another actor in Australia in 2016, Amalgated Pest Control which was the third largest company in the country<sup>12</sup>. Jarl emphasized a model in which many of the potential targets were approached in less formal settings, such as industry fairs and events, where Anticimex could more easily motivate its attractiveness. Jarl Dahlfors explains his view on value creation and M&A,

*“We use the classification quality, profit and growth (QPG) in order to classify branches into one of the three categories in order to secure that each branch gets the right expectation. First comes quality because unless customers are satisfied and the staff feel good, you must solve it first. Then when you have done that, you go in and look at profitability; when the margin is there, all operational key figures are there and you are efficient, the company can enter growth mode. All branches must pass QPG before they can grow through acquisitions [...] If there are companies to buy where they like us, and we like them, you buy them after performing our standard evaluation and due diligence. Almost all add-ons have been good, meaning that they have met the goals we set for margin and growth. The main reason for that is that it is the branch manager, or in larger markets the country manager, who is responsible for the transaction” (Jarl Dahlfors 24.03.2020).*

Newly acquired companies became a part of the organizational structure from day one, receiving access to the different group functions and the international network, as a part of the integration process. Anticimex was pragmatic in approaching companies and after acquisitions they did not tear down signs and state that their way was the only way. Ultimately, Anticimex managed to transform into a scalable international group, where a model to buy and integrate more than 200 companies in a focused way was established.

#### **6.3.4 Digitalization**

The service Anticimex provides can be defined as a route-based service, in which the key to success is density. When the company serves a customer in a certain area, there is a considerable effect on profit from receiving another one in the same area, as the revenue uplift is much larger than the relatively small incremental cost of adding the new business. High density leads to higher employee utilization and better efficiency. Essentially, by achieving customer clusters and density, the degree of sophistication in the service process increases,

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<sup>12</sup> <https://www.anticimex.com/en-us/newsroom/2016/anticimex-announces-acquisition-of-leading-australian-pest-control-company-amalgamated-pest-control/>

allowing higher profits. By introducing digital elements, the business becomes more efficient and the benefit of density is maximized.

Digitalization can be separated into two categories, internal IT systems and the value proposition of the service offering. For Anticimex, internal digitalization efforts meant improvement of systems for route planning and optimization, which had previously been done manually. Digital route planning was introduced in 2015, which led to reduced costs as well as environmental impact. A software program recalculates the optimal routes and schedules based on the latest available information.

Considering the value proposition, Anticimex announced the acquisition of 20% of the shares in Danish Wisecon in January 2015, the leading company within digital rat traps. Digital traps are free from toxins and kill rodents by electrocution. This was an important step in the plan to make Anticimex service offering more digital. In 2015, Anticimex launched a solution called “SMART”. The concept is built on using digital traps, sensors and cameras to enable real-time monitoring and prevent pest problems by acting on it immediately. One year after the launch of digital solutions, approximately 20% of new sales came from the digital offering. Olof Sand highlights the digital development and the value of adopting digital tools,

*“A company has to work with its value proposition, this is done in order to provide a better service for the customers. In Anticimex it is the same thing as for Securitas (Swedish alarm company) [...] The burglars are just a lot smaller and have four legs. Earlier the technology had been so expensive that no one wanted to make the investment, but now the technology is cheap” (Olof Sand 13.02.2020).*

There were several advantages as a result of a more digital value proposition. It created a higher willingness to spend among customers and a better lock-in effect due to the added value of the service. The price sensitivity among Anticimex customers is quite small, as the price charged to each customer is negligible in absolute terms. It is of higher importance to offer a valuable service to the customers than to keep the price very low. Over time this has allowed Anticimex to move away from cost-based pricing to more of a value-based pricing strategy. In addition, there was a competitive benefit from pursuing the digital strategy thanks to scale, as smaller competitors may not be able, or willing, to make the necessary investment and attempt these digital initiatives. On the same note, this made it easier to acquire targets as they had a more promising future if they became a part of Anticimex and gained access to its network and resources.

*“It has been a very important tool for us in order to convince family-owned businesses to sell to us. They understand that they do not have the resources and possibility to develop new solutions and new technology as we do. Therefore, it has been important to digitalize the business. I believe the large financial effect from the digitalization is still ahead of us, which makes it exciting for us to own Anticimex for an additional, longer time going forward” (Per Franzén 18.03.2020).*

## 6.4 Financial Engineering

Financial engineering has not been a key component in EQT's value creation in Anticimex. However, similarly to most PE deals, much higher leverage levels than non-PE backed peers have been used, which has enhanced the returns both through leverage itself and the interest tax shield<sup>13</sup>. Carl Johan Renström explains,

*"We have always had only senior loans, term loan A and term loan B, and it started with a small group of Nordic banks. We could have used exotic instruments on top of the senior, which would however have yielded less flexibility to make add-on acquisitions. This was going to be an add-on journey and we needed the flexibility. We have actually kept this group of banks with only senior loans for the entire holding period. What has changed is the leverage multiple, which has gone up over time as both we and the banks have become more comfortable with the fact that this is a very stable business [...] This stability makes the banks confident that Anticimex will deliver during good and bad times, therefore we have been able to increase the absolute amounts drastically over the years. We have actually had to expand the group of banks because even if they love the credit and believe it is stable and fantastic, there are internal guidelines for how much they can lend to one specific company"* (Carl Johan Renström 23.03.2020).

## 6.5 The Anticimex Culture

Several of the interviewees attribute part of the success for Anticimex to the culture which is strong and widespread across the entire organization and can be traced back to the start of the company. There is a sense of pride among all employees in the organization and a clear focus on being close to the customers and adjusting the service offering to their needs. EQT has decided to retain a large share of management, in order to preserve the valuable culture within Anticimex. They have been able to do so by granting favorable alternatives to invest in the company and take part in the success. Alexander Storckenfeldt knows the company very well as his grandfather co-founded it and he explains his view on the culture,

*"The culture at Anticimex is extremely strong. It is a sense of one big family, and entrepreneurship in the form of always finding solutions and being customer oriented. Three main pillars have been in place in the company since 1934: entrepreneurship, sense of family and local connection. The entrepreneurship has grown strong with help from a decentralized organizational model and the franchise model"* (Alexander Storckenfeldt, 09.03.2020).

## 6.6 Exit Decision, Sell or Keep?

By the end of 2016 EQT had owned Anticimex for almost five years. They had successfully leveraged the strong capabilities of Anticimex and carried out their agenda of internationalization and digitalization. The group had conducted more than 100 add-on

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<sup>13</sup> Interest tax shields refer to the reduction in tax liabilities due to interest expenses. Companies pay taxes on the income they generate. As interest expenses are tax deductible, they decrease the taxable income and hence act as a 'shield' against tax obligations.

acquisitions and compared with its peers Anticimex was the leading service provider in terms of installed digital systems. Revenues had grown by 18.2% annually, substantially better than the average firms in the OMX30, and at the same time EBITDA margin had increased from 12.1% to 14.7%. See *Appendix A Exhibit 19* for revenue and EBITDA development. EQT's investment committee tasked Jarl Dahlfors and his management team with bringing a new three to five-year business plan for them to consider. Even though the industry was experiencing consolidation and digitalization, the fundamental drivers remained the same. During 2011-2016 the leading global pest control players increased their market share by approximately four percentage points, primarily through M&A activity. Despite the recent trend of consolidation since 2012, mainly driven by Anticimex and Rentokil, the pest control industry was still highly fragmented, where Anticimex and the four largest competitors held approximately 32% of the global market. See *Appendix A Exhibit 20–21* for peer financials and trading multiples. The consolidation possibilities were most evident in countries such as Germany, Spain, the US and Australia, where local and regional actors still made up the majority. According to industry trend reports, the digital business was about to have a much more material effect on industry topline and margin performance in the years to come. In the spring of 2017 Jarl Dahlfors had been at the company less than two years and he recalls the plan,

*“Together with my management team and the branch managers a five-year business plan was brought forward [...] It consisted of four essential building blocks, efficiency through the branch model and best practices, value-based pricing, digital development through SMART and continuing the M&A strategy”* (Jarl Dahlfors 23.03.2020).

As Anticimex was one of the first investment made in EQT fund VI, thoughts about a potential exit came naturally as for most PE funds after similar holding periods. For EQT this meant deciding between the risk of leaving too much value creating possibilities on the table and the benefit of returning proceeds to fund investors. Per Franzén discloses how the investment committee at EQT reasoned,

*“My recommendation to the investment committee was that there was still plenty of value creating activities left to do and that this was a company that we should keep and eventually we did exactly that. In the next stage, we had to think about how we could in the best way grow the company further since the PE-model is project-based [...] You have to rethink how you create this project around keeping the company a little longer. A very good way to do that would be to sell a minority share in order to establish a new market value, set up a new incentive program and a new business plan and strategy going forward. This would enable the fund to continue to own Anticimex longer”* (Per Franzén 18.03.2020).

Even though financial markets and exit multiples almost had returned to pre-global financial crisis levels (see *Appendix A Exhibit 22–23*), the base case for EQT was to prolong the investment and keep controlling ownership of Anticimex. All exit routes were still considered, and a formal process was established with the investment banks Deutsche bank and Jefferies as advisors. This was standard procedure for EQT's deal team in order to obtain a proper market value for the company and consider all potential exit possibilities. Per Franzén explains,

*“It could have been the case that there was a strategic buyer who could have paid a very high price [...] But the most attractive bids came from minority investors which was in line with what we wanted.” (Per Franzén 18.03.2020).*

Another strong rationale for keeping Anticimex could be found in the more general industry outlook. Between 2012 and 2017 EQT saw key public company peers increasing their average EV/EBITDA multiple from about 12x to over 20x (*see Appendix A Exhibit 24* for an illustration of the development). In the end, the formal process resulted in EQT keeping controlling ownership of Anticimex and only divesting 33% to a market valuation of SEK 22 billion to two institutional investors, AP6 and AMF, as well as the investment group Volito and secondary fund Cubera. Vidar Andersch (Investment Director, AP6) who took part in the co-investment in Anticimex, in addition to the AP6 stake in EQT fund VI, shares his view on the deal rationale,

*“After a successful start of the journey, it was clear that Anticimex was one of the winners in EQT fund VI. Several exciting value creation opportunities still existed going forward which included a further internationalization of the business as well as investing in the next generation of digital pest control technologies. We bought into that story and welcomed the opportunity to come onboard as new minority owners to help support the company and EQT in realizing the forward-looking goals” (Vidar Andersch 18.03.2020).*

## 6.7 Epilogue

In 2017 Anticimex published a press release announcing the acquisition of the remaining 80% of shares in Wisecon<sup>14</sup>, as the initial investment and digital development had been successful. In connection to the minority sale in 2017, the incentive programs were recalibrated to be more in line with the original set up and ensure alignment going forward. As of 2018, Anticimex had approximately 6,100 employees spread across operations in 18 different countries<sup>15</sup>. In November 2019 EQT sold an additional 9.9% of the company at a market valuation of SEK 38 billion to GIC, Singapore’s sovereign wealth fund<sup>16</sup>. This was followed by an investment from Melker Schörling AB in December 2019, retaining a similar stake size at the same valuation<sup>17</sup>. To this date EQT still owns 40% of Anticimex but are in full control of governance and exit decisions. Value creating opportunities still exist in the company and time will tell whether the company becomes listed at the stock exchange or if EQT maintains further ownership, as fund VI reaches liquidation in 2021. The latter could mean a roll-over investment similar to the recent ones from e.g. 3i in Action and PAI in Fronerie.

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<sup>14</sup> <https://www.anticimex.com/sv-se/nyhetsrum/2017/anticimex-forvarvar-wisecon/>

<sup>15</sup> [https://www.anticimex.com/contentassets/3dc0ba724ed14efea8933bb3339ab4d1/anticimex\\_ar\\_2018\\_eng.pdf](https://www.anticimex.com/contentassets/3dc0ba724ed14efea8933bb3339ab4d1/anticimex_ar_2018_eng.pdf)

<sup>16</sup> <https://www.eqtgroup.com/news/Press-Releases/2019/eqt-brings-in-gic-as-minority-partner-in-anticimex/>

<sup>17</sup> <https://www.eqtgroup.com/news/Press-Releases/2019/eqt-brings-in-melker-schorling-ab-as-minority-partner-in-anticimex/>

## 7. Discussion

In the following section we discuss our results based on the three research questions introduced in the introduction, in light of previous research available on the subject which was covered in the literature review.

- 1) *How can private equity firms create value in portfolio companies over a long-term horizon and is there an upper limit?*

Our case study clearly illustrates the possibility for value creation in secondary buyouts. Anticimex had been owned by Nordic Capital twice and Ratos once when EQT acquired the company, but nonetheless there is no doubt that EQT has had the most successful development during ownership. This validates the conclusion of Achleitner and Figge (2014) that SBOs do not seem to generate lower returns. One reasonable explanation for the existence of long-term value creation, in our case study, as well as in more general terms, is the suggestion of Degeorge et al. (2016) that a secondary buyer with skills and knowledge complementary to those of the first buyer should be able to create value. To the best of our knowledge there is not much previous research on what these complementary factors are, so hopefully our case study can add to the field by an illustrative example. Ratos had a very different agenda than EQT in Anticimex, focusing mainly on broadening the service offering in the Nordics whereas EQT refocused on the core business, invested heavily in digital solutions and scaled it up internationally. We believe this difference in agendas and focus on operational changes is in line with the conclusion of previous research (e.g. Gompers et al., 2016 and Næss-Schmidt et al., 2017) that operational engineering is becoming increasingly important as competition in the PE industry intensifies. We believe the fact that the Anticimex lead partner at EQT, Per Franzén, had an extensive investment banking background might have made a buy-and-build strategy more likely and its implementation more successful. This is however not unique for EQT as most PE professionals have investment banking experience. The argument is in line with the findings of Acharya et al. (2013), that PE partners with a financial background tend to outperform in using acquisition-based strategies. EQT also had experience from recent similar cases, e.g. Securitas Direct, which supports Hammer's et al. (2014) findings that PE funds with appropriate experience are more suitable for a buy-and-build strategy.

Previous literature describes a buy-and-build strategy as a way to combine the financial benefits of an LBO structure with the synergies utilized by a strategic acquirer (e.g. Braun et al., 2017), where add-on acquisitions are often made at relatively low multiples (Døskeland and Strömberg, 2018). The main drivers behind the buy-and-build strategy used by EQT in this case were the high degree of market fragmentation together with the fact that density was the key profit enabler. By having many customers in each area served by the company, the relative cost of delivering the service falls and hence there is a compelling case to use acquisitions to strengthen the presence in each region. This is in line with the findings of Hammer et al. (2018) that PE firms can realize synergies when making add-on acquisitions within the same industry. One of the key reasons for EQT's success in acquiring more than 200 companies was their investment in digital solutions, which made it desirable for smaller firms to become a part of a group, as they would otherwise have a hard time competing in the long run. The scale benefits



achieved through the buy-and-build strategy made high investments in digital solutions more feasible and led to higher margins as overhead costs could be distributed over a larger base.

Hammer et al. (2017) find that add-on acquisitions are more common in SBOs, though only if the previous PE owner made add-on acquisitions. Even though Ratos did make a few acquisitions, they clearly did not have a buy-and-build strategy. In addition, Hammer et al. (2017) find that experienced PE owners with a good reputation are more likely to make add-on acquisitions. This is in line with our case study as EQT undoubtedly has a lot of experience and a high reputational capital. Loos (2006) argues that most successful buy-and-build strategies have an acquisition pipeline in place prior to the transaction of the platform company. Our case supports this view since a main part of EQT's pre-identified and planned acquisition pipeline included the equally sized pest control division of ISS. Given their ownership of ISS, EQT also had superior knowledge and relationships, facilitating identification and integration. Moreover, our case study gives limited support to Bansraj's et al. (2019) arguments about increased profitability for platform companies compared to an equivalent portfolio of peers. Instead, we found that the main competitors, who were not as active in the M&A market, Rollins and ServiceMaster, experienced equal growth in margins throughout the case period. Our results rather support the view of Aldatmaz and Brown (2020) that having PE presence in an industry leads to productivity and profitability gains among public peers as well.

Private equity owned companies tend to have smaller boards than public companies and outside directors are often replaced by PE partners (Acharya et al., 2009). In Anticimex under Ratos, our interviewee Henrik Joelsson, the responsible investment director (from 2009) took place on the board. Similarly, both our EQT interviewees, Per Franzén and Carl Johan Renström, serve as board members in Anticimex. As for CEO and management replacement, it tends to be high in PE owned companies (e.g. Gompers et al., 2016). In the case of Anticimex, EQT chose to appoint a new CEO in connection to the transaction and to change the CEO another time during the period we studied. The motive behind the second CEO change was to find a different CEO profile, to drive increased standardization throughout the group and to take the next step in the company's globalization. This second shift could be viewed as less in line with previous literature as the findings of Cornelli and Karakas (2015) suggest that replacement is much higher during the transaction than after the transaction and post transaction replacement is even lower than that of public peers, although their sample consists only of public-to-private deals. The strategy of EQT to continuously adapt the board of directors, TROIKA and industry experts, based on the current state of the company, supports the arguments of Bernstein and Sheen (2016) about the importance and usage of industry experts in operations. Another important aspect of governance engineering is putting strong equity incentives for management in place (e.g. Gompers et al., 2016). Our findings are in line with this, as management held 15% of the company under Ratos and EQT similarly allowed beneficial investment schemes, where management reinvested more than 50% of their proceeds and eventually reached a 10% stake in the company. The incentive programs were an important tool for EQT to attract and retain management talent, which contributed to preserving the company culture. This reinforces the power of equity incentives, which was expressed as early as 1989 by Jensen but remains as true today.

There has been a debate on whether PE has a focus on only short-term value creating activities given their normally limited holding periods. Dutia (2012) argues that PE foregoes innovation initiatives to cut costs, which is contradicted by other papers, e.g. Lerner et al. (2011) and Link et al. (2014), who conclude that the quality of innovation is higher in PE backed companies. Our case study validates the positive effect on innovation, as one of the main components of EQT's value creating plan was investing in digital solutions, leading the industry change towards more efficient and more sustainable alternatives. However, it should be noted that there was a short-term benefit of the innovation efforts as joining Anticimex became more compelling for targets and we cannot know if EQT would have pursued the same agenda in the absence of this.

2) *How do extended investments perform compared to traditional private equity investments?*

There are several current trends within the PE industry, including an increasing occurrence of longer time horizon funds, explicit extension funds, as well as alternative fund structures. Our quantitative analysis shows that funds liquidated after more than ten years deliver a considerably higher mean IRR than funds liquidated within ten years (~6.3 percentage points). However, the difference in median is considerably smaller (~2 percentage points) and the longer funds exhibit more cross-sectional variation in returns. The fact that the longer funds exhibit outperformance both in terms of mean and median IRR, while the difference is smaller for the median, could indicate that the most successful funds have an easier time receiving approval for extensions and hence contribute to long-term outperformance in the data. It could also be the case that the most successful portfolio companies in any given fund tend to be extended, which would drive up the mean, while not affecting the median as much.

As the extended part of extended funds underperforms compared to the returns of the first ten years for the same funds (as well as compared to the whole sample), the most conceivable explanation would be that well-performing funds more easily are granted extensions. They seem to do so for less successful investments on average, although a few individual vintages show outperformance during the extended years. This means that the observed outperformance for longer funds is attributed mostly to performance between year one and year ten, while performance during the extended years rather contributes to decreasing the difference in the returns data. The idea that the best portfolio companies are extended would also be contrary to the view of some of our interviewees, who state that many firms tend to sell good companies too early and hold on to bad companies for too long. EQT stated that they exited Securitas too early, enabling the acquirer to make probably the best deal in its history, hence they wanted to avoid making the same mistake in Anticimex. The argument of extending bad investments would instead support the findings of Phalippou and Gottschalg (2009) around misalignment of incentives between GPs and LPs, as the former want to maximize fees rather than returns.

Alternatively, our results could indicate that flexibility from LPs, leading to extensions during bad market conditions, benefits returns and hence explains the longer funds' outperformance. This would be in line with the more general conclusion of e.g. Gompers and Lerner (2000) and Axelson et al. (2013) that abnormal PE returns could be a result of favorable industry and debt market conditions. One could also draw a parallel to the findings of Arcot et al. (2015) that

pressured buyers and sellers tend to engage more in SBOs and that these deals generate lower returns, which illustrates the value of increased flexibility and hence potentially outperformance. However, as our analysis of incremental cash flows after ten years compared to the NAV at ten years from inception shows, the actual extended part of investments seem to perform below average. This favors the argument that bad investments are prolonged, either to allow time for a turnaround or simply to avoid realizing a bad return, e.g. because of an upcoming fundraising. The latter would be in line with the findings of Barber and Yasuda (2017) that low reputation GPs time their exit and fundraising activities to appear more successful. The poor performance speaks against the theory that most extensions are motivated by bad market conditions, since the increased flexibility should have a positive impact on returns.

3) *What are the main determining factors affecting the choice to extend investments rather than to exit?*

In 2017 EQT had favorable exit conditions, with both a liquid debt market and a strong Nordic IPO market. Regardless of the positive state of financial markets, EQT barely considered a full exit of Anticimex and the base case was a minority sale. The rationale for keeping the company was the clear possibility to continue driving a similar agenda and realizing even more value in the future. Although the top five global pest control competitors including Anticimex had increased their market shares a few percentage points, they only held 32% of the total market. Hence, the opportunity to consolidate the industry further was very much present. In addition, digital sales made up 5.2% (FY 2017) of pest control revenue and 15-20% of new sales, which was continuously increasing both top line and margins and recouping the large investments made. In recent years there was also a positive sentiment in the industry with considerable growth in multiples for the publicly traded peers. In line with the recent trend of an increasing share of co-sponsored deals, EQT ultimately decided to sell off a minority share.

As Anticimex was one of the first investments in EQT VI it was still several years until the planned liquidation, which meant there was no need to consider establishing a formal extension fund or similar structure in order to keep the company. For EQT, the benefit of the minority sale was the opportunity to keep driving their agenda in the company, while showing some return for investors and establishing a new market value for Anticimex. For the LPs who were part of the minority sale transaction, one benefit was the absence of fees which are accompanied by a traditional investment in a PE fund. However, in our interview with AP6 some initial uncertainty was expressed given the fact that LPs co-sponsoring the deal entered at a market value substantially higher than what EQT paid for Anticimex. This was at least partly mitigated by the recalibration of management incentive schemes, which ensured alignment and the desire to create maximum value going forward.

One important reason for EQT to hold on to the company rather than to exit, was the view that they would not be fully compensated for the remaining value creating opportunities in a sales process. This concern is attributed to asymmetric information, as EQT most likely knows best what is in store for Anticimex in the future and the most appropriate strategic direction, as well as what it would mean in terms of growth and profit. Another argument for why EQT might not be fairly compensated in an exit is their, at least to some degree, unique ability to create

value in Anticimex. EQT currently has a dedicated in-house digital team, which likely facilitates realization of the digital strategy in Anticimex and may enable value extraction which would not have been possible under a different ownership. In addition, EQT has an advantage in their established relationships with management. All of our interviewees from Anticimex held EQT in high regard and were content with their agenda for the company and the interaction between them. Although it would be possible for a new owner to build similar relationships, it would require time and could therefore have a negative effect on possible value creation, especially in the short term. An alternative explanation for EQT's inclination to keep the company rather than to exit may be attributed to their high reputational capital. Given their previous consistent performance and well-established relationships with LPs, we deem it likely that they experienced less pressure to realize returns as they had earned the trust and confidence of their investors. This would be in line with the findings of Barber and Yasuda (2017) who argue that low reputation GPs time successful exits with fundraisings.

In addition to highlighting value creation in an SBO, our case study brings forward one example of a company where value has been created by PE for a very long time. We believe companies with similar characteristics as Anticimex, primarily the support of long-term mega trends, are more likely to become part of longer-term funds and the new phenomenon of roll-over investments in the future. Pest control could be viewed as an essential service and we speculate that this makes it somewhat similar to segments such as energy or infrastructure, which according to McKinsey (2018) could be more suitable for evergreen fund structures. From our interviews with people at EQT we got the impression that they were not unfamiliar with the idea of rolling over Anticimex to e.g. a continuation vehicle. Favorable market trends can mean there is much possible value creation left even when a focused PE agenda has been executed. In the case of Anticimex, the digital investments have been an important tool in acquiring targets but most of the financial benefits of the digitalization are yet to come. Currently, digital sales make up 6.7% of pest control revenue (2019) but a substantial part of new sales and as the shift to digital solutions continues, both revenue and margins will improve. Revenue increases as there is added value from proactive rather than reactive solutions and margins increase as the cost of supplying digital solutions is much lower. Therefore, there is no doubt that EQT could continue to create value in the company if they were to keep it for a longer time, even after eight years of ownership.

## **8. Conclusion**

### **8.1 Concluding Remarks**

Our aim was to highlight long-term value creation, performance of extended investments and the dynamics around the decision to extend or exit companies. We find that, in the case of Anticimex, several financial buyers have driven very different agendas in the company, which shows the possibility of value creation in SBOs when PE firms have complementary skills. There were two main interconnected components of EQT's strategy, buy-and-build and digitalization. Market fragmentation and easy integration of pest control providers enabled the buy-and-build agenda. Increased density was the main rationale behind consolidating the

industry. The acquisition of ISS was predetermined and created the necessary platform to expand internationally through acquisitions. Digital investments served as a tool for acquiring companies and laid the foundation for long-term value creation as the industry shifts towards more digital business models.

Our quantitative analysis finds that extended funds outperform normal funds, however the difference is less substantial for the median than the mean. This could indicate that successful funds extend in order to extract the most possible value from certain portfolio companies, which Anticimex would be an example of even though it has not been formally extended, only prolonged. However, a more likely explanation is simply that successful funds are better at reaching agreement with LPs around the decision to extend investments. This is backed by the fact that extended funds perform better during the first ten years compared to the extended years. The incremental extended investments made at the end of the fund also considerably underperforms compared to the total sample but slightly outperforms the public equivalent portfolio.

The decision about when and why PE funds exit portfolio companies is highly complex and a multidimensional question. We find that the strong megatrends such as urbanization and decreasing pest tolerance contributed to the attractiveness of keeping Anticimex. In addition, there was tailwind from a general multiple expansion in the industry and an expected financial uplift from the increasing share of digital solutions. Regardless of the positive state of equity and financial markets, EQT was determined that they were the most appropriate owner of the company and best able to accurately assess the risks and future potential of the business. Therefore, EQT decided to keep the company and only sell a minority share, in a deal which attributed the highest market value to the company. Asymmetric information likely gave rise to an inability of other parties to properly account for the full value of the company, which inhibited a full exit. Some of the future value creation would likely not have been possible for another owner to achieve, given EQT's unique digital capabilities, its knowledge of Anticimex and the pest control industry, and the strong relationships in place with key management individuals.

## **8.2 Further Research**

In a PE environment with fierce competition and scarcity of quality assets, more and more pressure will be put on investment managers to liquidate portfolio companies within the lifetime of the fund. This development is a widespread phenomenon in the industry and is frequently discussed in the media. In the long run this could eventually lead to more GPs trying to create liquidity for their LPs by rolling over investments and portfolio companies to later funds. In the case of Anticimex, when writing this, it has not yet materialized but based on our interviews we know that this subject is up for discussion, as EQT VI is planned to liquidate in 2021. However, we have seen other global PE houses like 3i, PAI and Permira adopt this strategy. We believe the format of a case study examining the dynamics of such a transaction would have been of great interest.

The quantitative part of our thesis studied the performance of extended funds with vintage years between 1993-2002. We believe that researchers could try to replicate our study by looking at a more recent data set. The increased competition within the PE industry has also resulted in more innovative investment strategies being launched. An interesting study would have been to observe the performance of not only extended funds but also evergreen funds. Researchers could potentially analyze the performance of evergreen funds by studying the returns based on the funds' cash infusions and distributions.

Finally, it would have been interesting to see additional research around the factors that determine when LPs are interested in extending their investments, for example reputation and past performance. Based on the interviews we have had with LPs we have come to understand that there is a fine line between grating extensions or liquidating positions. At the same time, LPs are experiencing a more active secondary market which over time could lead to less concern about liquidity. In the years to come this could potentially have a significant impact on prolonged investments and extended funds as LPs can sell and buy stakes from other investors.

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## 10. Appendix A

### 10.1 Quantitative study methodology

In the following section a more detailed presentation of the methodology used in the quantitative section of this thesis is illustrated. Appendix Exhibit 10.1.1 – 10.1.3 shows the formulas used for the results found in Exhibit 1-3. Appendix Exhibit 1.4 explains the method used for the incremental analysis and the PME comparison, for which the results are found in Exhibit 4.

#### 10.1.1 Appendix Exhibit 1.1. Internal rate of return formula

The net IRR is calculated as the money-weighted return of all cashflows to LPs, the cash flows are net of management fee and carried interest paid out to GPs. All cash flows are discounted back to present value and presented as a percentage.

$$IRR = \sum_{t=1}^T \frac{C_t}{(1+r)^t} - C_0 = 0$$

$C_t$  = Net cash inflow during the period  $t$

$C_0$  = Total initial investment costs

$r$  = Net cash inflow during the period  $t$

$t$  = The number of time periods

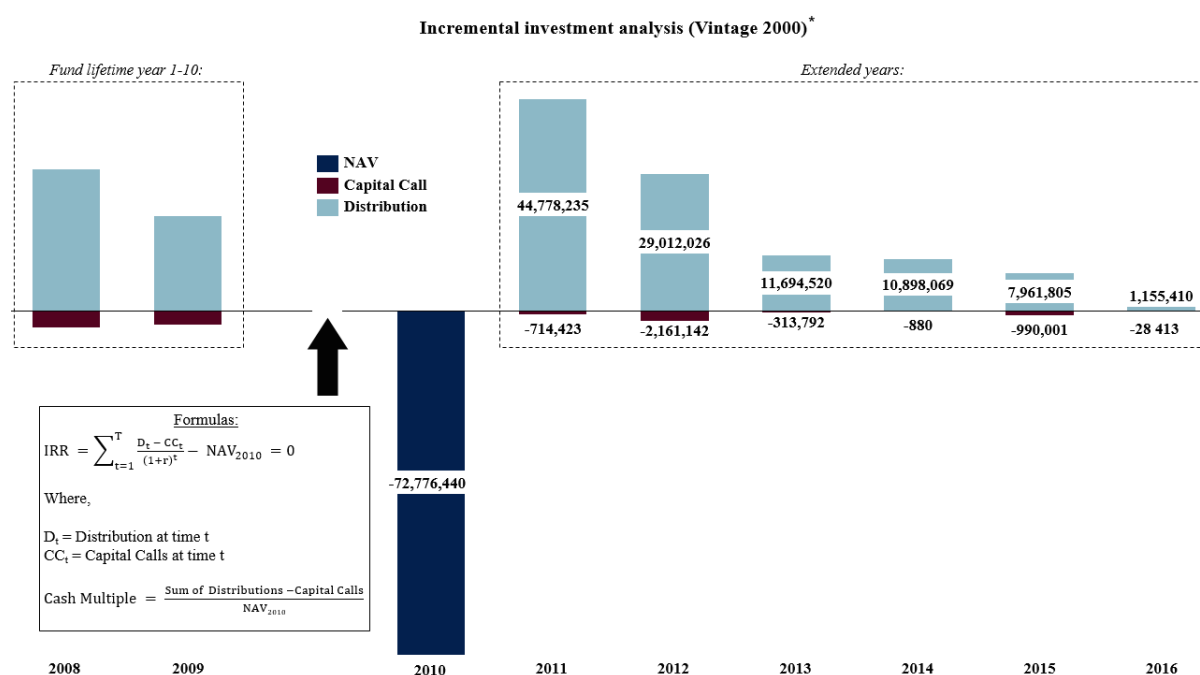
#### 10.1.2 Appendix Exhibit 1.2. Cash multiple formula

The CM is calculated as the quota of money returned to investors over the initial investment. If the LPs invested a total of \$100 and the fund generated returns of \$200 the corresponding CM would equal 2.0x. Equivalently if LPs invested a total of \$100 but only received a total of \$50 the fund generated a CM of 0.5x.

$$\text{Cash multiple} = \frac{\text{Total Cash Distributions}}{\text{Total Equity Invested}}$$

### 10.1.3 Appendix Exhibit 1.3. Incremental investment analysis

The second methodology used in this thesis concerns the incremental analysis of cash flows for extended funds after year 10. As can be seen in the figure below, we assume that the investor would buy the fund for its NAV year 10 and hold the portfolio of funds until liquidation. From these cash flows we later calculate performance metrics in terms of IRR and CM (net of fees). For the normal fund the same methodology is used, however, with the NAV year 10 as a final pay out Appendix Exhibit 1.3 illustrates the real cash flow data for all funds of vintage year 2000. By discounting the cashflows with the suggested formulas, the vintage year 2000 yielded an IRR of 12.56% and a CM of 1.35x.

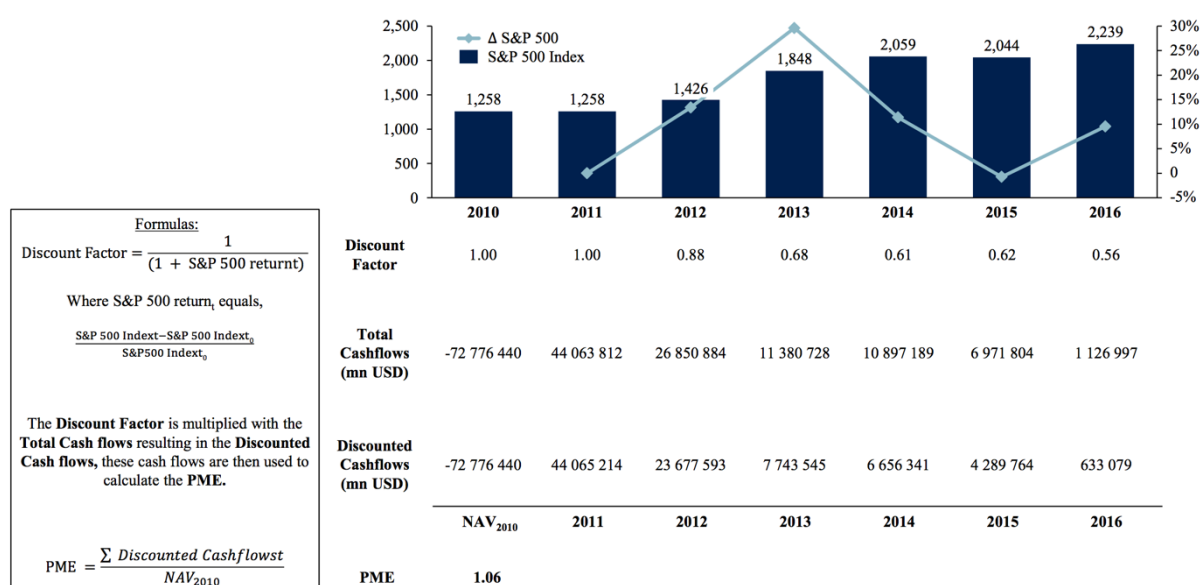


\*Note that the illustration is simplified, all cash flows are discounted based on the exact date of the transaction and not on a yearly basis as illustrated above.

### 10.1.4. Appendix Exhibit 1.4. PME calculation, vintage year 2000

The incremental returns from the extended fund is compared to a corresponding asset class by the use of PMEs.

This technique is often applied when evaluating PE fund performance since neither the IRR nor CM offers a direct comparison to public markets (Kaplan and Schoar, 2005). Appendix Exhibit 1.4 displays an example of the PME obtained for the PE extended funds with vintage year 2000. The method builds on the same NAV and cashflows (capital calls and distributions) seen in Appendix Exhibit 1.3. These cash flows are then discounted with the appropriate rate based on the corresponding daily return of the S&P 500 that coincided with the fund transaction (capital call or distribution). The PME is then calculated by dividing the sum of all discounted cashflows between 2011-2016 with the NAV of all PE funds as of 2010-12-31. For the vintage year of 2000 the PME equals 1.06 which indicates that an LP would have been better off investing in the private equity fund since that investment outperformed the S&P 500.



\*Note that the illustration is simplified, all cash flows are discounted based on the exact date of the transaction and not on a yearly basis as illustrated above.

## 10.2 Appendix Exhibit 2. Overview of t-tests

### Equal weighted IRR

t-Test: Two-Sample Assuming Unequal Variances

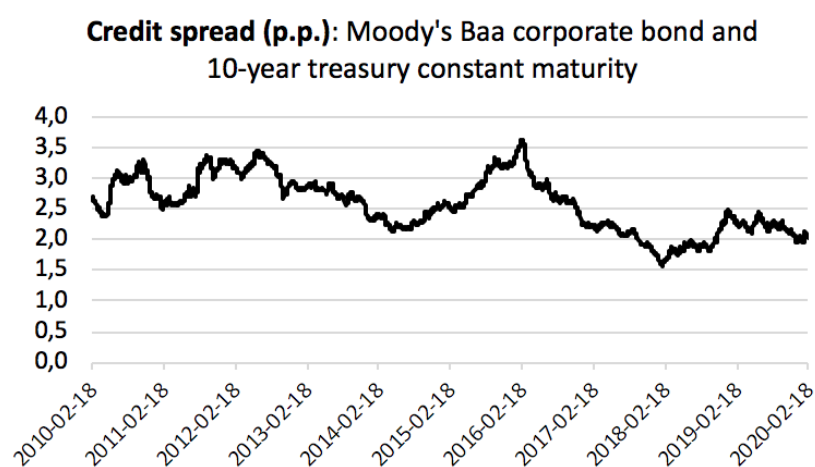
	Normal	Extended
Mean	15.4385454545455	21.7476829268293
Variance	294.182553125779	946.612438770013
Observations	220	164
Hypothesized Mean Difference	0	
df	238	
t Stat	-2.36624112778874	
P(T<=t) one-tail	0.00938585129468696	
t Critical one-tail	1.65128116381395	
P(T<=t) two-tail	0.0187717025893739	
t Critical two-tail	1.96998152952994	

### Equal weighted CM

t-Test: Two-Sample Assuming Unequal Variances

	Normal	Extended
Mean	1.76404545454545	2.06737804878049
Variance	0.538295431714411	1.21063173350292
Observations	220	164
Hypothesized Mean Difference	0	
df	267	
t Stat	-3.05964527535901	
P(T<=t) one-tail	0.001220773247029	
t Critical one-tail	1.65058060100266	
P(T<=t) two-tail	0.002441546494058	
t Critical two-tail	1.9688886224493	

## 10.3 Appendix Exhibit 3. Historical credit spreads



Source: Federal Reserve Bank of St Louis<sup>18</sup>

<sup>18</sup> <https://fred.stlouisfed.org/series/BAA10Y>

## 10.4 Appendix Exhibit 4. Overview of IK fund history up until 2013

Fund	Million EUR	Description	Year of closing
IK 1989	105*	Invests in Continental Europe. Industry focus business support services, chemicals, consumer services, food, industrials, media, and retail	1989
IK 1994	250	Invests in Continental Europe. Industry focus consumer services, food, logistics and distribution, media, and retail	1994
IK 1997	750	Invests in Continental Europe. Industry focus consumer services, food, logistics and distribution, media, and retail	1997
IK 2000	2,100	Multi-continental geographic scope. Industry focus chemicals, construction, consumer services, media, and retail	2000
IK 2004	825	Multi-continental geographic scope. Industry focus chemicals, construction, consumer services, media, and retail	2004
IK 2007	1,675	Invests in Continental Europe. Industry focus chemicals, construction, consumer services, media, and retail	2007
IK VII	1,356	Focus on Northern and Eastern Europe in the mid- and large cap segments. 17 out of 38 investments in industrial sector	2013

Note: \*IK 1989 fund size quoted in SEK. Average of EUR/SEK FX rate 31/12 1988 and 31/12 1989 used to convert into EUR.

*Source: Preqin and fxtop<sup>19</sup>*

## 10.5 Appendix Exhibit 5. Overview of Nordic Capital fund history up until 2013

Fund	Million EUR	Description	Year of closing
Nordic Capital I	55	Invests in Nordics and Western Europe. Focus on manufacturing companies in a diverse range of sectors, eg. biotech. and construction	1990
Nordic Capital II	110	Invests in Nordics and Western Europe. Focus on manufacturing companies in a diverse range of sectors, eg. biotech. and construction	1993
Nordic Capital III	350	Invests in Nordics and Western Europe. Focus on manufacturing companies in a diverse range of sectors, eg. biotech and construction	1997
Nordic Capital IV	760	Invests in Nordics and Western Europe. Focus on manufacturing companies in a diverse range of sectors, eg. biotech and construction	2000
Nordic Capital V	1,500	Invests in Nordics and Western Europe. Focus on manufacturing companies in a diverse range of sectors, eg. healthcare and IT	2003
Nordic Capital VI	1,900	Diverse investments but a special focus on the healthcare sector. The fund primarily focuses on Nordic region and has selected investments in Europe	2006
Nordic Capital VII	4,300	The fund focus primarily on investments in large to medium-sized companies with strong market positions and growth potential in the Nordic region and Europe	2008
Nordic Capital VIII	3,591	The fund primarily invests in Europe-based companies, mainly in the Nordic region and the German-speaking countries. It operates in a wide range of industry sectors	2013

*Source: Preqin*

<sup>19</sup> <https://fxtop.com/en/historical-currency-converter.php>



## 10.6 Appendix Exhibit 6. Overview of Altor fund history up until 2014

Fund	Million EUR	Description	Year of closing
Altor 2003	650	Invests in the Nordics. Industry focus healthcare, medical devices and equipment, oil and gas, and telecom	2003
Altor II	1,150	The fund invests in medium size Nordic companies with EUR 50 to 500 million in revenue. Industry focus healthcare and telecom	2006
Altor III	2,000	Altor Fund III is a generalist buyout fund focusing on Nordic mid-market investments	2008
Altor IV	2,124	Altor Fund IV is a generalist buyout fund focusing on Nordic mid-market investments	2014

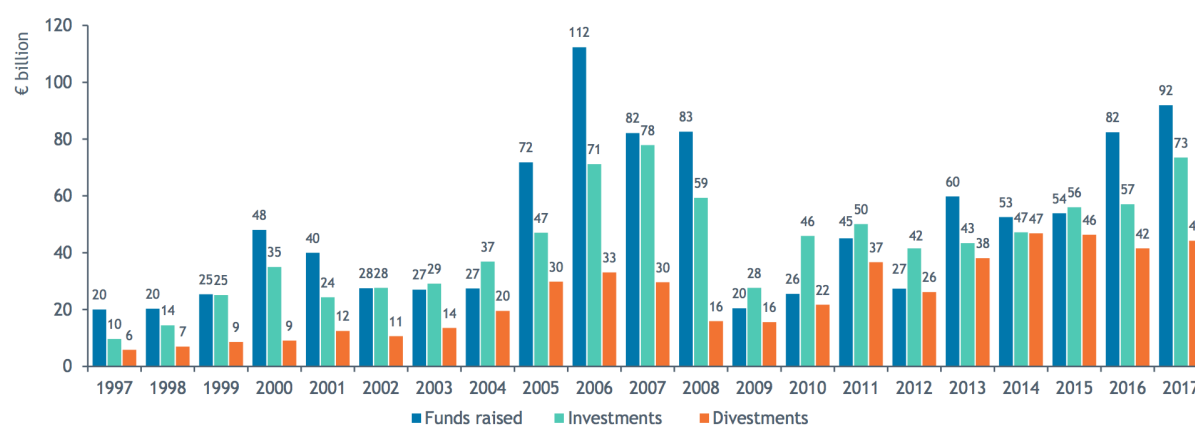
Source: Preqin

## 10.7 Appendix Exhibit 7. Overview of Triton fund history up until 2013

Fund	Million EUR	Description	Year of closing
Triton I	588	Specializes in mid-market buyouts and spin-offs in Europe, primarily focusing on Austria, Germany, and Switzerland.	1999
Triton II	1,100	Mid-market buyouts in Northern Europe with a focus on the industrial, business services and consumer / health sectors	2006
Triton III	2,000	Mid-market buyouts in primarily the Nordics and the US, with a focus on the industrial, business services and consumer / health sectors	2009
Triton IV	3,600	Mid-market buyouts and special situation investments, with a focus on Northern Europe and Western Europe	2013

Source: Preqin

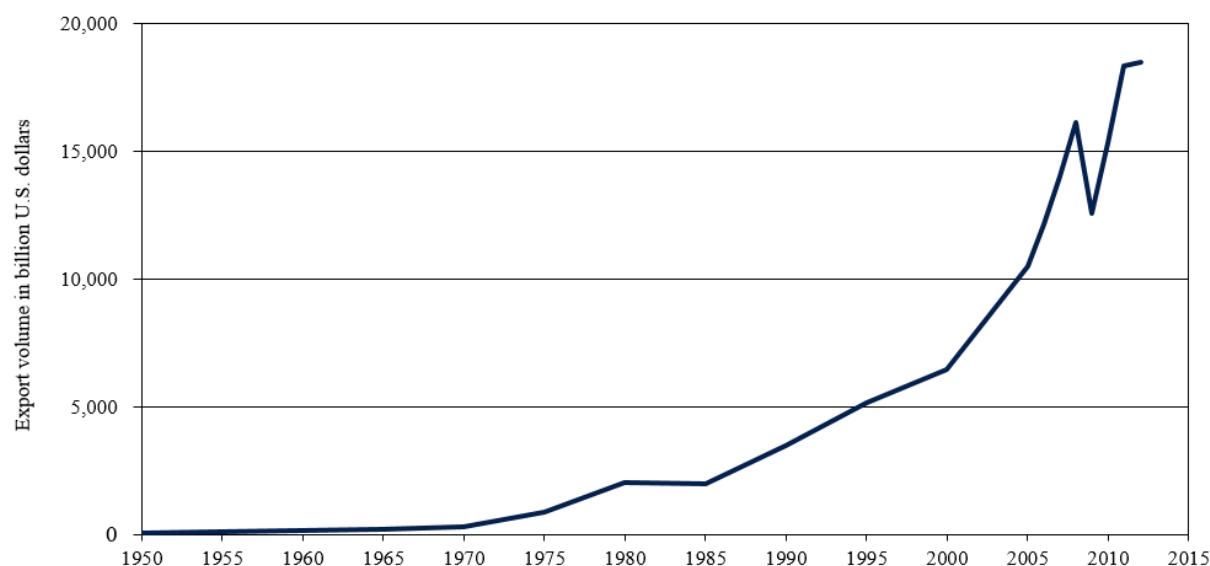
## 10.8 Appendix Exhibit 8. European private equity activity 1997-2017



Source: Invest Europe

## 10.9 Appendix Exhibit 9. Global export volume

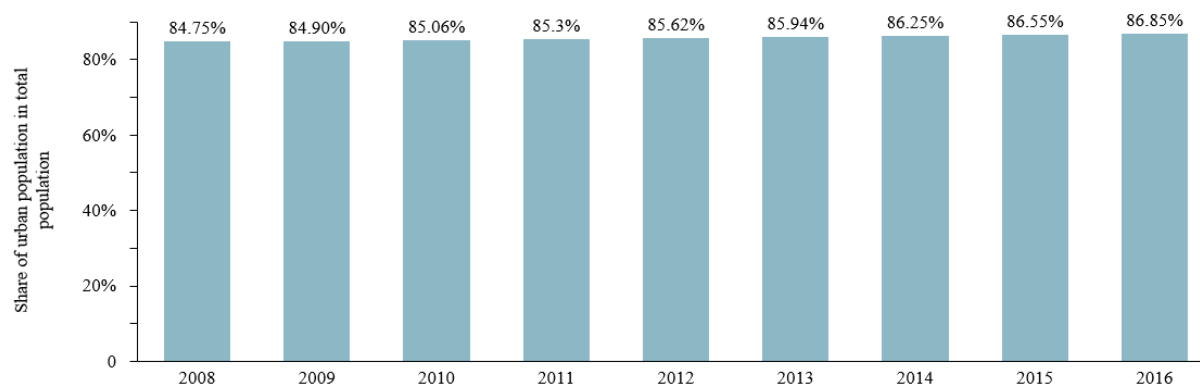
*The graph illustrates trends in global export volume from 1950 to 2012. Global trade refers to the exchange of capital, goods and services between different countries and territories. Global export refers to goods sold internationally which were grown, produced or manufactured in another country.*



Source: UNCTAD

## 10.10 Appendix Exhibit 10. Urbanization in Sweden

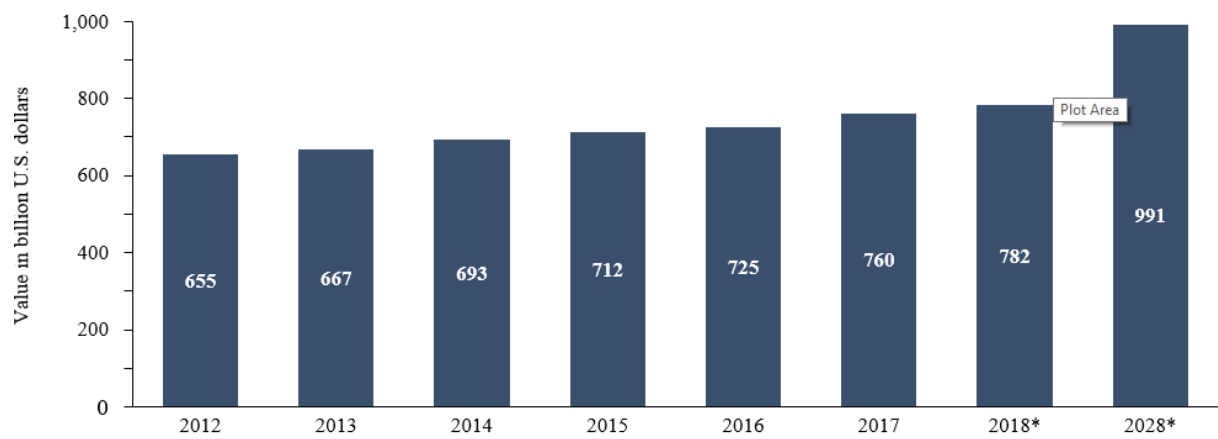
*This graph shows the degree of urbanization in Sweden from 2008 to 2016. Urbanization means the share of urban population of the total population of the country.*



Source: World Bank

10.11 Appendix Exhibit 11. Travel contribution to GDP in Europe

*This graph presents the direct contribution of travel and tourism to GDP in Europe from 2012 to 2018, with an additional forecast for 2028. Over the period, the direct contribution increased, reaching 760 billion U.S. dollars in 2017. \* = estimates.*








Source: WTTC

## 10.12 Appendix Exhibit 12. Company descriptions for comparable companies

Company Name:	Description:
Rollins Inc.	Rollins, Inc. engages in the provision of pest and termite control services through its wholly-owned subsidiaries to both residential and commercial customers in North America, Australia, and Europe. Its subsidiaries include Orkin, LLC, Orkin Canada, Western Pest Services, The Industrial Fumigant Company, HomeTeam Pest Defense, Rollins Australia, Rollins Wildlife Services, and Rollins UK. The company was founded by John W. Rollins and O. Wayne Rollins Sr. in 1948 and is headquartered in Atlanta, GA.
Servicemaster Global Holdings Inc.	ServiceMaster Global Holdings, Inc. engages in the provision of residential and commercial services. It offers residential and commercial termite and pest control, national accounts pest control services, restoration, commercial cleaning, residential cleaning, cabinet and furniture repair, and home inspections. It operates through the following segments: Terminix, ServiceMaster Brands, and Corporate. The Terminix segment focuses on providing termite remediation, annual termite inspection and prevention, periodic pest control services, insulation services, crawlspace encapsulation, wildlife exclusion, and treatments with termite damage repair guarantees to residential and commercial customers. The company was founded by Marion W. Wade in 1929 and is headquartered in Memphis, TN.
Rentokil Initial.	Rentokil Initial Plc engages in the provision of business support services. The firm through its products and services protect people from the dangers of pest-borne disease and the risks of poor hygiene. It operates through the following geographical segments: France, Benelux, Germany, Southern Europe, and Latin America. The firm focuses on route-based services, predominately in pest control and hygiene as well as other smaller specialist services including plants, medical services, property care and specialist hygiene. The company was founded by Harold Maxwell-Lefroy on September 29, 1924 and is headquartered in Camberley, the United Kingdom.
Ecolab Inc.	Ecolab, Inc. engages in the provision of products and services in the field of water, hygiene, and energy. It operates through the following segments: Global Industrial, Global Institutional, Global Energy, and Others. The Global Industrial segment consists of the water, food and beverage, paper, life sciences and textile care operating segments. It offers water treatment and process applications, and cleaning and sanitizing solutions, primarily to large industrial customers within the manufacturing, food and beverage processing, transportation, chemical, primary metals and mining, power generation, pulp and paper, pharmaceutical and commercial laundry industries. The Global Institutional segment consists of the institutional, specialty and healthcare operating segments. It provides specialized cleaning and sanitizing products to the foodservice, hospitality, lodging, healthcare, government, education and retail industries. The Global Energy segment serves the process chemicals and water treatment needs of the global petroleum and petrochemical industries in both upstream and downstream applications. The Other segment offers services to detect, eliminate and prevent pests, such as rodents and insects. The company was founded by Merritt J. Osborn in 1923 and is headquartered in St. Paul, MN.

*Source: FactSet*

## 10.13 Appendix Exhibit 13. Service offering by Anticimex in 2011

Service Group:	Description:	Sales 2011:
 Pest control	The B2C model consists of Anticimex providing treatment for pest incidents in family homes as well as residents of apartment buildings. Either as part of homeowners' insurance coverage or per job basis. A small number of customers purchase an insurance policy directly from Anticimex. The B2B model foremost targeting companies required to control pests such as food service companies, hospitality companies and pharma companies. The service contracts foremost consist of prevention of and/or treatment for pest incidents that are part of a direct agreement with Anticimex.	867
 Building environment	Anticimex offers a full range of working environment control services like documentation of working environment, workplace inspection, annual follow-ups, employee training and employee surveys. These services were mainly targeted as add-on sales to current customers since most companies already conducted these services in-house.	771
 Hygiene	Anticimex hygiene offering consist of six different sub-groups; establishing self-control program, inspections and control, report on proposed improvements, documentation, education/training program and consultation and support. Anticimex hygiene offering is focused on the foodservice industry.	173
 Fire protection	By Swedish law all commercial (hotels, restaurants, retail etc.) and non-commercial operations (schools, hospitals, housing etc.) must actively work towards establishing systematic fire safety routines and document these practices. Within the fire safety industry Anticimex foremost focus on providing training and courses within these segments.	58
 Energy inspection	Anticimex foremost offered energy declaration services within optimization of energy usage. Anticimex is focused on providing energy declarations primarily to family homes and residents of apartment buildings. The energy declarations contain three key components; inspection and control of the building and surrounding areas, diagnosis and report on measures to be taken to reduce energy consumption and follow up and advice on suggest measures.	58
		1,927

## 10.14 Appendix Exhibit 14. Financials for publicly traded peers (1<sup>st</sup> of January 2012)

Company	Country	Sales (\$m)	EBITDA (\$m)	EBIT (\$m)	Earnings (\$m)	Market Cap (\$m)	Net debt (\$m)	Net debt/EBITDA
Rollins Inc.	USA	1 205.1	199.5	162.0	100.7	3 091.6	1.7	0.01
Servicemaster Global Holdings Inc.	USA	3 205.9	538.9	375.5	40.8	na	na	na
Rentokil Initial.	UK	2 544.3	427.4	182.8	-69.7	1 659.2	1047.0	2.45
Ecolab Inc.	USA	6 798.5	1 289.4	893.7	462.5	11 987.1	1037.8	0.80
Peer average		3 438.4	613.8	403.5	133.6	5 579.3	695.5	1.09
Anticimex	SWEDEN	279.7	34.0	27.0	12.6	na	129.0	3.8

Source: FactSet

## 10.15 Appendix Exhibit 15. Biography of the main interviewees in the case

### Background of key interviewees

**Per Franzén** joined EQT Partners in Stockholm in May 2007. Per holds a M.Sc in Economics and Business Administration from the Stockholm School of Economics with exchange studies at the University of St Gallen in Switzerland.

Prior to joining EQT Partners, Per spent six years at Morgan Stanley's London and Stockholm offices working in M&A, Leveraged Finance and Nordic Banking.

Per has worked in the Stockholm and Munich offices at EQT Partners and has been involved in a number of investments including IFS, Automic, SSP, AcadeMedia, Securitas Direct, IVC, Anticimex, Eton, Duni, Karo Pharma and Piab. In January 2014, Per was appointed Head of Equity in Stockholm and as of January 1, 2019, Per is Co-Head of EQT Equity.

Per is a member of the EQT Executive Committee and Chairman of the Equity Partners Investment Committee.

**Carl Johan Renström** joined EQT Partners in 2009. Carl Johan holds a M.Sc. in Economics and Business from Stockholm School of Economics with exchange studies at the University of St Gallen in Switzerland, and an MBA from Harvard Business School.

Prior to joining EQT Partners, Carl Johan was in private equity at The Blackstone Group in London. Prior to Blackstone, he was working in M&A at JP Morgan in London.

**Olof Sand** was CEO and President of Anticimex 2012-2015. Olof completed his IFL (now called Executive Education) at Stockholm School of Economics and holds a MBA from Uppsala University.

Prior to joining Anticimex, Olof served as CEO and President of Proact IT Group. He is currently Chairman of the Board at Zington and Regin.

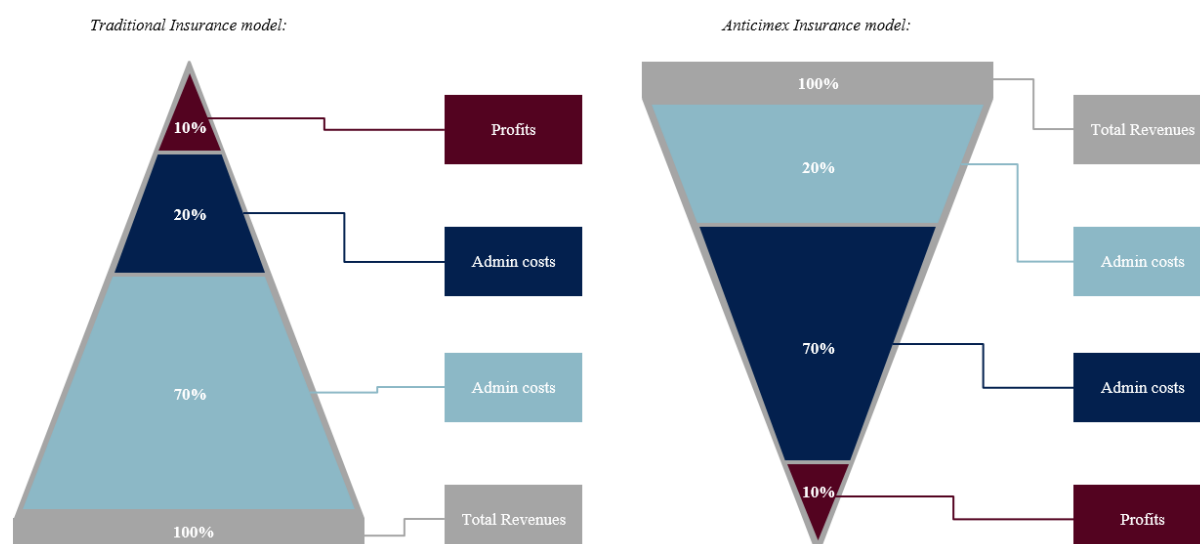
**Jarl Dahlfors** is CEO and President of Anticimex since 2015. Jarl holds a BSc in Finance and Business Administration from Stockholm University and has completed IMD management training.

Prior to joining Anticimex, Jarl was CEO and President of Loomis Group and before that CEO of Loomis US.

**Mats Samuelsson** is President of Anticimex Insurance since January 2020. Before that he was CEO of Anticimex Insurance 2010-2019. Mats completed his IFL at Stockholm University.

## 10.16 Appendix Exhibit 16. The upside-down insurance model

*"Traditional insurance companies are underwriters calculating their risks. We also do this, but we can influence this through our inspections, the advantage is that our profits become less volatile. For example, if damage increases in a traditional insurance company by 10%, it hooks up 7% of profits while for Anticimex only 2%" (Mats Samuelsson 11.03.21)*



## 10.17 Appendix Exhibit 17. Biography of board members in Anticimex

### Background of board members in Anticimex as of 2017

**Gunnar Asp (Chairman)**, holds a BSc of Administration from Stockholm University. Gunnar's other assignments include: Chairman Broadnet AS and IP-Only, board member Adamo. Gunnar was previously Chairman at KBW, Blizoo and UDG, President and CEO ComHem 2003–2008, CEO StjärnTV 1999–2001, Board member 3L, Securitas Direct and AIMS

**Hans-Erik Andersson**, has an education from Stockholm University and INSEAD Executive program. Other assignments for Hans include: Chairman Skandia and SinterCast, Board member JLT Risk Solutions. Hans was previously President and CEO Skandia 2004–2006, Chairman Marsh&McLennan Nordic 2000–2003

**Edward Brown**, completed BA Business studies University of Coventry. Edward's other assignments include: Chairman Energy Saving Trust, Board member of IDVerde, Partner Cophall Associates. Edward previously held Senior Executive positions in Rentokil Initial 1981–2007

**Michael Kneeland**, has an education from Bethlehem Central and completed business courses at Hudson Valley Community College. Michael's other assignments include: CEO United Rentals, Board member YRC Worldwide Inc. Co-chair Transportation Stakeholder Alliance. Member of Advisory Board of John Hopkins Berman Institute of Bioethics. Michael was previously President of Freestate Industries and General Manager at Rylan Rents

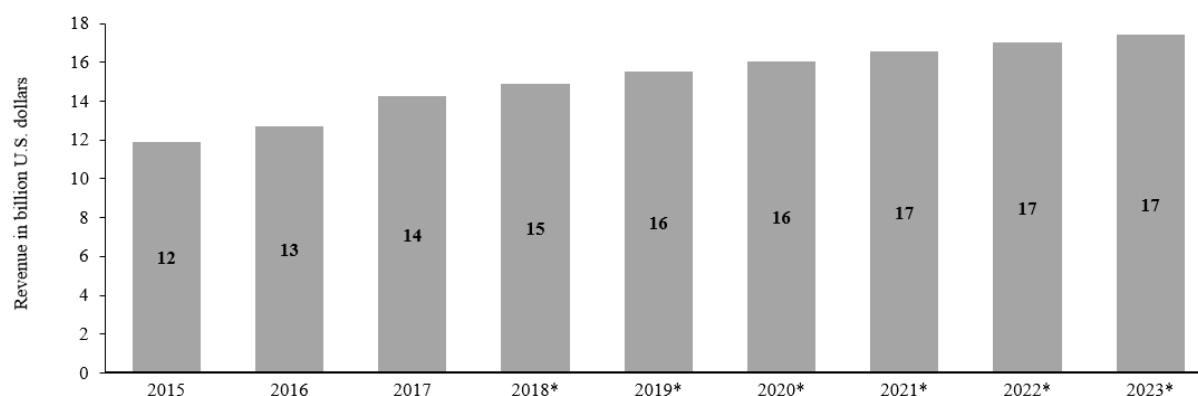
**Dick Seger**, has an education in Civil Engineering, Industrial Economy, Linköping. Dick is also Director of Securitas AB. Dick was previously President, CEO, Director of the Verisure group (previously Securitas Direct)

**Per Franzén**, holds a MSc from Stockholm School of Economics. Per's other assignments include: Partner EQT Partners, Board member IFS, IVC, Eton and Board observer Piab. Per was previously at Morgan Stanley London and Stockholm, Board member AcadeMedia, Securitas Direct, Duni, SSP and Automic

**Anna Setzman**, has an education from Berghs School of Communication and SSE IFL Executive Education. Anna's other assignments include: Board member Telia Company AB, Collector Bank AB and Dreams Nordic AB. Anna was previously CEO Aftonbladet, Executive Board member Schibsted Sweden AB and Board member Nordnet Bank AB, Dibs Payments AB

## 10.18 Appendix Exhibit 18. US pest control market size

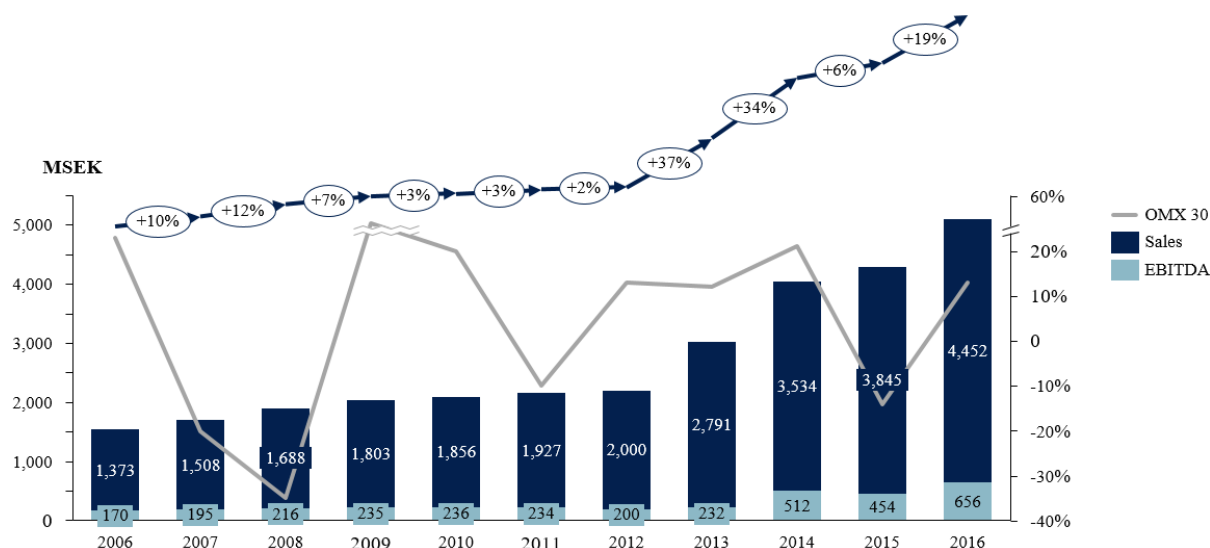
*Total industry revenue for "exterminating and pest control services" in the U.S. from 2011 to 2023 (in billion U.S. Dollars). \* = Estimates.*



*Source: Statista*

## 10.19 Appendix Exhibit 19. Anticimex cyclicalality graph

The column displays the yearly sales and EBITDA for Anticimex between 2006 and 2016, the blue line shows the yearly growth in sales. The grey line represents the corresponding return from the OMX30 during the same period. The figure demonstrates the low cyclicality of the company throughout a ten-year period with both economic growth periods and downturns.



## 10.20 Appendix Exhibit 20. Financials for publicly traded peers (1<sup>st</sup> of January 2017)

Company	Country	Sales (\$m)	EBITDA (\$m)	EBIT (\$m)	Earnings (\$m)	Market Cap (\$m)	Net debt (\$m)	Net debt/EBITDA
Rollins Inc.	USA	1 573.5	309.6	259.7	167.4	8 045.4	-142.8	-0.5
Servicemaster Global Holdings Inc.	USA	1 726.0	394.0	316.0	155.0	5 354.2	2 519.0	6.4
Rentokil Initial.	UK	2 926.9	660.2	347.4	226.5	6 207.0	1 575.0	2.4
Ecolab Inc.	USA	13 151.8	2 870.2	2 019.5	1 229.0	36 610.7	6 359.6	2.2
Peer average		4 844.6	1 058.5	735.6	444.5	14 054.3	2 577.7	2.63
Anticimex	SWEDEN	498.7	73.7	39.0	-12.7	na	740.4	10.05

Source: FactSet

## 10.21 Appendix Exhibit 21. Multiples for publicly traded peers as of June 2017

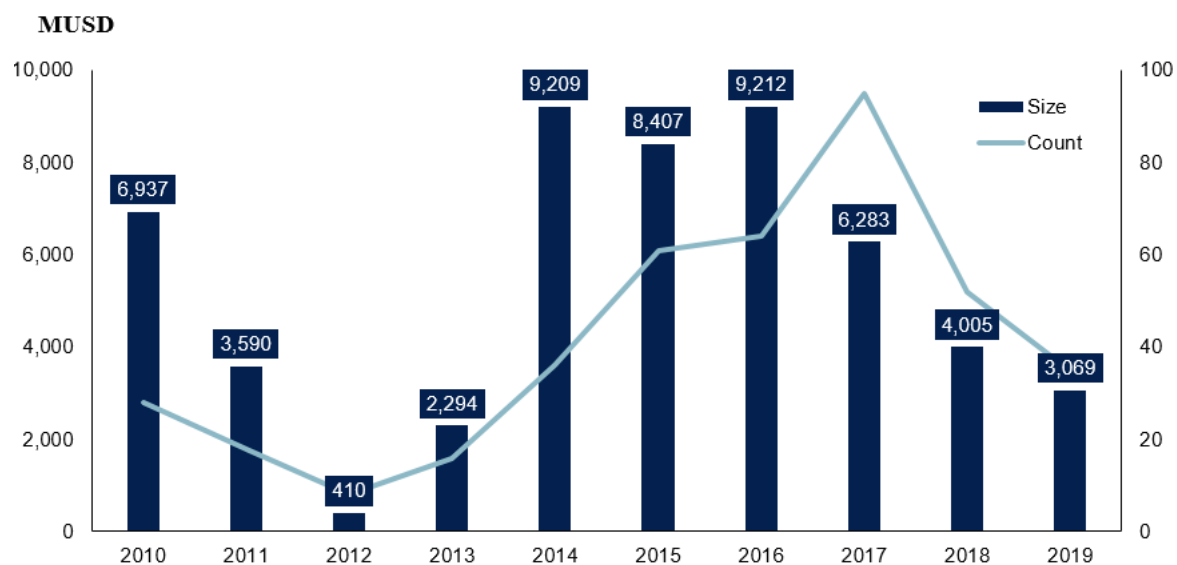
	EV/NTM SALES	EV/NTM EBITDA	EV/NTM EBIT
Rollins Inc.	5.16	24.31	28.81
Servicemaster Global Holdings Inc.	2.65	11.06	12.51
Rentokil Initial.	2.65	11.93	20.6
Ecolab Inc.	3.24	14.64	20.51
Average	3.4	15.5	20.6
Median	2.9	13.3	20.6
High	5.2	24.3	28.8
Low	2.7	11.1	12.5

Source: FactSet



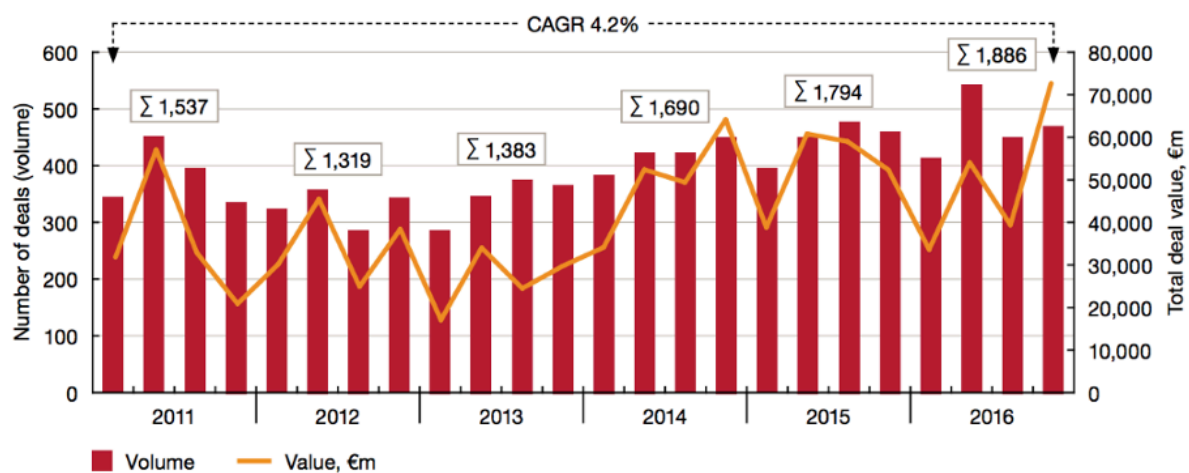
## 10.22 Appendix Exhibit 22. Nordic IPOs over the last ten years

*All Nordic (Sweden, Norway, Finland and Denmark) IPOs between 2010-2019*



*Source: Bloomberg*

## 10.23 Appendix Exhibit 23. European private equity deal value and volume 2011–2016

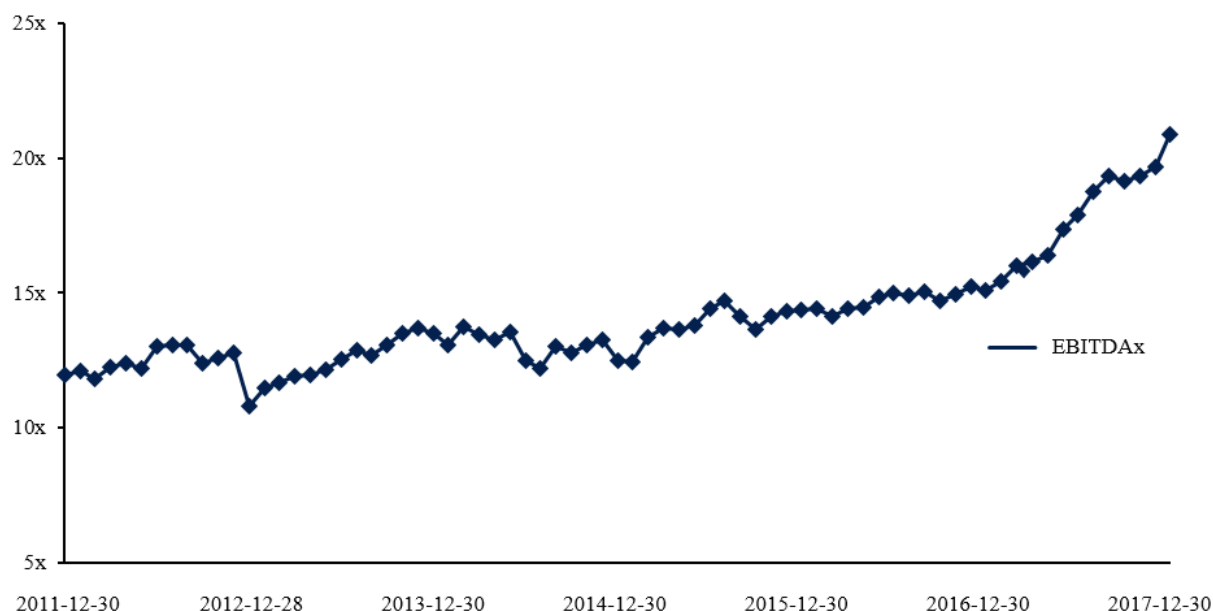


*Source: PWC*

## 10.24 Appendix Exhibit 24. EV/EBITDA development of publicly traded peers

The graph shows the development of the EV/EBITDA multiple for publicly traded peers from 2011-12-30 to 2017-12-29. The multiple is the equally weighted average of the companies presented in Appendix Exhibit 20.

The graph clearly demonstrates the increased valuation throughout the case period.



Source: FactSet

## 11. Appendix B – Teaching case material

### 11.1 Appendix Exhibit 1. Anticimex case timeline

Anticimex before EQT			EQT Ownership									
ServiceMaster	Nordic Capital 1992-1995 and 2001-2006	Ratos 2006-2012		Transaction			Minority Sale			Minority Sale		
1995-2001	2001-2006	2006-2012		2012	2013	2014	2015	2016	2017	2018	2019	2020
Divestment of most non-US assets to become more strategically focused	Initial investment in fund I, public-to private deal. Exited though strategic sale to ServiceMaster but then bought back the company in fund IV in 2001	Main focus on broadening product portfolio in existing markets. Sale to EQT for SEK 2.9 billion generated 24% IRR on investment	<b>Sourcing</b>	Successful exit from Securitas Direct and were looking for service industry company with attractive acquisition opportunities. Actively reached out to Ratos but were initial turned down, but when a formal process was initiated EQT secured the deal								
			<b>M&amp;A</b>	Acquisition of <b>ISS</b> in 2013, doubling the size of operations and solidifying the platform for further growth Acquisition of <b>Enviropest</b> in 2014, becoming a major player in Australia Acquisition of 20% of <b>WiseCon</b> in 2015, digital trap company Acquisition of <b>Bug Doctor</b> in 2016 and entry into the US, the largest pest control market (~50% of global market) 2017: More than 100 add-on acquisitions made so far 2020 (April): More than 200 add-on acquisitions made so far								
			<b>Governance</b>	2013 (January): <b>Olof Sand</b> with a background from running IT companies appointed as CEO Top existing management talent put on Sweden operations, many new recruited for international expansion Reinvestment of more than 50% of proceeds for management staying on after transaction 2015: <b>Jarl Dahlfors</b> with a background from service business and strong believer in decentralization appointed as CEO Branchmodel established and tracking of KPIs and spreading of best practices initiated								
			<b>Operational</b>	2013: Started the process of closing down non-core businesses to <b>refocus on pest control</b> , allowing Sweden to be a bit more diverse As a result, pest control made up 79% of revenue in 2016 compared to 45% of revenue in 2011 2015: Launch of <b>SMART</b> concept, digital traps, sensors and cameras for proactive and more efficient pest control One year after the launch, almost 20% of new sales came from the digital segment 2012: Global footprint at beginning of year was <b>6 countries</b> : Sweden, Norway, Denmark, Finland, Germany & Netherlands, supported by <b>1300</b> employees By the start of 2020 the Anticimex organization had grown to <b>7100</b> employees and presence in <b>18</b> countries								
			<b>Exit</b>	2017 (October): Sale of 33% stake to AP6, AMF, Volito and Cubera at SEK 22 billion valuation 2019 (November): Sale of ~10% stake to GIC at SEK 38 billion valuation 2019 (December): Sale of ~10% stake to Melker Schörling AB at SEK 38 billion valuation								

## 11.2 Appendix Exhibit 2. Precedent Nordic transactions: selected essential service business acquisitions

Date	Target Firm	Target Firm Description	Target Country	Acquirer Firm	Acquirer Country	Sector	Target Enterprise Value (€V)	Target EV/EBITDA multiple based on Last 12
								Months (f.T.M.)
2017	Textilia	Sweden based provider of facility solutions	Sweden	DFD	Denmark	Laundry services	n.a.	11.9x
2017	Colosseum Smile	Sweden based provider of dental services	Sweden	Jacobs Holding AG	Switzerland	Dental services	n.a.	12.5x
2016	Pierre.dk	Denmark based provider of auto painting services	Denmark	Dent Wizard	USA	Auto services	54	10.2x
2016	Mekonomen	Sweden based automotive spare-parts chain primarily located in Northern Europe	Sweden	LKQ Corporation	USA	Auto services	810	10.8x
2014	Alliance	Denmark based provider of facility solutions	Denmark	Kirk Kapital	Denmark	Cleaning services	n.a.	10.3x
2014	Oral	Finland based provider of dental services	Finland	Capman	Finland	Oral services	62	9.3x
2012	ISS	Denmark based facility services company, the offering includes i.a. real estate, pest control and cleaning	Denmark	Kirkbi Invest AS	Denmark	Services	5.496	9.8x
2012	Anticimex	Sweden based company involved in i.a. pest and vermin control	Sweden	EQT	Sweden	Pest control	327	11.1x
2009	Environmental Property Service	UK based provider of property solutions	UK	Mitie Group	UK	Services	43	6.4x
2009	Dalkia Technical FM	UK based provider of outsourced technical FM and energy services	UK	Mitie Group	UK	Services	151	11.3x
2008	Orbis	UK based provider of property and security services incl. Pest control, cleaning and clearance	UK	Insite Service Management	n.a.	Pest control	144	10.2x
2005	Anticimex	Sweden based company involved in i.a. pest and vermin control	Sweden	Ratos	Sweden	Pest control	175	12.5x
2004	Engel-Yhtymä	Finland based provider of life-cycle real estate services and care services	Finland	ISS	Denmark	Services	192	11.5x
							Average	10.7x
							Median	10.8x

Source: Mergermarket

### 11.3 Appendix Exhibit 3. Rentokil financials (all numbers in USDm)

Rentokil Initial plc								
	Fiscal Year Ending December 31							
	2017A	2016A	2015A	2014A	2013A	2012A	2011A	2010A
<u>Income Statement</u>								
<b>Sales</b>	<b>3,107</b>	<b>2,925</b>	<b>2,687</b>	<b>2,866</b>	<b>3,637</b>	<b>4,035</b>	<b>4,079</b>	<b>3,854</b>
Growth (%)	11.3	23.3	1.0	-25.2	-8.6	0.1	1.9	-1.4
<b>Gross Income</b>	<b>739</b>	<b>667</b>	<b>647</b>	<b>975</b>	<b>1,246</b>	<b>1,781</b>	<b>1,542</b>	<b>1,485</b>
Growth (%)	16.2	16.7	-28.5	-25.7	-29.1	16.9	0.0	468.5
Gross Margin (%)	23.8	22.8	24.1	34.0	34.3	44.1	37.8	38.5
<b>EBIT</b>	<b>400</b>	<b>336</b>	<b>322</b>	<b>353</b>	<b>394</b>	<b>336</b>	<b>287</b>	<b>287</b>
Growth (%)	24.8	18.1	-1.8	-15.0	18.8	18.5	-3.6	-92.7
EBIT Margin (%)	12.9	11.5	12.0	12.3	10.8	8.3	7.0	7.4
<b>EBITDA</b>	<b>656</b>	<b>665</b>	<b>631</b>	<b>695</b>	<b>742</b>	<b>684</b>	<b>691</b>	<b>701</b>
Growth (%)	3.3	19.4	-2.2	-11.0	10.0	0.0	-5.0	-83.8
EBITDA Margin (%)	21.1	22.7	23.5	24.3	20.4	16.9	17.0	18.2
<b>Net Income</b>	<b>879</b>	<b>226</b>	<b>190</b>	<b>208</b>	<b>141</b>	<b>81</b>	<b>-112</b>	<b>-36</b>
Growth (%)	307.6	34.8	-1.7	40.4	75.1 -	-	-197.9	-149.2
Net Margin (%)	28.3	7.7	7.1	7.3	3.9	2.0	-2.7	-0.9
<u>Balance Sheet</u>								
<b>Cash &amp; Short-Term Investments</b>	<b>429</b>	<b>212</b>	<b>299</b>	<b>388</b>	<b>727</b>	<b>276</b>	<b>148</b>	<b>148</b>
<b>Total Assets</b>	<b>4,204</b>	<b>3,142</b>	<b>3,185</b>	<b>2,789</b>	<b>3,303</b>	<b>3,165</b>	<b>2,796</b>	<b>2,821</b>
Return on Assets (%)	24.2	7.1	6.3	6.7	4.6	2.7	-3.9	-1.2
<b>Total Debt</b>	<b>1,671</b>	<b>1,653</b>	<b>1,766</b>	<b>1,570</b>	<b>2,429</b>	<b>1,970</b>	<b>1,568</b>	<b>1,639</b>
Total Debt / Total Assets (%)	39.7	52.6	55.4	56.3	73.6	62.3	56.1	58.1
Total Debt / Total Equity (%)	132.3	371.0	564.3	1,005.2 -	-	-	-	-
<b>Net Debt</b>	<b>1,242</b>	<b>1,441</b>	<b>1,467</b>	<b>1,182</b>	<b>1,702</b>	<b>1,694</b>	<b>1,420</b>	<b>1,490</b>
Net Debt / Total Equity (%)	98.3	323.5	468.8	756.6	-442.7	-668.9	-832.6	-701.4
<b>Total Shareholders' Equity</b>	<b>1,263</b>	<b>446</b>	<b>313</b>	<b>156</b>	<b>-384</b>	<b>-253</b>	<b>-170</b>	<b>-212</b>
Total Shareholders' Equity / Total Assets (%)	30.0	14.2	9.8	5.6	-11.6	-8.0	-6.1	-7.5
Return on Equity (%)	105.5	58.5	79.6 -	-	-	-	-	-
<u>Cash Flow Statement</u>								
<b>Net Operating Cash Flow</b>	<b>493.2</b>	<b>501.3</b>	<b>491.0</b>	<b>443.1</b>	<b>389.1</b>	<b>434.0</b>	<b>443.6</b>	<b>508.6</b>
<b>Capital Expenditures</b>	<b>-249.1</b>	<b>-279.6</b>	<b>-263.2</b>	<b>-304.8</b>	<b>-357.5</b>	<b>-326.6</b>	<b>-337.0</b>	<b>-297.4</b>
Growth (%)	6.7	-20.3	6.9	19.1	-11.0	2.0	-9.1	-5.5
<b>Net Investing Cash Flow</b>	<b>-22.8</b>	<b>-418.0</b>	<b>-815.8</b>	<b>-1.3</b>	<b>-361.4</b>	<b>-439.9</b>	<b>-371.3</b>	<b>-289.5</b>
<b>Net Financing Cash Flow</b>	<b>-212.0</b>	<b>-19.8</b>	<b>189.0</b>	<b>-334.6</b>	<b>-150.2</b>	<b>243.9</b>	<b>-67.2</b>	<b>-206.6</b>
<b>Free Cash Flow</b>	<b>268.8</b>	<b>250.0</b>	<b>247.8</b>	<b>158.1</b>	<b>74.7</b>	<b>144.5</b>	<b>137.4</b>	<b>225.7</b>
<u>Ratios (x)</u>								
Price / Sales	2.4	1.9	1.7	1.3	0.9	0.7	0.4	0.7
Price / Earnings	8.5	24.2	23.3	17.4	26.8	33.8	-16.3	-75.1
Price / Book Value	6.2	11.2	13.7	22.1	-9.1	-11.2	-10.4	-13.0
Price / Cash Flow	15.4	11.0	9.1	8.2	8.5	6.4	4.1	5.3
Price / Free Cash Flow	28.2	22.1	17.9	23.0	44.2	19.1	13.3	12.0
Dividend Yield (%)	1.2	1.5	1.8	2.1	2.0	2.2	0.0	0.0
Enterprise Value / EBIT	21.7	21.0	18.5	13.8	12.4	13.1	11.5	14.6
Enterprise Value / EBITDA	13.2	10.6	9.4	7.0	6.6	6.5	4.8	6.0
Enterprise Value / Sales	2.8	2.4	2.2	1.7	1.3	1.1	0.8	1.1
EBIT / Interest Expense (Int. Coverage)	8.9	6.5	5.5	4.8	4.2	4.2	3.6	3.6

Source: FactSet

## 11.4 Appendix Exhibit 4. Rollins financials (all numbers in USDm)

Rollins, Inc.								
	Fiscal Year Ending December 31							
	2017A	2016A	2015A	2014A	2013A	2012A	2011A	2010A
<u>Income Statement</u>								
<b>Sales</b>	<b>1,674.0</b>	<b>1,573.5</b>	<b>1,485.3</b>	<b>1,411.6</b>	<b>1,337.4</b>	<b>1,270.9</b>	<b>1,205.1</b>	<b>1,135.8</b>
Growth (%)	6.4	5.9	5.2	5.5	5.2	5.5	6.1	5.8
<b>Gross Income</b>	<b>797.4</b>	<b>750.2</b>	<b>704.8</b>	<b>660.3</b>	<b>619.3</b>	<b>584.7</b>	<b>550.7</b>	<b>516.3</b>
Growth (%)	6.3	6.4	6.7	6.6	5.9	6.2	6.7	6.3
Gross Margin (%)	47.6	47.7	47.5	46.8	46.3	46.0	45.7	45.5
<b>EBIT</b>	<b>294.3</b>	<b>260.1</b>	<b>241.1</b>	<b>218.6</b>	<b>191.1</b>	<b>177.2</b>	<b>162.0</b>	<b>143.0</b>
Growth (%)	13.1	7.9	10.3	14.4	7.8	9.4	13.3	9.8
EBIT Margin (%)	17.6	16.5	16.2	15.5	14.3	13.9	13.4	12.6
<b>EBITDA</b>	<b>350.9</b>	<b>311.0</b>	<b>285.6</b>	<b>262.1</b>	<b>230.6</b>	<b>215.8</b>	<b>199.5</b>	<b>179.4</b>
Growth (%)	12.8	8.9	9.0	13.7	6.8	8.2	11.2	7.2
EBITDA Margin (%)	21.0	19.8	19.2	18.6	17.2	17.0	16.6	15.8
<b>Net Income</b>	<b>179.1</b>	<b>167.4</b>	<b>152.1</b>	<b>137.7</b>	<b>123.3</b>	<b>111.3</b>	<b>100.7</b>	<b>90.0</b>
Growth (%)	7.0	10.0	10.5	11.6	10.8	10.5	11.9	7.2
Net Margin (%)	10.7	10.6	10.2	9.8	9.2	8.8	8.4	7.9
<u>Balance Sheet</u>								
<b>Cash &amp; Short-Term Investments</b>	<b>107.1</b>	<b>142.8</b>	<b>134.6</b>	<b>108.4</b>	<b>118.2</b>	<b>65.1</b>	<b>46.3</b>	<b>20.9</b>
<b>Total Assets</b>	<b>1,077.1</b>	<b>965.8</b>	<b>852.4</b>	<b>808.2</b>	<b>739.2</b>	<b>692.5</b>	<b>645.7</b>	<b>603.9</b>
Return on Assets (%)	17.5	18.4	18.3	17.8	17.2	16.6	16.1	15.4
<b>Total Debt</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>26.0</b>
Total Debt / Total Assets (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3
Total Debt / Total Equity (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7
<b>Net Debt</b>	<b>-107.1</b>	<b>-142.8</b>	<b>-134.6</b>	<b>-108.4</b>	<b>-118.2</b>	<b>-65.1</b>	<b>-46.3</b>	<b>5.1</b>
Net Debt / Total Equity (%)	-16.4	-25.1	-25.7	-23.4	-27.0	-18.3	-14.3	1.7
<b>Total Shareholders' Equity</b>	<b>653.9</b>	<b>568.5</b>	<b>524.0</b>	<b>462.7</b>	<b>438.3</b>	<b>355.0</b>	<b>324.0</b>	<b>298.0</b>
Total Shareholders' Equity / Total Assets (%)	60.7	58.9	61.5	57.3	59.3	51.3	50.2	49.3
Return on Equity (%)	29.3	30.6	30.8	30.6	31.1	32.8	32.4	32.0
<u>Cash Flow Statement</u>								
<b>Net Operating Cash Flow</b>	<b>235.4</b>	<b>226.5</b>	<b>196.4</b>	<b>194.1</b>	<b>162.7</b>	<b>141.9</b>	<b>154.6</b>	<b>124.1</b>
<b>Capital Expenditures</b>	<b>-24.7</b>	<b>-33.1</b>	<b>-39.5</b>	<b>-28.7</b>	<b>-18.6</b>	<b>-19.0</b>	<b>-18.7</b>	<b>-13.0</b>
Growth (%)	25.4	16.2	-37.4	-54.2	2.1	-2.1	-43.1	17.2
<b>Net Investing Cash Flow</b>	<b>-154.2</b>	<b>-76.8</b>	<b>-69.9</b>	<b>-89.5</b>	<b>-30.8</b>	<b>-42.7</b>	<b>-29.2</b>	<b>-47.6</b>
<b>Net Financing Cash Flow</b>	<b>-130.3</b>	<b>-136.4</b>	<b>-97.2</b>	<b>-106.5</b>	<b>-75.7</b>	<b>-81.0</b>	<b>-99.4</b>	<b>-65.5</b>
<b>Free Cash Flow</b>	<b>210.7</b>	<b>193.4</b>	<b>156.9</b>	<b>165.4</b>	<b>144.0</b>	<b>122.9</b>	<b>136.0</b>	<b>111.0</b>
<u>Ratios (x)</u>								
Price / Sales	6.1	4.7	3.8	3.4	3.3	2.5	2.7	2.6
Price / Earnings	56.6	44.0	37.2	35.1	35.9	29.0	32.2	32.4
Price / Book Value	15.5	12.9	10.8	10.4	10.1	9.1	10.0	9.8
Price / Cash Flow	43.1	32.5	28.8	24.9	27.2	22.7	21.1	23.6
Price / Free Cash Flow	48.1	38.1	36.1	29.2	30.7	26.2	24.0	26.4
Dividend Yield (%)	1.2	1.5	1.6	1.6	1.5	2.0	1.3	1.2
Enterprise Value / EBIT	34.1	27.7	22.9	21.5	22.5	17.8	19.8	20.4
Enterprise Value / EBITDA	28.6	23.2	19.3	18.0	18.6	14.6	16.1	16.2
Enterprise Value / Sales	6.0	4.6	3.7	3.3	3.2	2.5	2.7	2.6
EBIT / Interest Expense (Int. Coverage)	-	-	-	-	-	-	318.9	327.2

Source: FactSet

## 11.5 Appendix Exhibit 5. ServiceMaster financials (all numbers in USDm)

ServiceMaster Global Holdings, Inc.								
	Fiscal Year Ending December 31							
	2017A	2016A	2015A	2014A	2013A	2012A	2011A	2010A
<u>Income Statement</u>								
Sales	2,912	2,746	2,594	2,457	3,189	3,193	3,206	
Growth (%)	6.0	5.9	5.6	-22.9	-0.1	-0.4	-	
Gross Income	1,330	1,272	1,186	1,108	1,226	1,264	1,291	
Growth (%)	4.6	7.3	7.0	-9.6	-3.1	-2.0	-	
Gross Margin (%)	45.7	46.3	45.7	45.1	38.4	39.6	40.3	
EBIT	562	545	497	404	304	392	410	
Growth (%)	3.1	9.7	23.0	32.7	-22.3	-4.5	-	
EBIT Margin (%)	19.3	19.8	19.2	16.4	9.5	12.3	12.8	
EBITDA	665	639	582	504	454	538	573	
Growth (%)	4.1	9.8	15.5	11.1	-15.7	-6.2	-	
EBITDA Margin (%)	22.8	23.3	22.4	20.5	14.2	16.8	17.9	
Net Income	510	155	162	43	-506	-714	73	
Growth (%)	229.0	-4.3	276.7	-	29.2	-1,081.4	-	
Net Margin (%)	17.5	5.6	6.2	1.8	-15.9	-22.4	2.3	
<u>Balance Sheet</u>								
Cash & Short-Term Investments	500	316	320	408	521	448	-	
Total Assets	5,646	5,386	5,098	5,134	5,905	6,415	-	
Return on Assets (%)	9.2	3.0	3.2	0.8	-8.2	-	-	
Total Debt	2,787	2,831	2,752	3,056	3,956	3,961	-	
Total Debt / Total Assets (%)	49.4	52.6	54.0	59.5	67.0	61.8	-	
Total Debt / Total Equity (%)	238.8	412.7	505.0	851.3	17,054.1	740.2	-	
Net Debt	2,287	2,515	2,432	2,648	3,434	3,513	-	
Net Debt / Total Equity (%)	196.0	366.6	446.2	737.6	14,806.4	656.5	-	
Total Shareholders' Equity	1,167	686	545	359	23	535	-	
Total Shareholders' Equity / Total Assets (%)	20.7	12.7	10.7	7.0	0.4	8.3	-	
Return on Equity (%)	55.0	25.2	35.8	22.5	-181.1	-	-	
<u>Cash Flow Statement</u>								
Net Operating Cash Flow	413.0	325.0	338.0	243.0	249.1	235.9	304.9	
Capital Expenditures	-77.0	-56.0	-40.0	-35.0	-60.4	-73.2	-98.4	
Growth (%)	-37.5	-40.0	-14.3	42.1	17.5	25.6	-	
Net Investing Cash Flow	-85.0	-133.0	-109.0	-58.0	-93.0	-122.8	-116.6	
Net Financing Cash Flow	-152.0	-102.0	-319.0	-280.0	-90.5	-23.2	-114.3	
Free Cash Flow	336.0	269.0	298.0	208.0	188.7	162.7	208.4	
<u>Ratios (x)</u>								
Price / Sales	2.4	1.9	2.1	1.2	-	-	-	
Price / Earnings	13.6	33.6	33.5	-53.5	-	-	-	
Price / Book Value	5.9	7.4	9.8	10.0	-	-	-	
Price / Cash Flow	16.8	15.9	15.9	12.5	-	-	-	
Price / Free Cash Flow	20.7	19.2	18.0	14.6	-	-	-	
Dividend Yield (%)	-	-	-	-	-	-	-	
Enterprise Value / EBIT	16.4	13.9	15.6	15.4	-	-	-	
Enterprise Value / EBITDA	13.9	11.9	13.3	12.4	-	-	-	
Enterprise Value / Sales	3.2	2.8	3.0	2.5	-	-	-	
EBIT / Interest Expense (Int. Coverage)	4.0	3.7	3.1	1.8	1.2	1.7	1.8	

Source: FactSet

## 11.6 Appendix Exhibit 6. Ecolab financials (all numbers in USDm)

Ecolab Inc.								
	Fiscal Year Ending December 31							
	2017A	2016A	2015A	2014A	2013A	2012A	2011A	2010A
<u>Income Statement</u>								
<b>Sales</b>	<b>13,838</b>	<b>13,153</b>	<b>13,545</b>	<b>14,281</b>	<b>13,253</b>	<b>11,839</b>	<b>6,828</b>	<b>6,090</b>
Growth (%)	5.2	-2.9	-5.1	7.7	11.9	73.4	12.1	3.2
<b>Gross Income</b>	<b>6,491</b>	<b>6,303</b>	<b>6,365</b>	<b>6,610</b>	<b>6,057</b>	<b>5,447</b>	<b>3,366</b>	<b>3,080</b>
Growth (%)	3.0	-1.0	-3.7	9.1	11.2	61.8	9.3	5.2
Gross Margin (%)	46.9	47.9	47.0	46.3	45.7	46.0	49.3	50.6
<b>EBIT</b>	<b>2,269</b>	<b>2,007</b>	<b>1,983</b>	<b>2,022</b>	<b>1,778</b>	<b>1,526</b>	<b>928</b>	<b>823</b>
Growth (%)	13.0	1.2	-1.9	13.7	16.5	64.5	12.7	9.7
EBIT Margin (%)	16.4	15.3	14.6	14.2	13.4	12.9	13.6	13.5
<b>EBITDA</b>	<b>3,163</b>	<b>2,858</b>	<b>2,842</b>	<b>2,894</b>	<b>2,594</b>	<b>2,240</b>	<b>1,323</b>	<b>1,171</b>
Growth (%)	10.7	0.6	-1.8	11.6	15.8	69.3	13.0	8.0
EBITDA Margin (%)	22.9	21.7	21.0	20.3	19.6	18.9	19.4	19.2
<b>Net Income</b>	<b>1,508</b>	<b>1,230</b>	<b>1,002</b>	<b>1,203</b>	<b>968</b>	<b>704</b>	<b>463</b>	<b>530</b>
Growth (%)	22.7	22.7	-16.7	24.3	37.5	52.1	-12.8	27.1
Net Margin (%)	10.9	9.3	7.4	8.4	7.3	5.9	6.8	8.7
<u>Balance Sheet</u>								
<b>Cash &amp; Short-Term Investments</b>	<b>240</b>	<b>374</b>	<b>152</b>	<b>210</b>	<b>339</b>	<b>1,158</b>	<b>1,844</b>	<b>242</b>
<b>Total Assets</b>	<b>19,962</b>	<b>18,330</b>	<b>18,642</b>	<b>19,467</b>	<b>19,637</b>	<b>17,572</b>	<b>18,241</b>	<b>4,872</b>
Return on Assets (%)	7.9	6.7	5.3	6.2	5.2	3.9	4.0	10.7
<b>Total Debt</b>	<b>7,323</b>	<b>6,687</b>	<b>6,466</b>	<b>6,569</b>	<b>6,905</b>	<b>6,542</b>	<b>7,636</b>	<b>846</b>
Total Debt / Total Assets (%)	36.7	36.5	34.7	33.7	35.2	37.2	41.9	17.4
Total Debt / Total Equity (%)	96.1	96.9	93.6	89.8	94.0	107.7	134.8	39.7
<b>Net Debt</b>	<b>7,083</b>	<b>6,313</b>	<b>6,314</b>	<b>6,360</b>	<b>6,565</b>	<b>5,384</b>	<b>5,793</b>	<b>603</b>
Net Debt / Total Equity (%)	93.0	91.5	91.4	86.9	89.4	88.6	102.2	28.3
<b>Total Shareholders' Equity</b>	<b>7,619</b>	<b>6,901</b>	<b>6,910</b>	<b>7,316</b>	<b>7,344</b>	<b>6,077</b>	<b>5,667</b>	<b>2,129</b>
Total Shareholders' Equity / Total Assets (%)	38.2	37.6	37.1	37.6	37.4	34.6	31.1	43.7
Return on Equity (%)	20.8	17.8	14.1	16.4	14.4	12.0	11.9	25.7
<u>Cash Flow Statement</u>								
<b>Net Operating Cash Flow</b>	<b>2,091.3</b>	<b>1,939.7</b>	<b>1,999.8</b>	<b>1,815.6</b>	<b>1,559.8</b>	<b>1,203.0</b>	<b>685.5</b>	<b>950.4</b>
<b>Capital Expenditures</b>	<b>-868.6</b>	<b>-756.8</b>	<b>-815.2</b>	<b>-793.9</b>	<b>-662.3</b>	<b>-607.5</b>	<b>-366.0</b>	<b>-297.7</b>
Growth (%)	-14.8	7.2	-2.7	-19.9	-9.0	-66.0	-22.9	-0.1
<b>Net Investing Cash Flow</b>	<b>-1,673.2</b>	<b>-829.5</b>	<b>-915.8</b>	<b>-856.7</b>	<b>-2,087.7</b>	<b>-487.9</b>	<b>-2,024.3</b>	<b>-303.6</b>
<b>Net Financing Cash Flow</b>	<b>-522.7</b>	<b>-868.2</b>	<b>-1,150.9</b>	<b>-1,062.6</b>	<b>-292.6</b>	<b>-1,393.6</b>	<b>2,933.8</b>	<b>-462.2</b>
<b>Free Cash Flow</b>	<b>1,222.7</b>	<b>1,182.9</b>	<b>1,184.6</b>	<b>1,021.7</b>	<b>897.5</b>	<b>595.5</b>	<b>319.5</b>	<b>652.7</b>
<u>Ratios (x)</u>								
Price / Sales	2.9	2.6	2.5	2.2	2.4	1.8	2.0	2.0
Price / Earnings	26.2	28.3	34.5	26.6	33.0	30.6	30.3	22.6
Price / Book Value	5.1	5.0	4.9	4.3	4.3	3.5	3.0	5.5
Price / Cash Flow	18.9	17.9	17.2	17.6	20.4	17.9	20.4	12.6
Price / Free Cash Flow	32.3	29.4	29.1	31.3	35.5	36.1	43.8	18.4
Dividend Yield (%)	1.1	1.2	1.2	1.1	0.9	1.2	1.3	1.3
Enterprise Value / EBIT	20.3	20.2	20.3	18.7	21.4	17.5	24.5	15.0
Enterprise Value / EBITDA	14.5	14.2	14.2	13.1	14.7	11.9	17.2	10.5
Enterprise Value / Sales	3.3	3.1	3.0	2.6	2.9	2.3	3.3	2.0
EBIT / Interest Expense (Int. Coverage)	7.9	7.3	8.2	7.9	6.8	5.9	12.5	11.5

Source: FactSet