

# **Does the Plan Trump the Team? CEO Turnover, Selection and Assessment in Private Equity Buyouts**

Evidence from Finland

Master's Thesis  
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**Abstract:** The purpose of this study is to look at the role of top management in Finnish private equity (PE) buyouts. This is done by analyzing the CEO turnover, selection, replacement decision and management assessment using a novel quantitative and qualitative approach. The study is thus both theory-testing and theory-building.

The sample consists of unique hand-picked data of 114 Finnish buyout deals conducted between 2006 and 2016 excluding divisional sales and companies formed through buy & build. Of these 92 had sufficient fundamentals in Bureau van Dijk's Orbis –database for statistical analysis. In addition, entire Finnish buyout landscape, 12 buyout-focused PE firms, were interviewed together with a consultancy company Mercuri Urval to gather qualitative insight on management approach.

Using (non-)parametric tests and logit-model this study finds that CEO is replaced in 32% of buyouts – less than in comparable studies. The likelihood is increased when an experienced, larger, buyout firm is buying a larger portfolio company and credit is readily available. The theory-testing findings are robust for probit-model, selection bias and multicollinearity.

By conducting multiple case study from the interviews it seems that Finnish PE firms can be roughly split into two categories: those with high-managerial focus tend to be smaller or lower end of medium-sized buyout funds (e.g. AUM €350m, 8.4 investment professionals & ~7 investments in portfolio) targeting smaller entrepreneur-lead companies. Here the buy processes are often less structured ensuring better access to the management early on to the deal allowing the use of workshop-assessment. For them, a poor existing management is often a deal-breaker and a replacement has been agreed beforehand. These funds are majority in Finland partly explaining lower CEO change %.

Low-managerial focus PE firms tend to be larger (e.g. AUM €690m, 15 investment professionals & 13 investments in portfolio) targeting larger companies with tendency to base a high portion of their strategy on buy & build. They primarily source their deals from an intermediary such as an investment bank highly limiting their access to the management making them prone to CEO window-dressing behavior. These facts could explain the relatively higher likelihood of larger PE firms replacing the CEO of larger companies as management is less involved and assessed early on the buy process. These larger buyout funds tend to also use some sort of management review more often.

The theory-building findings are robust for conjoint analysis performed on decision-making suggesting management has central role in all PE as supported by the relatively low CEO turnover %.

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**Keywords** private equity, buyouts, CEO, assessment, management, CEO turnover, replacement

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**Tiivistelmä:** Tässä tutkimuksessa pyritään selvittämään johdon roolia suomalaisten buyout-pääomasijoittajien (PE) ostopäätöksissä. Tämä tehdään katsomalla johdon (CEO) vaihtuvuutta, valitsemista, korvaamispäätöstä sekä arviointia uudennlaisella kvantitatiivisella ja kvalitatiivisella lähestymistavalla. Tutkimus on siten sekä teoriaa testaava, että teoriaa rakentava.

Otos koostuu 114 suomalaisesta buyout-diilistä välillä 2006-2016, poislukien divisioonien myynnit sekä useiden yhtiöiden yhteenliittymänä luodut yritykset. Näistä 92:ssa oli tarpeeksi fundamenttidataa tilastolliseen analyysiin Buerau van Dijk's Orbis -tietokannassa. Tämän lisäksi 12 buyout-sijoittamiseen keskittyvää PE-yhtiötä, eli käytännössä koko suomen buyout-sijoitus kenttä, haastateltiin yhdessä henkilöstökonsultointiyhtiö Mercuri Urvalin kanssa.

Tämä tutkimus löytää, että CEO vaihdetaan 32% kaikista buyout-sijoituksista käyttäen (ei-)parametrisia testejä sekä logit-mallia. Vaihdamis % kasvaa, kun suurempi buyout-sijoitusyhtiö ostaa suurempaa kohdeyritystä lainoitusmarkkinoiden ollessa löyhempiä. Nämä teoriaa testaavat löydökset ovat robusteja myös probit-mallille, valintaharhalle ja multikollinearisuudelle.

Haastattelujen pohjalta muodostetussa monitapaustutkimuksessa käy ilmi, että suomalainen PE-kenttä voidaan jakaa kahteen kategoriaan; korkeasti johtoa huomioivat yhtiöt ovat pienempiä tai keski-pieniä buyout-yhtiöitä (AUM ~€350m, 8.4 sijoitusammattilaista, ~7 portfolioyhtiötä) jotka kohdentavat ostonsa pienempiin yrittäjävetoisiin yhtiöihin. Tällöin ostoprosessit ovat vähemmän strukturoituja mahdollistaen paremman pääsyn johtoon prosessin alkuvaiheessa sallien workshop-painotteisen työskentelyn. Näille sijoittajille huono johto on usein esto sijoitukselle ja mahdollisesta johdon korvaamisesta on sovittu hyvissä ajoin etukäteen. Tällaiset buyout-yhtiöt ovat enemmistö Suomessa mahdollisesti osaltaan selittäen matalamman CEO:n vaihtuvuuden.

Matalasti johtoa huomioivat buyout-yhtiöt ovat suurempia (AUM ~€690m, 15 sijoitusammattilaista & 13 portfolioyhtiötä) ostaen suurempia yhtiötä sekä perustaen isomman osan strategiastaan ostoon ja rakentamiseen. Lähtökohtaisesti nämä hankkivat diilinsä välikädeltä kuten investointipankilta rajoittaen heidän pääsyä johtoryhmään ja altistaen heidät CEO:n somistuspyrkimyksille. Tämä teoria voisi osittain selittää miksi suuremmat buyout-yhtiöt korvaavat toimitusjohtajan useammin.

Teoriaa rakentavat löydökset ovat robusteja päätöksentekoa selvittävälle conjoint analyysille implikoiden että johdolla on kuitenkin rooli kaikilla pääomasijoittajilla mitä alhainen CEO vaihtuvuus % tukee.

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**Avainsanat** pääomasijoittaminen, buyout, CEO, johtoryhmä, johto, toimitusjohtaja, vaihtaminen

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# 1 Introduction

## 1.1 Background

*"... There were some surprising patterns over the years. It turned out, for instance, that partners had tendency to overestimate the abilities of those managing the companies Blackstone bought. In deals where the partners in charge had rated management highly at the outset, returns tended to be disappointing. "Management acumen drives ability to meet the plan," the headline summary read. "Unfortunately we don't seem to be able to accurately determine this and calibrate the operating projections up front," the subhead wryly noted. The results led the firm to turn to outside consultants and psychologists to evaluate executives at potential portfolio companies..."*

— King of Capital: The Remarkable Rise, Fall, and Rise Again of Steve Schwarzman and Blackstone (Carey, 2012)

Private equity has been a central way of ownership and financing since 1980s. During that decade Jensen (1989) predicted that leveraged buyout ownership would become the dominant corporate organizational form. Back then it was already apparent that private equity companies bring in an efficient way of corporate governance by applying a performance-based compensation for management, bootstrapping the company with high debt levels and performing active governance to companies it has invested in. He saw this ownership superior to public corporation, which were characterised with weak management, low leverage and poor governance. (Kaplan & Strömberg, 2009)

Though back then the idea seemed premature due to junk bond market crashing, many LBOs resulting in bankruptcy and buyout market virtually disappearing in the early 1990s, Jensen (1989) was a still pioneer in understanding the role of management and governance in driving the organizational success. Buyouts were relatively low up until early 2000 when they began to boom only to severely crash again with 2007/2008 financial crisis. With the turmoil of debt markets (Kaplan & Strömberg, 2009) private equity buyouts have since lived relatively quiet life with the exception of partial rebound in 2011/2012 (Kraemer-Eis et al., 2015).

Nowadays private equity has become a common form of ownership (Bloom et al., 2009). In Europe alone private equity companies had €564bn assets under management with almost €50bn new investments made in 2015, vast majority of it being later-stage buyout investing (Invest Europe, 2016).

Since Jensen's (1989) widely cited study the role of management has also been studied a lot more. Today the consensus among academics is that management adds to performance, the success of turnarounds and investment success. For this, replacing the management has become a standard process of implementing company strategy in private equity (Siegel et al., 2011). Yet, still when it comes to due diligence in acquisitions the human capital is assessed rather poorly. For example, in a study by Harding and Rouse (2007) they note that deal makers often simply ignore, defer or underestimate the significance of people in mergers and acquisitions.

Although it's intuitive to say that management matters not all management can be equal as noted by the global leading private equity firm Blackstone above. That said, there exists little studies that are focused on *how* value-adding managers are selected, why the incumbent CEO gets replaced and what exactly is the role of management in private equity. There is a need to understand the human capital factors that successful PE firms require (Cumming et al., 2007) and existing literature calls for studies to examine how private equity companies assess the management (Siegel et al., 1993; Siegel et al., 2011).

## 1.2 Research objectives

As a response to these needs, the purpose of this paper is to try fill this gap by examining how private equity companies actually account for the management in their investment decisions. Ultimately, this study tries to bring novel insight by breaking down this question into several subquestions using both quantitative and qualitative methods:

**Table 1:** Research questions

Question	Method
1. How often and what determines CEO turnover in Finland?	Quantitative
2. How is the CEO replacement decision formed?	Qualitative
2. How is the management assessed?	Qualitative

The first question is assessed using statistical methods and analysing a handpicked sample of 114 Finnish buyout deals conducted between 2006 and 2016. The other two research questions are studied using qualitative methods and carried out as a multiple case study by interviewing Finnish private equity buyout investment professionals. This is done jointly with a global consultancy company Mercuri Urval, who provide expertise in interviewing and assessment beyond the author's personal capabilities.

## 1.3 Contribution to existing literature

Private equity is a widely researched topic. There exists plenty of studies from private equity value creation (e.g. Kaplan et al., 2005; Achleitner et al., 2010; Humphery-Jenner, 2011) to social effects (e.g. Bacon et al., 2008; Wood and Wright, 2010; Bacon et al., 2013). However, as several studies have begun finding vast majority of private equity companies generate value mainly through operational improvements instead of financial leverage or multiple expansion (e.g. Matthews et al., 2009; Achleitner et al., 2010; Puche et al., 2015) a stellar contribution this study tries to make is look at top management team as a way of adding value to the portfolio company. Underlying idea is that through upper-echelon

theory<sup>1</sup> management shapes the organization to fit a certain strategic goal e.g. a turnaround. In other words, the operational efficiency is mainly result of human capital (Crook et al., 2011).

The study does this by looking into CEO turnover in Finnish buyouts. If a CEO is replaced, a rational private equity company should have a clear idea of *why* the incoming CEO is better than the incumbent one. In other words, the CEO is replaced as a way to implement the operational changes (Siegel et al., 2011) or to prevent agency costs. Likewise, if the CEO is not replaced the private equity company should have an idea why the incumbent CEO should continue. Studies on CEO turnover does exist (e.g. Denis & Denis, 1995; Guo et al., 2009; Gong & Wo, 2011) but for the most part they have been made using U.S. sample. Several factors suggest that the reasoning for management replacement would be different in Nordics (e.g. Spliid, 2013) with reasons mainly related to organizational cultural differences presented by Hofsteden et al. (2010).

Though this answers the first research question giving valuable insight into the determinants of a CEO turnover in buyouts, it leaves the actual CEO decision process unclear. And indeed, despite lots of research on private equity, little is known of their decisions because especially in Europe it's difficult to collect data regarding PE-sponsored deals. Private equity is very opaque industry and largely exempt of public disclosure. (De Maeseneire & Brinkhuis, 2012; Teerikangas, 2012)

For the last two research questions, plenty of studies have identified that changing management is central part of implementing the buyout strategy (e.g. Dial & Murphy, 1995; Slatter & Lovett 1999; Schiuma et al., 2008) but the actual selection process is left in the background. This study hence tries to explain this more while also looking at differences between assessing the new and old management.

Arguably the main contribution of this study is to reveal management due diligence practices in private equity buyouts. Though plenty of studies have shown that top management team contributes to investment success (e.g. Bloom et al., 2009; Kaplan et al., 2012; Nadolska et al. 2014) with the exception of Smart (1999), who studied accuracy of management assessment in venture capital, no other studies have shown attempts at identifying how top management team is assessed in new investments despite its importance. One obvious reason for this is that it's frankly difficult thing to research as shown in sections 3 and 5.1.

Studies regarding Finnish private equity industry are also scarce. They are, for the most part, other theses<sup>2</sup>. For example, Männistö (2009) looked into societal and economic impact of private equity in Finland, Alen (2009) researched the impact of venture capital and buyout investments in Finland and

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<sup>1</sup>See section 3.1.2

<sup>2</sup>With the known exception of Collett et al. (2014), who studied Finnish SME turnarounds and even though not specifically limiting the scope of his study to private equity, turnarounds are very integral part of buyout fund activity (e.g. FVCA, 2016).



more recently Järvenpää (2012) studied value creation mechanisms in Finnish private equity companies. Although it's difficult to argue that studies focusing only on Finnish private equity industry would be highly generalizable in global context, this study regardless provides unique insight into human capital processes in private equity buyouts in Finland.

## 1.4 Key findings

This paper finds that in Finnish buyouts CEO is replaced in 32% of deals conducted between 2006-2016, which is slightly less than in comparable studies. To put this in perspective, Gong & Wu (2011) found that CEO is replaced in 51% of deals within two years of purchase, Guo et al. (2011) found the figure being 37.2% within one year of conducting a deal and Acharya & Kehoe (2008) found that in the first 100 days a bit over one-third of CEOs gets replaced.

This paper further notices that the likelihood is increased when an experienced buyout fund is buying a larger company and when the credit market is more lenient. The interviews suggest that this is because bigger deals are usually auction-lead limiting the access to management in the acquisition process and when the management is confronted they are prone to giving a much better image of themselves to get the most beneficial outcome from the buyout process. In a similar manner, the respondents indicate that for smaller companies the top management is often the entire management. These people are usually also the selling party and without established organizational structures in place the replacement becomes more difficult. Contrary to previous studies (e.g. Siegel et al., 2011), there does not seem to be evidence for CEO being replaced due to deteriorating performance but instead the cases reveal that CEO is being assessed based on whether he can execute the target performance set in business plan<sup>3</sup> going *forward*. Nor is there strong evidence that CEO would be replaced due to agency problems contrary to e.g. Gong & Wu (2011). These theory-testing results are also robust for probit-model, selection bias and multicollinearity.

In addition, during theory-building it became apparent that Finnish private equity companies can be roughly split into two categories in their approach to the target company management<sup>4</sup>: those with high-managerial focus and those with low-managerial focus. In the former group tend to be smaller or small-medium-sized<sup>5</sup> buyout funds targeting smaller entrepreneur-lead companies. Here the buy processes are often less structured with frequently long established relationships with the selling party ensuring better access to the management early on to the deal. Because of this, their assessment of the management tends to be based on the image they get by working closely with them in several workshops as they craft

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<sup>3</sup>Business plan (also known as value-creation plan or 5-year plan) is the plan which private equity firm makes prior to entering the deal entailing central steps needed to execute in order to eventually exit the investment at profit

<sup>4</sup>Note that despite using slightly ambiguous term management this study *always* refer to at least CEO. However, as seen in section 6.3.4 the interviewees see "management" often entailing CFO as well.

<sup>5</sup>Note that the sizes are in the context of Finnish buyout environment

the business plan. For them, a poor incumbent management is often a deal-breaker and if it ends up replaced it has been agreed beforehand with the CEO who often is also the entrepreneur and/or owner in these sorts of companies. As these funds are majority in the study this could be an explanation to the relatively lower CEO turnover rate.

Low-managerial focus funds tend to be larger private equity firms targeting larger companies with tendency to base a high portion of their strategy on rapid acquisitions. Main differentiator is also that they primarily source their deals from an intermediary such as an investment bank, which highly limits their access to the management and makes them prone to so called CEO window-dressing behaviour. These facts combined could explain their relatively higher likelihood of replacing the CEO as management is less involved in crafting the business plan early on the buy process meaning they do not necessarily share the same intent and CEOs capabilities cannot be as reliably assessed. Though no major differences in assessment were noted, these larger buyout funds have more resources available and more often tend to use some sort of management review performed by external consultants relying on their view of the management instead of subjectivity as is the case with smaller peers.

Finally, this study noticed that the view Finnish buyout companies have on top management fits the upper-echelon theory by Hambrick & Mason (1984) representing an extension of standard agency model (Bertrand & Schoar, 2003). This means that there is a consensus among interviewees that for each different business plan, or scenario, a certain set of skills are required from the management. This calls for matching CEO capable of forming the company as set in plans or shaping the firm to look like "himself". Hence, by agreeing that the management does indeed possess various skills required for success the general view leads to resource-based theory (e.g. Newbert, 2007) where competitive edge, followed by returns, start with superior management. (e.g. Crook et al., 2011). Furthermore, the findings in this theme also suggest that endogenous factors i.e. chemistry between buyout and target company plays a central role in CEO evaluation as noted by Teerikangas (2012) as well as Kaplan et al. (2012) in their widely cited private equity study on CEO characteristics.

## **1.5 Structure**

The remaining structure of the thesis is as follows. In section 2 the paper takes a brief look on private equity business model and sheds light on how buyout investing is in Finland compared to globally. Afterwards, in section 3 a comprehensive look at the existing literature on the role of top management in private equity is taken, while also presenting key top management team theories that lie in the basis of this study. This is followed by central hypothesis and initial frameworks in section 4. Next in section 5 this paper describes the statistical and qualitative methodologies used and the process of how the study, including interviews, are carried out. In this section the paper also takes a closer look at the sample and the selection criteria. In sections 6 and 7 this study presents the results and talks about the implications

while in section 8 discussing the robustness of the study. Finally, in section 9 the paper is concluded.

## 2 Private Equity

This section focuses on the private equity explaining the relevant terminology and describing their business model utilizing well known academic literature. It is essential to understand the characteristics of private equity model and how Finland compares to it globally in order to place the study on robust grounding.

### 2.1 Overview and terminology

Private equity is foremost an ownership model for investments in privately held companies of all sizes and at all stages of development. Private equity aims to make profit through governance, financial and operational improvements to their portfolio companies and then exiting their investments after 5-10 years of holding. (Invest Europe, 2015; Kaplan & Strömberg, 2009). It is first and foremost equity-based funding that is originated outside public market that is not the owners' own money nor generated by the company itself (Pajarinen et al., 2016).

Often times a generic *fund* is used to refer to any designated pool of capital targeted at any stage of private equity investment. It's a practice thoroughly used in the industry and defined in the Invest Europe (2015) official handbook. Similar terminology is thus used in this thesis as well.

Private equity investing are generally divided into two fundamentally different categories: those that predominantly perform venture capital and to those that carry out buyout investments. The former refers to investing in companies early on their life-cycle that may not yet have a proven profitable business model (i.e. seed, early-stage, development or expansion funding) and they often seek to become a minority owner in the company. In contrast, buyout investors seek to acquire controlling stakes in established, more mature, companies. (Invest Europe, 2016) These buyout companies often use additional debt financing to purchase their target company for which they are also referred to as leveraged buyouts, or LBOs for short. (Kaplan & Strömberg, 2009).

Trade associations, such as British Venture Capital Association and old European Venture Capital Association<sup>6</sup>, and academic literature vaguely refer to both venture capital and buyout investing with a single term venture capital. This is to acknowledge that private equity activity is in general associated with entrepreneurial risk-taking. (Froud & Williams, 2007) Still this paper focuses only and explicitly to

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<sup>6</sup>In October 1st 2015 European Venture Capital Association changed their name to Invest Europe to better reflect their membership's broadened investment scope and in recognition of the industry's evolution since the association's founding over 30 years ago (Invest Europe, 2015)

buyout funds as their investment strategies vastly differ.

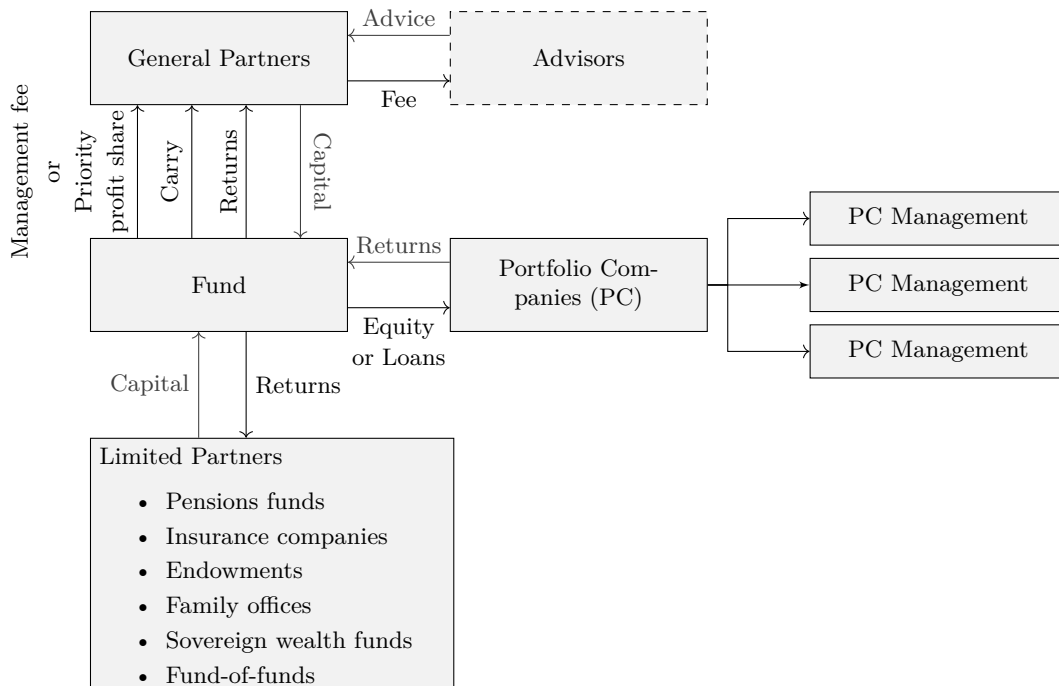
While private equity funds have a full control over their portfolio companies the funds itself act on behalf of their investors. They are almost always structured as closed-ended limited partnerships with the limited partners (LPs) providing most of the capital and the general partners (GPs) making investment decisions and receiving a substantial share of the profits (most often 20% over a certain threshold, in addition to 2% management and possible other fees) (Axelson et al., 2009; Invest Europe, 2016).

Limited partnership model is generally also used for its tax advantages. Capital gains are not paid by the company itself, but instead by the (taxable) limited partner, which attracts many tax-exempt institutional investors such as pension funds. Though this pass-through taxation significantly reduces double taxation of the portfolio company it often entails restrictions on the lifespan that are defined in the limited partnership agreement. (Gompers & Lerner, 1999; Axelson et al., 2009; Invest Europe, 2015).

Figure 1 illustrates a typical closed-end fund structure.

**Figure 1:** Typical private equity fund structure

This figure presents an example of closed-end private equity structure as adapted from Invest Europe (2015). First, the private equity firm raises equity capital from limited partners (or rather simply gets capital commitments) and issues a capital call receiving cash equity accompanied with debt to acquire portfolio companies (PCs). For operating the fund private equity firm is often compensated in the form of fixed management fee and/or other fees and is rewarded with performance-based carried interest for successfully exited investments. Likewise, limited partners receive their share from the private equity fund as the PCs are exited. This is an illustrative model and there exists many variations of this structure.



## 2.2 Fund lifecycle

### Fundraising

Buyout fund raises its funds in two parts. First, it raises equity before a single investment is made and then after a suitable target has been found it supplements this equity with debt or debt-like financing<sup>7</sup>. Axelson et al. (2009) calls this ex-ante and post-ante financing. The reason for this comes from the fact that it prevents the GP from investing to suboptimal companies and 'gaming' its investments before a follow-on fund is closed (Braun & Schmidt, 2014). In other words, the debt portion is there to prevent the GP from investing to below the standard investments<sup>8</sup> - a sort of agency problem between LP-GP. The other reason is related to reducing agency problems towards the portfolio company in the sense that the debt load eventually bootstraps the portfolio company manager by reducing available cash flow at hand and boosting equity returns with leverage-effect (Jensen, 1986; Kaplan & Strömberg, 2009).

A new fund always starts with ex-ante fundraising. The partners spend around a year contacting institutional investors, such as corporate and public pension funds, endowments, and insurance companies, as well as wealthy individuals. In contrast to public companies that raise their equity from public markets private equity funds collect their equity mainly from institutions like pension or mutual funds for a fixed period of time. (Froud & Williams, 2007; Pajarinen et al., 2016)

The year the first LPs are admitted into a fund is called vintage year (Invest Europe, 2015) and is generally used as the year the fund is officially started. After the funds are committed into a fund, the LPs have little say to how the capital is deployed nor can withdraw their funds as long as covenants in the agreements are followed. (Froud & Williams, 2007; Kaplan & Strömberg, 2009). However, even though limited partners lack the ability to directly affect fund operations, they may indirectly have a say on fund operations through these limited partnership agreements, which often entail covenants to further mitigate potential agency problems towards the GP (Cumming & Johan, 2006). In addition, LPs can also influence the decision making of GP through limited partnership advisory committees (BVCA, 2014).

### Transactions

While fundraising is still going on, the fund may have already started investing its equity. Typically the fund is invested by purchasing between 10 and 20 companies as operating businesses (Froud & Williams, 2007). The private equity firm normally has up to five years to invest the fund's capital, and then has an additional five to eight years to return the capital to its investors. (Kaplan & Strömberg, 2009). In this

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<sup>7</sup>The funds do not actually get the equity beforehand, but instead receive so called capital commitments from the LPs and then execute capital calls to use this equity as needed (Robinson & Sensoy, 2016)

<sup>8</sup>Though Axelson et al. (2009) also agree that this is a double edged sword. In bad times the good projects may not get financed either because of lack of funding. Likewise, in good times there will inevitably be bad projects financed in addition to good projects as both of these get pooled due to lemon problems

process, networks are heavily utilised to source the potential deals and buyout funds often compete with each other for the chance to invest in the best ones (Teerikangas, 2012).

At this point the buyout firm will have to raise post-ante funds, typically debt, as well. The equity used in these transactions normally represent only 20-25% (e.g. Kaplan & Strömberg, 2009) though some argue that after the financial crisis it would have risen to as high as 40-50% in the Nordics (Spliid, 2013)<sup>9</sup>.

The amount of debt taken varies by the credit market conditions. Axelson et al., (2013) found that the same determinants that explain public companies' leverage, e.g. asset base or profitability, have little explanatory power in private equity financing. Instead, the higher the credit risk premium of leveraged loans, measured as high-yield spread over LIBOR, the lower the leverage used in buyout transactions. This means, that like credit risk premiums, the leverage is also pro-cyclical peaking in hot credit conditions such as in 2006 and 2007 and falling after credit market deteriorates as in 2008 and 2009. Axelson et al., (2013) presents an often used buyout structure that consists of approximately 25% of equity and 75% of total debt. Of this 75% around 70% is senior debt that could be broken down to three separate term loans of roughly equal sizes but with different maturities, payment schedules and seniorities.

## **Exits**

The exit process is important part of fund's life-cycle because this structure typically does not pay any dividends. Usually the returns are derived solely from the capital gains of underlying companies and GPs decision to make an investment depends a lot on the exit potential. (Cummings et al., 2006) Globally, after around 5 years of holding the most prominent exit route is sale to a strategic (industrial) buyer followed by a secondary buyout i.e. a sale to another private equity company. IPO is relatively rare, and happens only in 11% of all exits. Despite buyouts often being highly levered, bankruptcies only represent 6% of all cases. (Kaplan & Strömberg, 2009)

The GPs raise equity capital to a new fund from LPs typically every 3-5 years to ensure the availability of capital for investing to new promising targets. This also means that the GPs have a recurring incentive to demonstrate their quality as a financial intermediary every time they raise a new fund. (Braun & Schmidt, 2014) They hence have to show exceptional ability in picking suitable companies through detailed due diligence process. After 7-10 years the fund as a whole will be disposed, unless extended, with capital returned as and when investments are sold (Froud & Williams, 2007).

## **2.3 Value creation and social impact**

### **Value creation**

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<sup>9</sup>Example from another extreme would be the 1982 LBO of Gibson Greetings, which is said to have had 80-to-1 debt-to-equity ratio (Burrough & Helyar, 2010)

For every study saying private equity buyouts create value there exists one saying they do not. Studies looking at the first wave in 1980s show large gains in operating performance following a buyout, largely attributed to the reduced agency costs and improved governance (e.g. Kaplan, 1989; Abbie, 1990). After 1990s, and especially with the credit boom of 2002-2007, it has been heavily questioned whether buyouts were just fuelled by the availability of debt (Shivdasani & Wang, 2011) or if they were actually value creating. The results have indeed been less prominent and partly comparable to other benchmarks, but still positive (e.g. Guo et al., 2011; Acharaya et al., 2012). Leslie & Oyer (2008) find weak or no evidence that U.S. buyouts during 1996 to 2004 created any value whatsoever. In Nordic, the operational effect has been found significantly positive (Bergström et al., 2007) though studies after the financial crisis are yet to come.

Private equity firms create value through operational improvements, leverage and multiple expansion together with active involvement in the company board (Kaplan & Strömberg, 2009). First, the firm value will increase if there are operational improvements, such as improved profitability, unprofitable assets sold or existing assets used more efficiently. Second, even if there are no changes in cash flows subsequent to buyout, the firm value may increase as market and industry valuations increase. Finally, substantial increases in leverage allow the portfolio company benefit from increased tax shields in addition to allowing the buyout company use less equity on purchase. (Guo et al., 2011)

At the time of purchase new executives are often also appointed enabling new business and knowledge to flow into the company (Kaplan & Strömberg, 2009; Bacon et al., 2013) and interestingly Guo et al. (2011) found that operating cash flows are higher for companies that replace their CEO soon after the buyout. When a company is bought, one of the first things the buying GP does is give stock incentives to the portfolio company management to align their interests with the buyer's. (Kaplan & Strömberg, 2009)

### **Social and economical impact**

Perhaps wrongfully, there have been times when private equity has gained a lot of bad publicity. Around mid-2000 German Social Democratic Party described private equity investors as 'locusts', who were stripping assets and destroying jobs and shortly after Business Week referred them at least as degradingly as 'gluttons at the gate'. (Froud & Williams, 2007)

In reality, they have strong social impact. They contribute a lot to the employment and wages growth (e.g. Amess & Wright, 2007; Bacon et al., 2013), improved management practices (Bacon et al., 2008; Bloom et al., 2009) and productivity (Liechtenberg & Siegel, 1990; Davis et al., 2014).

Yet it's not always a clear cut. in many cases what may happen is that there's an initial net job loss subsequent to buyout, but a long term positive job creation after operational improvements and long-

term value creation realize (Cressy et al., 2011; Davis et al., 2014). Also, Axelson et al. (2013) note that buyouts may destroy value if there's excess supply of credit available and/or interest rates are low.

They also have an important role of providing much needed risk capital for both SMEs (Berger & Udell, 1998) and larger companies, especially when in distress (Fenn et al., 1998). And despite their habit of leveraging the companies, having a private equity backing actually lowers the chance of a bankruptcy (Tykvova & Borell, 2012) proving their role of turning around distressed companies and providing financing when other sources may refuse it.

Indeed, private equity companies have a central role in economy. (Frontier Economics, 2013) Part of the value creation is explained by the fact that experience required to implement operational improvements is skill that only top PE houses have (Kaplan & Schoar, 2005). If this is the case, they should also have extraordinary skill in picking the suitable CEO to manage their investment.

So far this study has described the private equity model, its relevant terminology and most notable academic literature. Next, this study will look into private equity industry in Finland and how it positions globally in order to later draw conclusions in relevant framework.

## **2.4 Finnish private equity buyouts**

### **2.4.1 Finnish buyout environment**

The very first Finnish private equity company was likely Sponsor founded by Bank of Finland and other private investors in 1967 but the industry didn't really establish itself until around 1990. (Pajarinen et al., 2016) Since then, buyouts have enjoyed significant growth shown in buyout activity figure 2 with investments peaking as expected at the end of dot-com bubble and prior to 2007-2008 financial crisis.

A recent study by Pajarinen et al. (2006) showed that private equity in Finland has stronger than expected social and economical impact. As a matter of fact, in number terms the investments actually kept growing after the financial crash of 2008 proving private equity's resilience as a financier when more conventional ways of financing dry up (e.g similarly to Fenn et al., 1998).

Generally speaking the pattern of Finnish buyouts seem to follow market valuations and credit market cycles as depicted by Axelson et al., (2013) and Kaplan & Strömberg (2009). The impact of financial busts were rather small, partly because smaller private-to-private transactions typical to Finland meant that less leverage would be needed but more importantly because as Spliid (2013) notes many private equity companies in Finland had raised funds just before the crisis hit (see Panel B of figure 2). According to him they also had a good track record regarding loan payments with few distressed portfolio companies meaning that they were in prime position to time the market investment wise. As valuations decrease many companies become attractive acquisition targets for funds (Kaplan & Strömberg, 2009; Metrick &



Yasuda, 2011; De Maeseneire & Brinkhuis, 2012) which in turn shows in volume-wise increase of buyouts.

Though Finland is a small country, it is constantly ranked high in various private equity lists. In 2015 Finland had the 4th most buyout investments in relation to the GDP in Europe (FVCA, 2016). Also in a recent study by Groh et al. (2016) Finland ranks 14th in the private equity attractiveness index<sup>10</sup> in the entire world.

### 2.4.2 Finnish buyout targets

The scale of Finnish buyouts is small in global context. Typical buyout target in Finland has annual revenues of €10m to €150m (Ståhlberg et al., 2014) with the buyout fund contributing less than €15m of equity (Invest Europe, 2015). In fact, 90% of buyout investments in Finland are with an equity investment of €15m or less compared to European average of 66%. Table 2 shows how Finnish buyouts compare to European peers in terms of equity investment size illustrating the scale of Finnish buyouts.

**Table 2:** Buyout investments by size in Finland and Europe

The data from Invest Europe shows the size of buyout investments aggregated from 2008 to 2015. The size is measured as the *equity* investment made by the buyout fund. The table shows how vast majority of Finnish buyout investments have been less than €15m, which is smaller than in Europe.

	By size		By count	
	Finland	Europe	Finland	Europe
Small (<€15m)	46 %	12 %	90 %	66 %
Mid-market (€15 - 150m)	41 %	44 %	10 %	29 %
Large (€150 - 300m)	13 %	23 %	0 %	3 %
Mega (>€300m)	0 %	21 %	0 %	2 %
Total (%)	100 %	100 %	100 %	100 %
Total #/Value (€m)	2,243	245,734	281	7,532

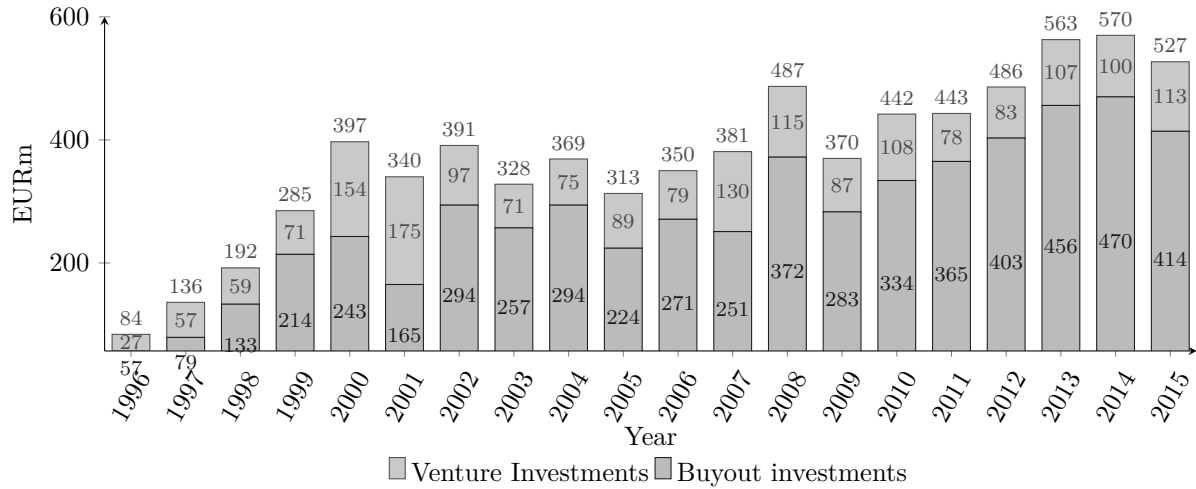
Finnish private equity market depicts conventional division between buyout and venture capital. Size-wise it is vastly driven by buyout funds, but the venture capital takes the lead by a mile in terms of number of investments. Number-wise buyout investments constitute 26% of all investments well below the European mean of 42% in 2015 shown in Panel A of Figure 2.

Finnish buyout activity is dominant to private companies. There have been very few public-to-private investments in the recent decade, with only notable ones being Bridgepoint's acquisition of Terveystalot Healthcare Oyj in 2009 and CapMan's acquisition of Oral Hammaslääkärit in 2014 (Ståhlberg et al., 2014). Finland lacks completely big LBO and turnaround funds simply because these kinds of opportunities are very limited (Lang, 2016).

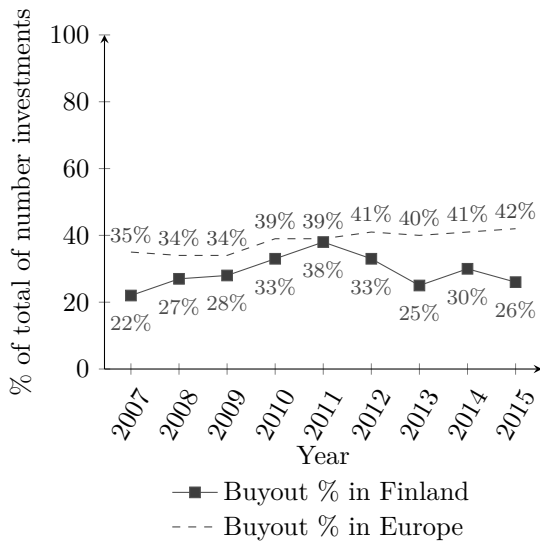
<sup>10</sup>Groh et al. (2016) measures this by economic activity, depth of capital markets, taxation, investor protection and governance, human and social environment and entrepreneurial culture and deal opportunities

**Figure 2: Buyout activity in Finland**

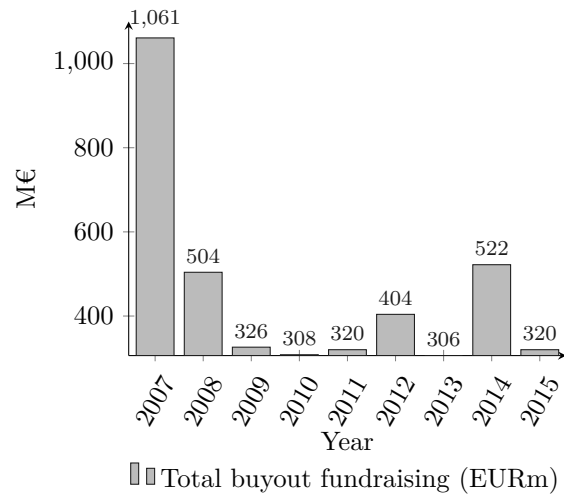
Buyout activity in Finland between 1996-2015 follows typical private equity cycles. It can be seen to have increased heavily since 1996 peaking in 2000 and 2008 after which credit market tightening resulted it briefly getting squeezed. Although venture capital investments lead buyouts in volume as seen in panel (a) buyouts clearly dominate size-wise. (FVCA, 2015)

**(a) Number of buyout investments as % of all investments in Finland, 2007-2015**

This subgraph shows the percentage of buyout investments to total private equity investments (i.e. venture capital and buyout) and compares it to European equivalent. (FVCA, 2015; Invest Europe, 2015)

**(b) Buyout fundraising in Finland between 2007-2015**

This subgraph shows the amount of funds raised by buyout funds in millions during 2007-2015. The data is based on FVCA (2017).



The strong role of public health care is also visible in the big buyout flow to life science firms as well as business and industrial product companies (figure 16 in appendix). These investments are perhaps not surprisingly into rather established industries as high-tech companies, as classified by Invest Europe, represent only around 2% of all investments size-wise.

Still, Finnish buyout field is characterised with the absence of suitable buyout targets. Pajarinen et al.

(2016) performed a survey on the challenges in the private equity environment in Finland and found that buyout investors see finding suitable companies to invest in as the single biggest concern. This was closely followed by the quality of companies. The lack of potential targets could be explained by the fact that government is still rather big owner in major industries such as postal services, railways, hospitals and water- and power supply (Spliid, 2013). These industries are often quite asset heavy, stable and big, which could be potentially lucrative business for larger buyouts (Wright et al., 2001).

In Finland, leverage used in transactions is likely lower than what Axelson et al. (2013) presented in his study. In fact, according to Spliid (2013) the equity portion of investment could be as high as 50% in the Nordics nowadays. This would be supported by literature showing that firm size is important factor for loans as larger companies could hold more debt (Bae & Goyal, 2009), larger deals use significantly more debt than smaller ones (Axelson et al., 2013) and larger funds, which are rare in Finland, are better connected and more internationally diversified allowing them to get financing with better terms. (Humphery-Jenner, 2011). Data on financing terms in Finnish buyouts is scarce but previous evidence based on literature would suggest that leverage used in Finnish buyouts is likely lower than in international context. It would also imply a slightly lower bootstrapping effect as presented by Jensen (1986) meaning that in theory buyout funds should be more wary of emerging agency problems among portfolio company managers.

Finally, compared to Europe and other Nordic countries Finland differs a lot when it comes to exits. According to Invest Europe (2015) almost a third of all buyout exits between 2008-2005 happens through the repayment of principal loans in Finland while the same number is around 10% in Europe. Yet size-wise these repayments represent only around 4% of all exits in Finland, while trade-sale and public offering represent the first and second most popular exits with 32% and 26% of all proceeds respectively<sup>11</sup>. The high number of principal loan payment exits could partly reflect the riskier investments to small- and medium-sized enterprises that characterise Finnish company landscape (Spliid, 2013; Pajarinen et al., 2016). This would make sense considering how small the average buyout investment is implying the company is unlikely that well established at the time of purchase.

### 3 Literature Review

Previously this paper has described the private equity model and Finland's position in the industry. In this section the study digs deeper into past studies on the role of human capital and management with CEO in the main focus<sup>12</sup>.

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<sup>11</sup>Note Invest Europe reports all proceeds at cost, not at market values

<sup>12</sup>Again, even though this paper talks about management the primary focus is on CEO

### 3.1 Central theories on top management team

Governance is one of the key concepts of private equity. It is crucial, that the portfolio company's management shares the same values and interests with investor (the principal) to minimize the agency costs (Spliid, 2013). Goel & Thakor (2008) define the role of a CEO as one determining corporate strategy and thereby setting an overall direction for the firm. When a CEO makes a decision that affects a prospect of an individual project, he simultaneously makes a decision that affects the prospects of all projects, that is, the entire firm.

In a typical (leveraged) buyout the distribution of responsibility is split so that the private equity company handles mainly corporate finance functions acting as a sort of centralized investment bank providing specialized advice to the portfolio company, whereas the management team is granted decision rights over strategic and operating choices. (Wright et al., 2001) The private equity company hence places a great trust on the management to perform decisions that add value to the owner. Next, this study will present three central top management team theories found from literature placing this relationship on a theoretical framework.

#### 3.1.1 Principal-agent Theory

Principal-agent theory (also known as agent theory) is a central starting point for trying to understand management turnover and the need to assess it in the first place. Principal-agent theory essentially states that managers, who are agents of shareholders, make decisions on behalf of shareholders (or principals) but yet own trivially small equity stakes in their companies and are loosely monitored resulting in less than optimal decision making detrimental to shareholders (Jensen & Meckling, 1976).

A (leveraged) buyout provides a natural solution to principal-agent problems as it bootstraps the management by loading the company with debt and limiting the available cash flow. In addition, the management is almost always handed incentives such as bigger equity stake in the company in the form of stock options to align his interests with the ones of the owner. This works great when the company is facing downturn and the value of equity is falling. The management then has incentives to take on risky but profitable projects in an attempt to increase the value of the company and bring his options in-the-money. (Wright et al., 2001)

Yet this is only partial solution to maximize the upside value potential. Manager owning big portion of its wealth in the company may be entrenched and hence incentivised to make too safe strategic choices in a way to safeguard his own assets when the company is doing relatively well (Morck et al., 1988). In a similar manner Wright et al. (2001) argue that successful founders may become overly conservative of their business and start taking actions that preserve their wealth rather than pursue attractive growth

opportunities that would be in the interest of the owners. This can be partly mitigated with effective monitoring by the private equity company but Wright et al. (2001) also support the view that private equity buyout may help to solve the problem by introducing professional managers in the organization i.e. replacing the management partially or completely.

Professional managers also bring in the knowledge to manage larger and more complex organizations. Private equity literature provides evidence that companies often feel the need to change management as they mature (Wright et al., 2001). This is because especially the original early stage management team may lack skills that are required in more mature phase and specifically many founders are unable to change their management style as company grows older (Rubenson & Gupta, 1996; Fiet et al., 1997). As firm grows, more systematic decision-making is required as shown by Gilmore & Kazanjin (1989). They continue to note that decision-making frameworks relevant for early-stage companies can often turn into major disadvantages leading to a complete venture failure. Hence, as a buyout-fund buys an established company it may see the need to replace some of the oldest members of the management team.

Against this backdrop the high agency costs (limitation of managerial discretion through for example bootstrapping) and entrepreneurial views (promotion of managerial discretion through for example incentives) Wright et al. (2001) argue similarly to Jensen (1989) that buyout governance is efficient at mitigating ineffective governance in diffusely held, managerial-controlled firms.

But incentives in private equity have also gained different kind of popularity. Since agency theory originates from U.S. Spliid (2013) argues that the value differences between American and Nordic people might mean that stock incentives do not have similar effect in the north. The core of incentive argument in principal-agent theory's is that management is motivated by financial gain. Yet Spliid (2013) argues that agency theories are, in fact, based on implicit assumptions about societal order, contractual relationships and motivation. These kind of assumptions are further affected by national borders (e.g. Hofsteden et al., 2010). Hence, in Nordic countries competition and money rewards are not valued as highly as in U.S. indicating that financial incentives would have less effect compared to motivational factors in Finland. Malmendier & Tate (2005) also concluded that incentives are unlikely to solve overconfident behaviour, i.e. one sort of agency problem, in the management.

Finally Wright et al. (2001) in his vast agency theory paper conclude, that important future research area is to study who should be managing the potential investment. Against the backdrop presented in this subsection, all the following literature are essentially principal-agent theory from slightly different perspective.

### 3.1.2 Upper-echelon Theory

Jensen's (1989) theory suggests a traditional neoclassical view of management. In other words, it implies that every manager is a perfect substitute of each other and we could simply pick any manager and she would perform as well as any other assuming she's given incentives and put against leverage. Now presented upper-echelon theory takes a more broad stance that is more characteristic to a standard agency model. (Bertrand & Schoar, 2003)

The central view taken in studies focusing on top management is that competent managers shape the businesses look like themselves. In the 80s Hambrick and Mason (1984) developed a theory in which they argued that an organization is essentially a reflection of its top management. This theory became later known as upper-echelon theory. It's essentially a very linear and intuitive model of a decision making process where there first exists a situation that is assessed by the top management team, who then makes a strategic choice that finally affects the organizational performance.

Managers in Hambrick & Mason's (1984) original version of upper-echelon theory first start with a situation the strategy maker is faced with. The situation is complex and made up of far more phenomena than the manager, or even a team of managers can possibly comprehend. This includes everything that's going on outside the company, such as markets, customer behaviour and competition as well as everything going on inside the company like supply chains, employees and production processes. In other words, because there are so many of these variables out there with no way to understand them all the managers are surrounded by what Hambrick & Mason (1984) call *a field of vision*. They then try to perceive this situation the best they can although these perceptions are limited because of selective nature of mind. The information that is used to form the perceptions are further interpreted through one's cognitive base and values.

At this point the characteristics of standard agency model (Bertrand & Schoar, 2003) start to emerge as the upper-echelon executive brings in his own cognitions, values and perceptions that he uses to process the situation creating a best possible perception under bounded rationality. This perception is then materialized into a strategic choice that results in various very much observable performance measures such as profitability, growth or even simply survival. (Hambrick & Mason, 1984)

The entire management team's collective values and cognitions are thus revealed in the decision making process. They argue that all variables affecting the strategic choice from innovation to response time reflect the executive team's characteristics (Hambrick & Mason, 1984) and against this backdrop the top management team is crucial as everything in the organization is shaped to look like them.

The upper-echelon theory is hence a central explainer of why there might be variation in private equity companies' practices of assessing the management. The model essentially contributes three central tenets:

(1) organizations are essentially just reflections of top management team's values and cognitive bases, (2) these values and cognitive bases are factors of top management teams' characteristic such as education and work experience and (3) significant organizational outcomes are associated with observable characteristics of these actors. Hence, private equity buyouts should take care in selecting their managers as their behaviour has a significant effect on the outcome of the venture. It implies that for different strategies that private equity companies pursue, a managers with different characteristic would be required.

Though agreeably lots of research progress has been made since Hambrick & Mason (1984), their theory is still being cited as one of the more prominent top management team theories. More importantly, it paved way for more generally accepted theory, the resource-based theory.

### **3.1.3 Resource-based Theory**

Researchers often focus on resource-based theory (RBT) when discussing about human capital (Crook et al., 2011). It offers a theoretical explanation of how human capital is a key factor in explaining why some companies outperform others (e.g. Barney et al., 2001; Acedo et al., 2006). RBT argues that heterogeneous distribution of valuable resources, such as human capital, explains performance differences among companies. Firms that possess valuable resources that other firms cannot easily replicate, duplicate or substitute will have a competitive edge compared to companies lacking such resources (Barney, 1991; Petaraf, 1993). In attempts to come up with such valuable resources, researches have converged on knowledge embedded in human capital as perhaps the most universally valuable and imperfectly imitable resource (Grant, 1996; Coff, 1997; Crook et al., 2011). These resources must also be in short supply and semi-permanently tied to the firm in order to deliver lasting above-average performance. Otherwise, other competitors would simply purchase the same resources and compete away any advantage that a firm may have. (Petaraf, 1993)

However, even though RBT is established theory in strategic management literature (Barney et al., 2001) and it's popularity is growing in the micro research (e.g. Gong et al., 2009) there have been contradictory evidence on why it may not be as apparent in generating competitive edge as previously reported. Newbert (2007) in his study found three reasons why performance gains resulted from human capital may in fact not support the notion of sustainable competitive advantage.

Newbert's (2007) first finding was that human capital might be path dependent. In resource-based theory truly unique and valuable skills develop over time (e.g. Coff, 1997). Thus if this is the case, the cross-sectional study Newbert (2007) performed does not capture the lagged effects of investments in human capital and resulting performance increase over time that comes from a buildup of superior human capital. And as Barney (2001) note, RBT is primarily concerned about long-term or sustainable advantages. (Crook et al., 2011)

The second reason for contradictory evidence could be related to so called "strategic factor market" (Barney, 1986). Essentially, some labour is more efficient for some types of human capital than others. People with valuable but general human capital move among the highest bidding competitors until their costs roughly equal the value they add (Coff, 1997; Crook et al., 2011). However, Kor & Mahoney (2005) note that people with unique firm-specific knowledge is valuable because it helps employees make decisions that are congruent with a firm's unique strategy, organizational context and competitive environment. Hence, even though the value of human capital increases as it becomes more unique (e.g. Dutta et al., 2005) it is not as easily transferable between companies making it difficult for employees with this kind of knowledge demand compensation that would fully reflect their value add. Thus Newbert's (2007) study may not take into account the fact that not all work is equal.

Finally, according to Coff (1999) there are numerous stakeholders in a company that all want their share of profits. When it is apparent that human capital is creating profit, the individuals with such capital are more likely to leverage it in order to gain higher pay (Coff, 1997). And even if the employees do not appreciate it, the managers might (Coff, 1999). In this sense the value of human capital may not reflect in a measure of firm performance because the profits that the human capital generates are actually diluted in the form of higher pay by employees or managers (Barney & Clark, 2007). Against this evidence the conclusion is rather intuitive: the more valuable work an employee does, the more you have to pay for that particular work.

Hence, there are several potentially important theoretical moderators of the human capital-performance relationship. In a study by Castanias & Helfat (1991) they asserted that superior human capital such as an above average CEO is rare indeed. Yet an entire literature called knowledge-based view, emerged from RBT, arguing that knowledge embedded within people is ultimately the only source of competitive advantage (Grant, 1996). (Crook et al., 2011) These findings would suggest should a company be able to find these CEOs reliably sustainable competitive advantage would follow as per RBT.

### **3.2 Management in investment success and failure**

Proficient CEO is especially important for buyouts (Teerikangas, 2012). There exists plenty of evidence how post-buyout companies undergo extensive asset and operational restructuring (e.g. Wruck, 2008). Denis & Denis (1995) discover that these structurings are associated with a CEO turnover. CEOs play important role in implementing these strategic changes while at the same time debt forces them to achieve strategic clarity and perform critical thinking (Gong & Wu, 2011).

Studies show that a capable management team leads to better performance in new ventures (e.g. Nadolska et al. 2014). In a comprehensive meta-analysis study by Crook et al. (2011) he researched 66 past studies focusing on human capital-performance relationships with 68 samples and 12,163 observations. In this



extremely comprehensive study he found that human capital is strongly related to performance especially when there's not much supply on the markets and when the performance is measured using operational indicators. Their research indicate that superior human capital is essential to firms' viability and success though also mentioning that not all human capital is equal in the success outcome. Crook et al. (2011) suggest that specific human capital is more strategic in nature in that it produces greater value relative to its costs and it is difficult, if not impossible, for competitors to purchase. His results thus reflect that of a resource-based theory in section 3.1.3.

Though private equity investors have significant skills and expertise in testing and evaluating the product and market assumptions (Dubini, 1989), they ascribe the failure of businesses, in the great majority of cases, to problems related to the management team (Gorman & Sahlman, 1989). In a similar manner Goslin and Barge (1986) report that both management team and entrepreneurial qualities have a great impact on the private equity selection process than any product and market consideration. Consequently, the evaluation of management team becomes the venture capitalists' most challenging task in portfolio company selection also because of the difficulties in evaluating the team ex-ante (Gorman & Sahlman, 1989; Dubini 1989). Sometimes PE companies even simply admit using a "gut feeling" when assessing a new team (Garman & Phillips, 2006). This is also supported by Smart (1999) who finds similar evidence that venture capitalists realize they are often betting on people when they make investment decisions.

Teerikangas (2012) attempted to crack the human element in private equity buyouts by interviewing 27 funds across eight European countries. Her central findings are that while PE model relies heavily on top management, it is still approached with a gut feeling or intuition. Only few PE houses actually conduct analysis on the talent even though most mistakes are people related. She suggests that human element will become the next 'competitive edge' for private equity players.

Not all knowledge assets are contained in individuals, however. Huber (1991) note, that critical know-how may be embedded in firm's more general organizational fabric, rather than in any specific person. Much of the knowledge may be in the formal and informal networks of relationship within the organization and even across organizational boundaries (e.g. Coff, 1997). In this sense, should a member of the top management team be replaced these networks as well as the knowledge embedded in them may get altered both to better or worse.

As Meerkatt and Liechtenstein (2010) note, research has shown that companies evaluating their CEO and other top managers produce a superior return on investment. They suggest, that starting point for all owners should be to assess the capabilities of current management and compare them to the company's future requirements. This, however, is done poorly as owners often replace managers too late to support future prospects. Either because they do not recognize the need for change or because they are reluctant to admit that they have made a poor selection. In line with previous findings Meerkatt and Liechtenstein

(2010) also argue that there is clear benefit in assessing management according to its match with the company's defined business strategy.

This would be supported by Kaplan et al. (2012) findings, who studied the success of early stage venture capitals and more mature leveraged buyouts by analysing 316 portfolio company managers (CEOs). Especially for buyouts, they find strong evidence that subsequent success is related to CEOs general ability. For the entire sample including venture capitals they find that success is more strongly related to execution, resoluteness and overconfidence skills than to interpersonal-related competency. Hence, a rational general partner would like to match these characteristics to the future requirements of the business. This kind of view represents an extension of standard agency models, where a management is chosen *precisely* because of specific traits that will be reflected on the company (Bernard & Schoar, 2013).

Continuing, another notable study was provided by Malmendier & Tate (2006) who looked at managerial overconfidence. An overconfident CEO may believe he can control an investment's outcome and underestimate the likelihood of failure yet genuinely believing to be acting in the interest of shareholders. Despite how well a manager's incentives are aligned and even without any informational asymmetries he may still take suboptimal projects if he's overconfident. Against this context, if a private equity company buys into an overconfident manager they increase their personal exposure to company-specific risk by making them carry entrepreneurial risk, which could inadvertently increase the chance of overconfident behaviour. (Malmendier & Tate, 2006)

Not all acquisitions are successful though. Just as it is known that management is the cause of a success, it's also cause of a failure in companies (e.g. Boyle & Desai, 1991). Macroty (1997) argues that a problem with takeovers lies in the fact some assets are difficult to value as some of them are more tangible and durable than others. In fact, it's often cited in many studies that human capital is really difficult to value accurately (Smart, 1999; Wood & Wright, 2010). In a similar manner, Coff (2002) notes that it is difficult for competing firms to assess, copy and/or acquire human capital for a cost that makes it worthwhile.

A lot of failures in turnarounds can be addressed to result from human element as well. Though there isn't that much comprehensive studies focusing on turnaround successes and failures, it is generally known that top management team contributes to a company's decline (Chowdhury & Lang, 1996; Lohrke et al., 2004). Slatter (1984) finds that an inadequate CEO is the second most frequent cause of decline in 73% of all deteriorating cases he studied and Carter & van Auken (2006) in turn find that bankruptcies are often caused by the lack of management skill. While removing poorly performing managers is important, it's equally important to be able to identify and attract superior replacement managers (Denis & Denis, 1995).

Importance of management in Finnish turnarounds is also evident. In a recent study by Collett et al. (2014) he focused on success and failures of Finnish SMEs attempting turnarounds. They find that

especially in unsuccessful turnarounds poor management is significantly more important cause of decline than other factors. As Chowdhury & Lang (1993) point out, poor management is especially deadly in small companies because top management is often the firm's entire management. Hence, when the top management is poor, every other single function in the company is poor. This is especially crucial in Finland, where SMEs constitute vast majority of the companies (Spliid, 2013).

### **3.3 Management assessment in (non-)private equity companies**

Studies on CEO characteristics are plenty (e.g. Frydman, 2007; Kaplan et al., 2012) but studies on the selection and more specifically the assessment process itself are more scarce.

Denis et al. (2015) argue that in CEO assessment the concern is in whether the CEO is inherently able to maximize shareholder value. According to them, differences in CEO assessment should reflect in the composition of the board implying dissimilar selection styles in private equity buyouts. Shackleton & Newell (1991) note that part of the differences in assessment methods should be attributed to the fact that there are cultural differences between countries, however, which in this study does not apply as the focus is only on single country.

Hermalin & Weisbach (2014) propose CEO assessment being more important the less is known about the CEO and the firm's future prospects. Similarly, Denis et al. (2015) suggest that CEO assessment is more important for newer firms and when a new CEO is hired from outside. However, Hermalin & Weisbach (2014) finding also suggest that the need for a CEO assessment decreases the longer tenure he has had in the company. Whether or not the CEO comes from inside or outside Goel & Thakor (2008) argue that the CEO is likely to be overconfident. This is due to their findings that if an overconfident manager is introduced to the board of directors' selection process, he is more likely to be promoted to CEO compared to when he's competing with otherwise modest managers.

There also some studies regarding the actual assessment methods. Piotrowski & Armstrong (2006) collected data on online assessment in candidate recruiting in Fortune 1000 companies. Back then, they found that only 1 in 10 companies used some kind of online assessment test and as much as 3/4 do not even plan to use any sort of internet assessment. Milia (2004) conducted a survey study on management selection in 218 Australian companies and found that interviews were dominant forms of assessment used in 97% of cases. In addition a breakdown revealed that in 47% of cases a behavioural interview was preferred over unstructured (22%) and situational (22%). Milia (2004) also found a significant use of document analysis, referring to application forms and CV check. Assessment centers and external consultants were never used or used in less than half of the cases in 86% of the time. Cognitive testing was also rarely used, though more often than assessment centers.

Assessing specific skills have been studied by Bambacas & Patrickson (2009) who looked at communication capabilities in the selection of potential managers. Though it was evident that communication skills were essential, *measuring* the skills were found to be difficult and often undertaken informally via individual judgement. The results were contrary to the listening and written skills, which were assessed through the application itself and during the interview. Bambacas & Patrickson (2009) conclude that too often subjective judgement is used in managerial selection even though there is no real evidence of informal interview judgements as either valid or reliable measures.

Older studies include e.g. Robertson & Makin (1986) who studied management selection in Britain and found in his survey paper that, whilst the usage by large organizations of assessment centre type exercises and even biodata is increasing, most organizations still select managers on the basis of interviews and references. Regarding interviews, he also found that companies often prefer more than one interview with multiple interviewers. However, considering how much internet has changed the recruitment process (Piotrowski & Armstrong, 2006) these results are not really applicable anymore.

Frankly, Smart (1999) is the only one who studied explicitly management assessment in private equity industry. He looked at human capital valuation in venture capital focused private equity companies via a survey questionnaire while also interviewing 28 private equity professionals. His central finding was that several different approaches to management due diligence exist. Smart (1999) based his assessment methods in psychology literature finding multiple different valuation methods: job analysis, documentation analysis, past-oriented interviews, work samples and reference interviews. Because his study most closely represents what this paper aims to achieve Smart (1999) is used as close peer despite being venture capital focused.

Finally, Kaplan et al. (2012) briefly touched the assessment subject by looking at CEO characteristics using a sample from ghSMART, which is a consulting company focused on assessing top management for private equity industry. They also recognized that presence of endogenous factors (i.e. chemistry) may affect their result of choosing a certain CEO but agreed it's difficult factor to capture in quantitative form. This was also raised in Teerikangas (2012) who noted that a good chemistry is essential between private equity firm and the target company. Considering the findings of e.g. Smart (1999), Hermalin & Weisbach (2014) and Denis et al. (2015) it would be rational for private equity companies to prefer spending time assessing the incumbent CEO - especially since CEO replacement is central often part of buyout investment strategy as next presented.

### **3.4 Management turnover and subsequent success**

Gong & Wu (2011) studied CEO replacement in private equity sponsored buyouts using a sample of 126 U.S. buyouts between 1990-2006 finding that the CEO is replaced in 51% of the deals within two years

of purchase. The chance for replacement is higher for companies with severe agency problems. Similarly, Guo et al. (2011) find the same figure being 37.2% with replacing companies experiencing higher return on sales and return on assets. Meanwhile, Acharya & Kehoe (2008) found that a bit over one-third of CEOs were replaced within 100 days of the purchase. To give a comparison for non-buyout companies Farrell & Whidbee (2003) found an average annual CEO turnover of only 11% in publicly listed firms while Fee & Hadlock (2004) found the same figure being only 9.55% between 1993-1998. From another perspective Lehn & Zhao (2006) found that 47% of CEOs who have made an acquisition are replaced within 5 years of the takeover.

Not surprisingly, as a central part of implementing a successful turnaround strategies the management team is often changed<sup>13</sup>. It can include the appointment of a new CEO, senior management staff or entire existing management team (Collett et al., 2014). The size of the fund also seem to matter as Teerikangas (2012) proposed that larger private equity houses are more lenient in replacing the CEO.

But the changes need to be thoroughly considered. In pioneering study by Warner et al. (1987) they provide strong arguments on why changes involving outside managers may be extremely costly for the target company. They note how the incentives to perform for current employees are greatly reduced as their chances of reaching top management positions are severed. It also brings costs as noted by Warner et al. (1987): outsiders would need to spend time to acquire valuable firm-specific human capital to succeed, and hence the benefits from hiring outside managers must be significant enough to outweigh the expenses. Considering that private equity players do not hesitate to replace their managers (Acharya & Kehoe, 2008) it would make sense they have an established way of assessing the management to justify the potential costs.

Similarly to Acharya & Kehoe (2008) Siegel et al. (2011) also argue that replacing management is a standard procedure for many private equity companies as part of strategy implementation. As they put it some private equity firms take the stance that "the plan always trumps the team". Considering previously presented findings it seems irrational to simply replace a management without being fully aware of their capabilities. Siegel et al. (2011) hence raise an important issue of the interaction between management team and private equity companies' strategy suggesting that research should be conducted on how this collaboration is actually performed. These conflicts may arise right after the post-buyout and again when exit is considered implying that private equity firms should aim to craft the business plan in close co-operation with the incumbent management already in the buy process as a way of collaboration.

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<sup>13</sup>See e.g. Slatter & Lovett, 1999; Schiuma et al., 2008

## 4 Hypothesis and Initial Framework

### Hypothesis

Based on previous literature this paper now forms a theoretical framework for figuring out in what kind of companies the management is replaced regarding the first research questions. This framework abstracts the subsequent empirical analysis. The vast majority of the theoretical background is covered in sections 2 and 3, but part is also briefly introduced simultaneously with the hypotheses. Overall, the focus of the research question is the CEO instead of entire management team in general with the underlying idea being that through upper-echelon theory the CEO forms the company to look like itself.

This study starts by testing the most notable and often used factors for CEO turnover. Jensen's (1989) principal-agent theory would suggest that higher cash flows and lower leverage in a target company would lead to increased CEO replacement due to agency problems. The literature also suggests that when the company is doing poorly at the time of investment, or in other words, when the operating performance is deteriorating (e.g. Denis 1995; Chowdhury & Lang, 1996; Lohrke et al., 2004) the CEO is also more often replaced. Additionally, since operational improvements is skill that only top private equity houses have (Kaplan & Schoar, 2005) and since CEO is often replaced as part of strategy implementation (Siegel et al., 2011) it would seem that more experienced private equity companies would be more willing to replace the CEO. It follows:

*Hypothesis #1: Companies with higher agency costs experience higher CEO turnover*

*Hypothesis #2: Companies with deteriorating industry-adjusted performance experience higher CEO turnover*

*Hypothesis #3: Companies acquired by more experienced buyout funds experience higher CEO turnover*

For control variables this study follows Gong & Wo (2011) and add Axelson (2013) findings regarding credit market. Adapting his central idea as credit market becomes more lenient, LP-GP agency problems increase meaning that the GP in turn makes investments more leniently which then should show in increased CEO turnover. Larger firms are further expected to have more CEO turnover, as they have more established organizations and less value is tied to single person compared to newer and smaller firms (Chowdhury & Lang, 1993; Denis et al., 2015). In a similar manner, this paper expects higher asset tangibility to reflect in higher CEO turnover, because as Gong & Wu (2011) notes firms with greater tangible assets find less relative value in a manager's firm-specific human capital<sup>14</sup>. Finally, this study controls for firm age as companies in different stages of their business life cycle have different tendencies for management turnover (Gong & Wu, 2011) and of course a natural reason for CEO replacement is the

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<sup>14</sup>And also because less value is tied to informal networks (Huber, 1991; Coff, 1997)

incumbent CEOs high age or retirement (e.g. Fosberg, 2001) .

### **Initial conceptual framework**

Since the other research question is qualitative one a theoretical framework is constructed to guide the research process as suggested by Yin (1994). Also, because the questions in hand are not theory-testing, but theory-*building* no hypothesis are formed but instead this conceptual framework is utilized to tie together findings in an attempt to ultimately draw new insight. (Eisenhardt, 1989; Yin, 1994)

As found in section 3 management has an important role in private equity buyouts. But focusing on private equity also gives an interesting research perspective as their sole business is centred around buying companies in a repetitive manner (e.g. Kaplan & Strömberg, 2007). Hence they should have relatively more situations when they need to assess the management. Repetition results in firms gaining experience and confidence as they develop knowledge on routines (Amburgey & Miner, 1992; Haleblian et al., 2006). And when it comes to mergers and acquisitions, the skills and knowledge that a company develops in past acquisitions will help it in subsequent acquisitions (Haleblian & Finkelstein, 1999; Finkelstein & Haleblian, 2002; Shimizu et al., 2004).

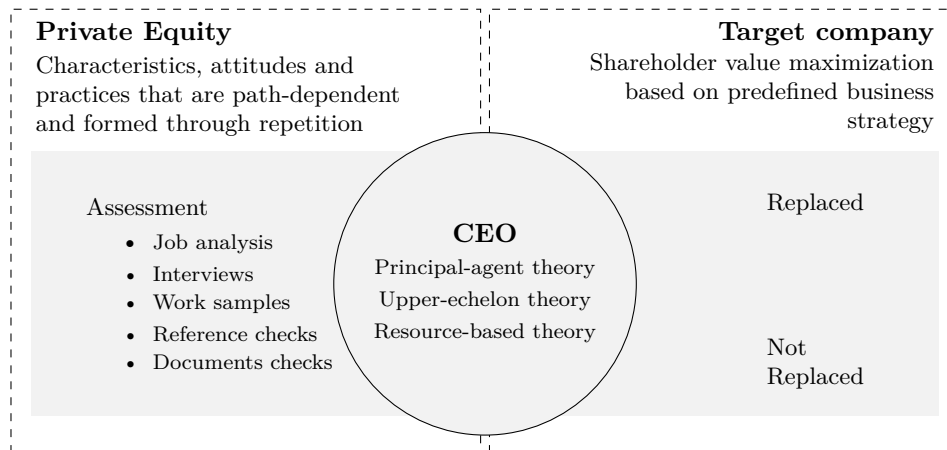
Hence, because of this repetition there should be clear differences in how private equity companies assess the management because of established practices. As noted by Collins et al. (2008) organizations become familiar with their acquisition routines leading them to continue these same, well perceived, practices in the future as well. Furthermore, as for example Humphery-Jenner (2011) and Lopez-de-Silanes et al. (2015) have found there exists plenty of differences among private equity funds when it comes to investments. Hence, it could be expected that private equity companies perform management due diligence in certain path-dependent way, which should be visible in the case studies as well. For this reason, it is believed that private equity companies can be separated into several distinct categories based on their approach on management assessment similarly to Smart (1999).

The CEO replacement decision is at the centre of the 2nd and 3rd research question as in building the qualitative framework this study follows the idea of principal-agent theory (Jensen & Meckling, 1976), upper-echelon theory by Hambrick & Mason (1984) and resource-based theory (e.g. Petaraf, 1993). The framework is thus based on the proposition that the private equity funds form the target company to look like their business plan (upper-echelon theory) while acknowledging the CEO as a strategically valuable resource (resource-based theory) and aligning his incentive through bootstrap and equity (Jensen & Meckling, 1976). Hence, the CEO replacement decision is ultimately based on whether the CEO maximizes shareholder value (Denis et al., 2015) due to their role of setting the general strategy for the firm (Goel & Thakor, 2008). Whether or not this is the case a rational general partner would assess both the incumbent and incoming CEO (Bushman et al., 2010) using various assessment methods

presented by Smart (1999)<sup>15</sup>. From this, it is possible to arrive to the initial framework guiding this study's theory-building research on the role of top management in private equity buyouts:

**Figure 3:** Initial conceptual framework for qualitative research

This framework depicts the initial research setting from which the qualitative study, interviews included, are constructed. At the center of the study is CEO of target company which role is defined by three core management theories. On the left hand side is private equity fund, which has its own approach to investment including managerial assessment methods developed through path-dependent ways over the years. On the right hand side is the target company, which aims to maximize shareholder value and which will either keep its incumbent CEO or have it replaced based on broader deal attributes.



## 5 Sample and Methods

In this section the data collection process is described along with the methods used to test the hypothesis and construct a valid qualitative framework. First, this paper will go through how the sample was collected followed by key descriptive statistics. Then, the quantitative and qualitative methods are explained with a focus in statistical models and within-/cross-case analysis processes respectively.

### 5.1 Sample

The focus of the study is on private equity but data for both private equity funds and portfolio companies were gathered. The starting point for both of these were the membership of Finnish Venture Capital Association ("FVCA"). To choose handpicking funds over VentureXpert or similar private equity database is for several reasons. First of all, VentureXpert is sometimes severely outdated. As one example, the most recent update of one portfolio company was back in 2014 missing all data of a major buyout that occurred a year later. Second, VentureXpert lacks all fundamental data of the companies meaning that the data would have to be complemented regardless using a third party source. Third, using a handpicked sample not only allows including those companies missing from VentureXpert but also frees the researcher from

<sup>15</sup>Smart's (1999) study on management assessment might be dated, but the methods (job analysis, interviews, work samples, document checks and reference checks) with roots in psychology are still widely used today



the bias that he may use deals that have been cherry picked by GP and/or LP. (Acharaya et al., 2012) And finally, being a member of FVCA entails certain reporting guidelines<sup>16</sup> that allow for convenient comparison among funds.

However, there lacks a single clear definition of what constitutes as a buyout firm because a large buyout company can also invest in venture capital (Humphery-Jenner, 2011). Thus in an attempt to distinguish between the two this paper follows a definition as per Invest Europe defining a buyout fund *"A fund whose strategy is to predominantly to acquire controlling stakes in established companies"*.

Accordingly every fund is checked on their website whether they (a) explicitly classify themselves as buyout company buying more mature companies (b) seem to take controlling stakes and (c) whether the portfolio companies have at least couple of millions proven revenues as a proof of establishment. In other words, it's not so much about the number differences per se, but characteristics of the funds that matter (Humphery-Jenner, 2011). If there was doubt this was cross-checked to VentureXpert's information of the company. More specifically, if VentureXpert classifies the company as buyout or restructuring it can be rather safely assumed being a buyout-fund (Hege et al., 2009). Otherwise, more judgement was needed.

### **Quantitative sample**

For the first and second research questions on CEO turnover a list of buyout deals is first collected from suitable private equity companies' web pages, then press releases, articles and LinkedIn records are looked through to find evidence of CEO replacement similarly to Gong & Wo (2011) and finally fundamental data from Bureau van Dijk's Orbis is collected for this gathered list. For the deal to be eligible to the sample the further following principles were followed:

- (a) The deal was made by a private equity firm that is a member of the Finnish Venture Capital Association ("FVCA")
- (b) The deal had to be made after 2006 as finding reliable information on CEOs prior to that becomes difficult. In some cases the press releases about the deal may not even exist anymore. Furthermore, Bureau van Dijk's Orbis only stores private company information for 10 years. The CEO in a particular deal is considered to be replaced if it's either explicitly mentioned in a press release or article about the deal or if there's reliable evidence from e.g. LinkedIn that the incumbent CEO has left the position and a new CEO has stepped in within a year of the deal completion. As a conservative principle if it is unclear whether a CEO is replaced or not for whatever reason, the deal is excluded from the list.

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<sup>16</sup>See FVCA (2009)

- (c) Finally, divisional sales<sup>17</sup> and portfolio companies that are built from several smaller firms are excluded, a practice also used by Gong & Wo (2011). This is because in these situations a new CEO is basically always selected but it's difficult to judge whether or not the CEO is actually replaced<sup>18</sup>. Hence, in order to keep the sample objective these cases are left out.

For the remaining deals fundamental data from 2006-2016 is gathered from Bureau Van Dijk's Orbis where the information is virtually always provided by Asiakastieto for Finnish companies<sup>19</sup>. Bureau Van Dijk's Orbis is the best available source for these companies, as (a) it contains plenty of Finnish companies in its database and (b) it includes private companies which many other sources lack. In fact, Bureau Van Dijk's Orbis has been said to be the best available source of financial data for private companies in Europe (Crocchi & Giudice, 2010). Often times private equity companies establish a holding company for the buyout prior to acquisition so extra care had to be taken to make sure the financial data was actually for the target company and not the holding wrapper. This meant that virtually all of the deals had to be checked manually in order to make sure the financial data is in line with historical levels.

This left the study with 114 deals that had data available of CEO change from 12 different private equity companies. Each of the private equity firms contributed on average 8% to the sample. Of these 81% or 92 companies had sufficient financial data available from Orbis for further statistical analysis, in addition to CEO turnover information. Descriptive characteristics are presented along with the results in section 6.

The sample, though small in absolute terms, is well in line with other buyout studies. For example De Masereine & Brinkhuis (2011) had a sample of 126 European private equity buyouts in their capital structure study, Gong & Wo (2011) had likewise 126 buyouts in their CEO turnover study, Acharya & Kehoe (2008) had 66 deals and finally Kaplan et al. (2012) had 88 observations in his CEO buyout candidates regressions. The reason this study has relatively large sample despite geographical focus is due to the handpicked nature of the observations. This, although requiring a little extra work, has allowed the paper to include funds that do not report to VentureXpert, Preqin or other similar databases commonly used in these studies.

## Interviews

In the second part of the study qualitative methods are used with interviews being essential sources of information as they form the cases and thus samples for the research. (Yin, 1994)

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<sup>17</sup>Divisional buyout is defined as the sale of a division, subsidiary, or other operating unit of a parent firm to members of the management of either the parent or the subunit being divested (Hite & Vetsuypens, 1989)

<sup>18</sup>For example, in a divisional MBO there may not have been a clear CEO previously and it is hence left on judgement whether the post-MBO CEO was sort of the acting head of division pre-MBO. Likewise in buy & build if three companies are merged together it is extremely vague to judge which one of the three CEOs can be considered to be the incumbent one

<sup>19</sup>In fact, in 92% of the companies the data was provided by Asiakastieto

Again, for a private equity company to be eligible the initial criteria was that the private equity company had to be preferably a full member of the FVCA. This is because contacting the private equity companies for interviews was ultimately done by a representative from FVCA as they had established relationship with these firms giving a higher chance of them agreeing to participate in the study. Furthermore, private equity industry is notorious for its secrecy and difficult of access (De Maeseneire & Brinkhuis, 2012; Teerikangas, 2012) and hence FVCA as a middleman ensured they saw this study as an important issue. In addition, Mercuri Urval’s personal contacts were utilized as the interviews were being set, which is why the pilot study was conducted on a private equity firm that is not a member of FVCA.

The initial private equity long list consisted of 52 companies. Of these 12 buyout-focused companies with an office in Helsinki area were shortlisted for interviews. These companies were in all but 2 cases contacted by FVCA to set up an interview and to the study’s delight all 12 companies agreed to participate in the study. For the other 2 cases personal connections were used. It should also be noted that 1 company in the sample defined itself as a late-stage growth equity company, but admitted conducting investments with buyout-structure as well. The interviewees were essentially always Partners or other senior investment professionals. Only one case had a junior member with a title Investment Manager<sup>20</sup>. Finally, for only a single case more than one person from the private equity company was present at the interview. The interviews were carried out at the respondents’ offices between January and April of 2017.

**Table 3:** Descriptive interviewee characteristics

This table presents central descriptive interviewee information for each of the 12 cases collected. In only one case more than one participant was present at the interview and only two of the interviewed persons were women. Fund A is not part of FVCA. Fund D officially considers itself a late-stage growth fund but admitted also doing buyout-structured investments. The size column reflects the size of the fund as measured by assets under management in relation to the average of entire sample. The data here is gathered from interviews and is shown in as detailed manner as possible while still ensuring sufficient confidentiality for the participants.

Case	Size	Private equity stage	Years in private equity	Position
A	Large	Buyout	3	Investment Manager
B	Small	Buyout	22	Partner
C	Medium	Buyout	2	Partner
D	Small	Late-stage growth	2	Partner
E	Medium	Buyout	7	Partner
F	Medium	Buyout	1/10	Partners
G	Large	Buyout	20	Managing Partner
H	Small	Buyout	13	Partner
I	Medium	Buyout	10	Partner
J	Large	Buyout	22	Managing Partner
K	Small	Buyout	25	Partner
L	Large	Buyout	13	Partner

<sup>20</sup>Note, however, that while analyzing the case the answers were no way different from other interviewees’ responses and hence does not affect the analysis

**Table 4:** Descriptive fund characteristics

This table shows aggregated fund sample characteristics at the interview date. Note that employees here include investment professionals only. The data is gathered from interviews and each respective fund’s website, where available.

Variables (N = 12)	Total Sample	
	Average	Median
Founding year	1999	1996
Assets under management (EURm)	507	480
Employees	11	12
Number of current portfolio companies	9	6
Total number of investment to date	32	30
Number of funds raised to date	7	5

This study’s sample is hence quite deliberately chosen that is characteristic of purposive samples. Maxwell (2008) describes purposive samples as sampling type where *“particular settings, persons, or events are deliberately selected for the important information they can provide that cannot be gotten as well from other choices”*. As this paper’s sample is limited based on rather specific private equity characteristics and settings, such as being a buyout fund and a member of FVCA, the sample is in line with first part of Maxwell’s (2008) definition. It is also pretty safe to argue further that the information these private equity players provided could not be fetched from any other sources as internal due diligence and decision processes are often highly proprietary and in order for interviewees to be direct with their answers a face-to-face meeting would be beneficial.

Again, at a glance the sample may seem small but it’s actually well in line with previous studies. Though there lacks clear guidelines on how many interviews are enough in qualitative research (Guest et al., 2006) Smart (1999) notes that similar studies with actual private equity firms often tend to have a sample between 5 to 20 firms. Guest et al. (2006) found that full range of thematic discovery occurs within the first 12 interviews, which is coincidentally the same amount as the sample in this paper<sup>21</sup>. Hence, it could be rather safely assumed that the sample is well saturated in this regard. Finally, as noted by Babbie (1990) this sample size is acceptable considering “hard-to-reach” participants.

Indeed, purposive sample sizes are often determined on the basis of theoretical saturation (the point in data collection when new data no longer bring additional insights to the research questions). This hence required constant reviewing and analysing of the data in conjunction to data collection to determine whether or not new observations added to new knowledge. (Mack et al., 2005) In the next section is explained how this was performed in more detail.

<sup>21</sup>Furthermore, Guest et al. (2006) found that basic elements for metathemes can be found in as early as six interviews

## 5.2 Quantitative methods

Regarding the first questions quantitative analysis is used to find out fundamental differences between portfolio companies experiencing a CEO change compared to those that do not. Below is briefly described the central methods used.

### 5.2.1 Univariate analysis

This study first looks at the sample using a simple univariate analysis. Having 91 observations enables the use of statistical significance testing to assess the difference in the means between groups. This test will tell whether or not the characteristics of buyout companies differ in the first place using a rough back of the envelope analysis. In essence, it tells whether it would be possible to pick a random characteristic from the sample and see if it significantly differs between companies that exhibit CEO turnover and those that do not. In other words, whether or not it rejects the null hypothesis that  $\bar{x}_1 - \bar{x}_2 = 0$ .

Hence, this paper begins by showing significance results for difference-in-means analysis using a traditional two sample t-test with unequal variances. In addition to standard t-test the results for Mann-Whitney U-test are also shown. This is because there's evidence that all the variables may not be normally distributed and hence non-parametric tests might be more appropriate. Appendix 17 shows Shapiro-Wilk test results for variables used and exhibits evidence that not all of them comply with null hypothesis of normality. However, the central limit theorem says that when N is sufficiently large, or more specifically higher than 30, the sample should be approximately normal and in practice the research does not need to worry too much about normality assumptions. (Park, 2009)

Still, non-parametric tests are problematic for two significant reasons (a) they ignore the correlations among the variables, which multivariate tests do not and (b) The use of univariate tests inflates the Type I error rate or incorrectly rejecting a null hypothesis when it is, in fact, true. (Rencher, 2003). Hence, two supporting multivariate models are used.

### 5.2.2 Logit-model

Since in the study the point of interest is whether the CEO is replaced or not, a binary model such as logistic regression is suitable for statistic analysis (Cox, 1989). This paper primarily uses logit regression to estimate the probability that a CEO is changed slightly following the tracks of Gong & Wo (2011)<sup>22</sup>. If a CEO is changed within one year the dependent variable has a value of 1 and if not its value is 0:

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<sup>22</sup>Secondarily, a probit regression and Heckman's (1979) selection model is used as a robustness check as will be explained in section 8

$$y_i = \begin{cases} 1 & \text{if incumbent CEO is changed within 1 year of buyout} \\ 0 & \text{if incumbent CEO remains} \end{cases}$$

Because the explanatory variable is not linear but instead categorical with only 2 possible values it is not sensible to use a traditional OLS regression as it would result in poor fit. Instead this study will assume a cumulative logistic distribution function  $F$ , which will result in the fitted regression looking more like an S-shape. It is expressed as follows:

$$F(z_i) = \frac{e^{z_i}}{1 + e^{z_i}} = \frac{1}{1 + e^{-z_i}}$$

where

$$Z_i = \beta_1 + \beta_2 X_{2i} + \dots + \beta_k X_{ki}$$

In this setting the beta-coefficients refer to transformed  $\log_s^{23}$  of various buyout characteristics and not probabilities. Doing this it becomes possible to assume that the *logit* of the probability that a CEO is replaced – rather than the probability itself – follows a linear model. (Rodriguez, 2007) Then by utilizing maximum likelihood estimation, the logit model evaluates the impact of buyout characteristics to the likelihood of replacing the target company CEO. In order to alleviate the potential problem of heteroscedasticity in standard errors Hubert-White robust covariances between a buyout characteristic and the decision to replace the CEO is reported. Z-statistics and pseudo- $R^2$  are further used for exhibiting the explanation power of the regression, similarly to t-statistics and  $R^2$  in a traditional OLS regression.

Finally, the reason this paper limits the time frame of the CEO change to 1 year is because if an organizational restructuring is to happen it likely occurs very soon after the buyout. Furthermore, past studies also tend to limit the time period to only one year. For example the time frame in Guo et al. (2011) study on CEO turnover was one year and Gong & Wo (2011) found that extending the time period to two years only resulted in an additional 5 companies out of his 126 sample to replace their CEO - a rather insignificant portion in the bigger picture.

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<sup>23</sup>Log transformation in logit model works as follows:  $z_i = \text{logit}(\pi_i) = \log\left(\frac{\pi_i}{1-\pi_i}\right)$ , which is the logarithmic ratio of the probability to its complement. Further  $\pi_i = x_i' \beta$  and is often estimated from individual data using OLS regression. (Rodriguez, 2007)

### 5.3 Qualitative methods

The majority of the research was carried out as a multiple case study by interviewing experienced private equity professionals in Finnish private equity companies. Interviews are an important source of information for a case study (Yin, 1994) and are arguably the primary data source where case study research is undertaken as it is through interviews that researchers can best access case participants' views and interpretations of actions and events (Walsham, 1995).

Considering the qualitative nature of the 2nd and 3rd research question, a case study was fitting as this paper tries to understand the dynamics present within a single setting (Eisenhardt, 1989). Compared to a single case study a multiple case study is preferred as this allows the paper to utilize replication logic (Eisenhardt 1989, Eisenhardt & Graebner, 2007). Here every case was first analysed as an independent entity and then continuously advanced to cross-case analysis in order to contrast findings between the cases (Eisenhardt & Graebner, 2007). It also allowed the paper to find cross-case patterns that counteract the tendencies of making premature conclusions from single case as a result of information-processing biases (Eisenhardt, 1989). As noted by Miles & Huberman (1984), the presence of a more elite respondent, as in this study essentially always the very senior buyout professional shown in table 3, may lead researchers to leap to false conclusions unless a multiple case study approach is used.

Finally, the nature of case study also allows the use of both qualitative data collection methods, such as interviews, and quantitative methods such as numbers pulled from databases along with supportive models. This type of combination of data is said to be highly synergistic and keeps researchers from being carried away by vivid, but false impressions in qualitative data. (Eisenhardt, 1989) In line with this flexibility this study uses these interviews to complement the quantitative results regarding CEO turnover in research question one.

The unit of analysis for the last two research questions is one case. More precisely, the case is a private equity buyout purchase process. The interview process was as follows. After suitable private equity buyout companies had been identified, a pilot study was conducted. After this, within-case and cross-case analysis was performed simultaneously and the resulting data reviewed in an iterative process. This was done until a theoretical saturation was reached and no new information was being generated. The case collection process is illustrated in Figure 1.

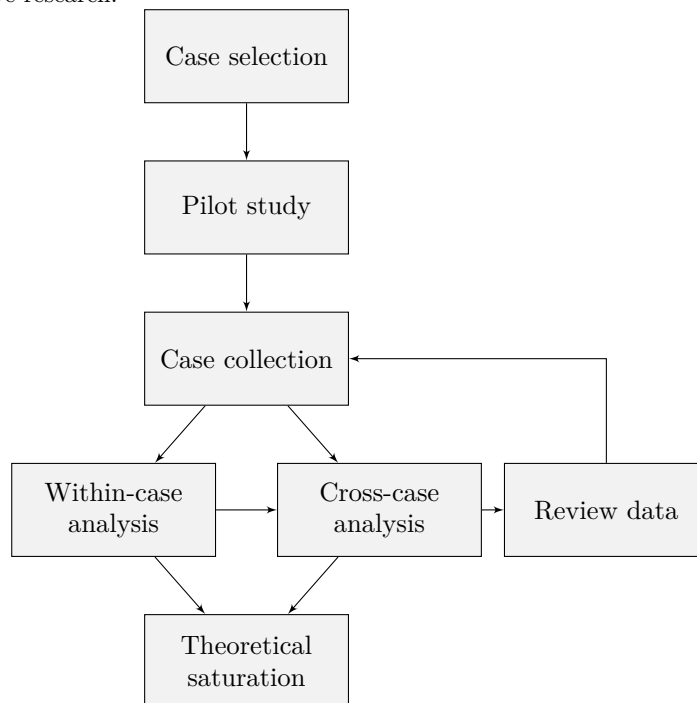
The interviews consisted of three major themes. First, the interviewers began by asking the interviewee to briefly introduce himself and his fund as a way to sort of break the ice. Then, using open-ended questions the interviewers probed his general views on the management using questions such as "How would you say that you consider the human capital in the buy process?" and "How established would you consider your approach on the management due diligence?". This allowed the researchers to get an idea of the

respondent's feelings towards the subject as well as understand what kind of processes they had in place. Third theme was the replacement of the CEO and the questions involved were for example "How do you come into a conclusion that the CEO needs to be replaced?" and "How do you assure that the replacing CEO is more suitable than the incumbent CEO?". Fourth theme was related to assessment methods. At this point it was essentially always clear which methods they used and which not simply based on previous answers. Here very similar questions as Smart (1999) were utilized related to assessment methods, but with more open-ended approach. An example would be "What kind of written material you look at when assessing the CEO?". Finally, the interviews were concluded by asking if there had been any lessons learned from management due diligence followed by a conjoint analysis as robustness check presented in section 8.

Each interview was conducted in Finnish lasting around 1 hour with some going slightly overtime and few finishing early. Each interview yielded approximately 6 pages or 1,500 words. In total, 72 pages of notes were analysed and 11 hours of recordings transcribed.

**Figure 4:** Case collection process

This figure illustrates the case collection and interview process. It is based on Eisenhardt (1989) and Yin(1994) guidelines on qualitative research.



### 5.3.1 Pilot study

As suggested in the literature before any of the actual interviews are taken place a pilot study was conducted. This was to help the study refine data collection plans with respect to the contents of the



data i.e. the questionnaire and the procedures i.e. analysis of the data that is to be followed. It essentially serves as the first conceptual clarification for the research design. (Yin, 1994)

Furthermore, Yin (1994) proposes that good criteria for a pilot study is convenience and proximity to the interviewee. Hence, in this sample a pilot case was obtained by using Mercuri Urval's existing contacts, which allowed conducting an interview with a buyout fund the researcher had a somewhat strong existing relationship with. Because of this, it was possible to get honest feedback that could then be used to refine the questionnaire and interview practices regarding the future interviews.

Even before conducting the pilot study, the rationale of questionnaire was tested using an experienced Mercuri Urval consultant who happened to have a long previous experience in a Finnish private equity company. Furthermore, the questionnaire and interview strategy received critical feedback from the author of Teerikangas (2012) who had conducted a similar study earlier in European setting. The feedback was proved invaluable and helped forming the final questionnaire.

### 5.3.2 Within-case analysis

After the interviews had been confirmed by the local venture capital association representative and/or Mercuri Urval, two investigators would be utilized when collecting the case studies. This was to ensure robustness and to increase the likelihood of capitalizing on any novel insights that might have been present in the data (Eisenhardt, 1989).

The data was then collected and analysed simultaneously. Each interview was recorded with the permissions and acknowledgement of the participant as is commonly done (Darke et al., 1998). All companies, with the exception of 1, agreed for the recording. This ensures the robustness of the data gathered. The research further followed the 24-hour-rule of case analysis suggested by Yin (1994) for writing down all detailed interview notes and summaries of cases within 24-hours after each interview had taken place. This 24-hour rule ensured that data collection was overlapping and complementary, rather than separate process (Eisenhardt, 1989). Hence, the analysis of the interviews was already started when consecutive interviews were taking place meaning that the data analysis was very much a simultaneous process.

By analysing the data thorough the interview process it enabled to focus on critical themes that emerged from each individual case. This way should it be seen required the questionnaire could be slightly altered to probe more into these central topics in the following interviews. Though this may seem extraordinary to do in the midst of a research it is in fact a well known principle in the field of qualitative research (e.g. Leonard-Barton, 1988). Furthermore, Eisenhardt (1989) guidelines also approve it as this paper is trying to understand each case individually as in depth as possible and it allows new line of thinking to emerge during the research that will lead to more focused and better analysis of the underlying issue.

After the notes had been written the first step in the data analysis was to perform a within-case analysis. For this, all expanded interview data was gathered to a qualitative data analysis software ATLAS.ti. Then open coding was performed and all collected information was thoroughly analysed to form initial propositions of each individual case. In this stage, the intention was to constantly find any emerging patterns and points of interest that could be capitalized in further interviews. More importantly, this within-case analysis allowed the study to get familiar with the information for cross-case analysis<sup>24</sup>.

### 5.3.3 Cross-case analysis

Cross-case analysis was already started when within-case analysis was still in the process. As relevant patterns were found from each individual case an attempt was made to look for similar patterns in other cases and find intergroup differences (Eisenhardt, 1989). In other words, the research tried to look for what is it that each individual buyout company does regarding management due diligence and then tried to see if other buyout companies had similar practices or where was it that they differed. Especially the similarities found between cases were important regarding the internal validity of the study (Yin, 1994).

Finding the answers to research questions was not a straightforward process as is traditional to qualitative studies. Shaping hypothesis involves a lot of constructs and verifying relationships, which in turn requires that each individual case is coded and subsequently analysed properly (Eisenhardt, 1989). Frankly, relatively more judgement was necessary as the applicability of statistical methods commonly used in traditional theory-testing studies is very limited with small-n samples. Hence, when drawing any conclusions from cross-case analysis Eisenhardt (1989) suggests the research team must judge the strength and consistency of relationships within and across cases and also fully display the evidence and procedures when the findings are published so that readers may apply their own standards. This principle was deeply applied in this study as well and reliability and validity is more assessed in section 8.3.

More importantly, before any conclusions were made all the results were compared to existing literature. This was for two main reasons. First, it allowed the findings of contradictory evidence, which even though may seem paradoxical, improves the internal validity of the study by making researchers to switch into more thorough thinking that otherwise would not be achievable. The result is deeper insight into both the hypothesis and the conflicting literature. The second reason for literature comparison was that it tied together similarities in phenomena normally not associated with each other. Ultimately, this culminated to more theoretically sound, generalizable and internally valid research. (Eisenhardt, 1989)

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<sup>24</sup>Note that despite how it is called ATLAS.ti was not used to perform any analysis in this study. In other words, ATLAS.ti did not generate any sort of pre-made analysis that would have allowed for quick findings across cases, but instead was solely used for *storing* and *handling* qualitative information in easy and efficient way enabling the researcher to analyse it himself in the best possible manner.

So far this paper has described past literature, sample and methods. In the next section the results of the study will be presented.

## 6 Results and Analysis

In this section the analysis and results for the study are presented. First, the section begins by looking into how often CEOs are changed in a buyout followed by a look at the factors affecting the buyout decision. Finally, the section will dedicate a big portion of the study on going through the cases and introducing the relevant findings.

### 6.1 CEO turnover in Finnish buyouts

This study first looks at how much CEO turnover there exists by examining Finnish buyout deals conducted in the last 10 years 2006-2016. The central observation is that CEO is replaced in around 32% of the time, which is slightly less than in comparable studies with international sample<sup>25</sup>. Table 1 presents the CEO turnover summary statistics. The sample shows cyclical distribution in which the number of buyout deals peaked right before the financial crisis and then again in 2014. Likewise, there seems to be slight fluctuation of CEO turnover during the observation period with replacements peaking before the financial crisis and then increasing again in 2010. Though it is likely explained by the fact that there was simply less investments as shown in section 2.4, one explanation could also be that the crisis briefly made buyout companies extra careful with their investments investing only to companies with exceptional management. In other words, when market is doing well and fundraising is relatively easier, buyouts are more likely to happen without very thorough due diligence often excluding the assessment of management capabilities.<sup>26</sup>

Table 6 shows the CEO turnover broken down to 13 separate industries. Industry wise the most turnover happens in the business and industrial services in addition to consumer goods and retail segment. In absolute terms, business and industrial products and services had together the most, 19, deals with CEO turnover. One explanation could be that for these kinds of industries the pool of available managerial knowledge is much larger than for more specialised industries as it doesn't required as heavily specialized knowledge (Newbert, 2007). Interestingly, life sciences and computer and consumer electronics had very little turnover compared to the deals made in the period. This could be due to the fact that in these kinds of industries much value is tied to the management's human capital.

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<sup>25</sup>See section 3.4

<sup>26</sup>Hence similarly to e.g. Axelson et al., (2009) and Bloom et al., (2011)

**Table 5:** CEO turnover across years

This table shows how often buyout funds replace their CEOs within a year after they make their investments broken down to years 2006-2016. The deals are handpicked from Finnish buyout funds' websites and CEO replacement data is fetched from various public sources including deal announcements, press releases, articles and LinkedIn. A CEO is considered to be replaced if it's explicitly mentioned in a written release, or if his/her tenure has begun within one year after the investment has been made. Observations where the replacement has been unclear have been excluded. Divisional sales and companies built from mergers are also excluded.

Year	Number of observations	of which CEO changed	Replacement %
2006	7	2	29 %
2007	6	5	83 %
2008	17	4	24 %
2009	1	0	0 %
2010	13	6	46 %
2011	13	2	15 %
2012	8	4	50 %
2013	4	1	25 %
2014	15	5	33 %
2015	14	4	29 %
2016	16	4	25 %
Total	114	37	32 %

**Table 6:** CEO turnover across industries

The table here shows how CEO turnover differs across industries between 2006-2016. Industry classification is as used by Invest Europe. Data for industry classifications were first obtained from Orbis database as NACE Rev. 2 and then converted to Invest Europe standard according to their guidelines.

Industry	Deals	of which CEO replaced	Replacement %
Business and industrial products	31	10	32 %
Business and industrial services	21	9	43 %
Chemicals and Materials	13	5	38 %
Life sciences	12	2	17 %
Consumer Services	9	2	22 %
Consumer Goods and Retail	8	5	63 %
Computer and consumer electronics	7	0	-
Communications	4	2	50 %
Agriculture	3	2	67 %
Financial Services	2	0	-
Transportation	2	0	-
Real estate	2	0	-
Energy and Environment	0	0	-
Total	114	37	32 %

### 6.1.1 Turnover vs. non-turnover companies

After this initial analysis the study then turns attention to the fundamental differences between the companies who replace their CEO and those who keep the incumbent CEO. From this point on, the focus is only on the companies that have relevant data available which results in the sample slightly decreasing in size. The research begins by performing univariate analysis on central variables of interest to see how these variables behave across turnover and non-turnover samples independently.

Table 7 shows the descriptive statistics of 91 buyout companies, which are then further divided into two subsamples. The first subsample contains the 29 firms that replace their CEOs within one year of the announcement and the second subsample the 62 who keep the incumbent CEO. This study then performs two-sample t-test along with non-parametric Mann-Whitney U-test to see whether the differences among the samples are significant under null hypothesis  $H_0 : \mu_1 - \mu_2 = 0$ .

Average firm age at the time of buyout is 20 years across the entire sample. The agency cost measures, cash flow and leverage, have no meaningful difference among the subsets. The leverage is, however, lower for companies experiencing CEO turnover, but the difference is not significant and slightly compensated by the fact that cash flow is also lower for this group. If anything, this would rather suggest that CEO is replaced for operational reasons and opposite of what Gong & Wu (2011) found hence not supporting hypothesis #1. However, the industry-adjusted *ROA* is positive for entire sample implying that, on average, the buyout companies tend to buy companies that outperform their peers. This too is essentially unchanged between subgroups hence at this point not giving support to hypothesis #2 either.

That being said, there's evidence that more experienced private equity firms replace the CEO more often than less experienced buyout funds (diff = 0.44, t = -2.35, p < 0.05). Indeed it would seem that with experience comes confidence, know-how and networks to replace CEOs as reckoned in hypothesis #2. Furthermore, the companies that experience CEO turnover after a buyout are on average significantly larger than their counterparts with the difference in natural logarithm of assets being 0.64 (t = 2.02, p < 0.05). Finally, as expected the mean age of incumbent CEO in companies that replace the manager is 51.52 versus 45.5 in those who don't (t = 2.99, p < 0.01) suggesting strongly that (voluntary) retirement could be a central reason for departure.

**Table 7:** Differences-in-means: turnover versus non-turnover companies

This table shows descriptive statistics of variables for this study's full sample and subsamples with/without CEO turnover within one year after the buyout. In the last column, the comparisons between the two subsamples are presented (Turnover subsample – Non-turnover subsample) along with the t-statistics and Mann-Whitney U-test z-statistics on the differences to be equal. Free Cash is measured as the EBITDA divided by beginning-of-year book value of equity, minus the mean free cash flow of firms with the same 2-digit SIC code in Finland. Leverage is defined as the ratio of long-term debt to total assets adjusted similarly for industry. ROA 1 is as defined by Gong & Wu (2011) measured as net income divided by total assets, minus the mean ROA of firms with the same 2-digit SIC code in Finland. ROA 2 measured similarly but with more traditional EBITDA to Total Assets.  $\Delta$ Spread is measured as annual change in BAA-Euribor spread fetched from Federal Reserve St. Louis database and Eurostat respectively. PE Experience is measured as the natural logarithm of number of deals made by the fund prior the deal. Firm Size is the natural log of total assets. Asset Tangibility is measured as property, plant and equipment divided by total assets, except cash. CEO Age is the incumbent CEO's age at the deal announcement date. Firm Age is the date of incorporation in Bureau Van Dijk's Orbis database until buyout transaction. All monetary variables are adjusted for inflation to 2006 euro value based on CPI gathered from Statistics Finland.

	Full Sample				Companies with CEO Turnover				Companies without CEO Turnover				Difference (t-stat) / (z-stat)
	N	Mean	Median	$\sigma$	N	Mean	Median	$\sigma$	N	Mean	Median	$\sigma$	
Free Cash	91	0.03	0.11	0.52	29	-0.02	0.11	0.58	62	0.05	0.10	0.49	-0.07 (-0.55) / (0.40)
Leverage	91	-0.09	-0.11	0.23	29	-0.12	-0.12	0.27	62	-0.07	-0.09	0.21	-0.04 (-0.77) / (0.87)
ROA 1	91	0.05	0.01	0.22	29	0.06	-0.02	0.23	62	0.05	0.02	0.21	0.00 (0.10) / (0.29)
ROA 2	90	0.12	-0.04	1.57	29	0.03	-0.07	0.47	61	0.16	-0.03	1.88	-0.13 (-0.52) / (0.80)
PE Experience	91	2.93	3.14	0.85	29	3.22	3.37	0.81	62	2.79	2.94	0.86	0.44 (-2.35) ** / (-1.84) *
$\Delta$ Spread	91	-0.02	-0.09	0.29	29	-0.08	-0.09	0.19	62	0.00	-0.08	0.32	-0.08 (1.48) / (0.93)
Firm Size	91	16.24	16.13	1.40	29	16.68	16.49	1.46	62	16.03	16.08	1.31	0.65 (2.02) ** / (-1.54)
Asset Tangibility	91	-0.09	-0.08	0.19	29	-0.06	-0.07	0.16	62	-0.10	-0.09	0.21	0.03 (0.82) / (-0.65)
CEO Age	91	47.42	47.00	9.28	29	51.52	53.00	8.94	62	45.50	46.00	8.95	6.02 (2.99) ** / (-2.55) ***
Firm Age	91	20.49	21.00	13.07	29	22.76	24.00	13.17	62	19.44	19.50	12.89	3.32 (1.13) / (-1.21)

Significance levels are denoted by: \*p<.1,\*\*p<.05,\*\*\*p<.01 (two-tailed test)

### 6.1.2 Multivariate analysis

Now, the CEO turnover is approached from slightly different angle. The sample is divided into subgroups by variables of interest, and the CEO turnover rate is compared across these subgroups. This analysis allows a closer look at the relation between CEO turnover and the major explanatory variables. Moreover, it allows this paper to identify potential non-linear relations between the independent variables and the probability of CEO turnover. (Gong & Wo, 2011)

Table 8 presents the correlation coefficients among the analysis' central variables of interest. In general, there exists some intuitive correlation among the study variables starting with strong positive correlation between ROA and Cash Flow ( $\rho = 0.28$ ,  $p < 0.01$ ) and Asset Tangibility and Leverage ( $\rho = 0.39$ ,  $p < 0.01$ ). Perhaps naturally Firm Age is highly correlated with Firm Size ( $\rho = 0.45$ ,  $p < 0.01$ ). Some other moderate and negative correlations exist between Firm Size and ROA 1 ( $\rho = -0.22$ ,  $p < 0.05$ ) as well as Firm Age and CEO Age ( $\rho = -0.13$ ,  $p < 0.05$ ). Though some of these strong relationships could potentially lead to multicollinearity this paper later shows that it's not an issue as variation inflation factors (VIF) remain well below commonly used rule of thumb 10 (O'Brien, 2007). The correlations here provide preliminary idea of the relations amongst the relevant variables used in multivariate analysis.

**Table 8:** Correlation matrix among variables of interest

This table shows Pearson correlation coefficients between the independent variables used in this paper. The definitions for the variables are provide in table 7.

	1	2	3	4	5	6	7	8	9	10
1. Cash Flow	1.00									
2. Leverage	-0.04	1.00								
3. ROA1	0.28***	-0.13	1.00							
4. ROA2	0.20*	-0.01	0.08	1.00						
5. PE Experience	0.03	-0.14	-0.02	-0.03	1.00					
6. $\Delta$ Spread	0.03	-0.08	0.01	-0.04	0.16	1.00				
7. Firm Size	-0.01	0.07	-0.22**	0.06	0.03	0.01	1.00			
8. Asset Tangibility	-0.19*	0.39***	-0.13	0.11	-0.18	-0.13	0.00	1.00		
9. CEO Age	-0.09	0.03	0.06	-0.08	0.14	0.18*	0.19*	0.17	1.00	
10. Firm Age	0.00	0.08	-0.03	-0.07	-0.10	0.17	0.45***	0.02	-0.13**	1.00

Significance levels are denoted by: \* $p < .1$ , \*\* $p < .5$ , \*\*\* $p < .1$  (two-tailed test)

The next table, table 9 shows how the CEO turnover rate varies with different quartiles of the primary variables. The observations essentially confirm what was found in univariate analysis. For cash flow, the turnover is highest, 36.36%, for those companies with lowest industry-adjusted cash flow compared to those with modest and high cash flow (28.26% and 34.78% respectively). In absolute terms the difference is not big just as it wasn't in previous analysis either. The same is observed for leverage where companies with highest interest-bearing debt to total assets at the time of buyout experience the same turnover rate of 34.78%. Essentially (and perhaps surprisingly) very similar findings are found for ROA but again, this



finding was already noticed in univariate analysis.

Finally, regarding private equity experience it's obvious that most turnover is experienced among the highest quartile companies. Essentially, the chance for deals where the private equity company is highly experienced is basically doubled compared to a more "novice" private equity fund (39.13% vs. 17.39%). This further supports the initial thesis regarding relationship between CEO turnover and buyout experience.

**Table 9:** Distribution of turnover vs. non-turnover companies

This table shows the distribution of firms with CEO turnover compared to firms without CEO turnovers between different subgroups of variables of interest. The subgroups are based on quartiles. The last column shows the t-value for null hypothesis that highest quartile equals lowest quartile. Table 7 presents the definitions for variables.

	Mean	$\sigma$	CEO Changed	CEO Not Changed	Turnover %	High vs. Low
Full Sample	-	-	29	62	31.87 %	
Free Cash						
25th percentile	-0.78	0.93	8	14	36.36 %	
50th percentile	0.07	0.14	13	33	28.26 %	0.00 ***
75th percentile	0.70	0.42	8	15	34.78 %	
Leverage						
25th percentile	-0.42	0.17	9	14	39.13 %	
50th percentile	-0.11	0.08	11	34	24.44 %	0.00 ***
75th percentile	0.25	0.13	9	14	39.13 %	
ROA						
25th percentile	-0.23	0.18	8	15	34.78 %	
50th percentile	0.01	0.08	13	32	28.89 %	0.00 ***
75th percentile	0.52	0.74	8	15	34.78 %	
PE Experience						
25th percentile	1.52	0.94	4	19	17.39 %	
50th percentile	3.07	0.35	16	29	35.56 %	0.00 ***
75th percentile	4.06	0.19	9	14	39.13 %	

Significance levels are denoted by: \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$  (two-tailed test)

### Logit-regression

Before this study has largely looked at variables affecting CEO turnover independently, but now an attempt is made to determine whether the results from the univariate tests hold after controlling for other variables associated with CEO turnover. This is done by using logistic regression where the dependent variable is the binary outcome that the target company's CEO is replaced within a year of the buyout. The key variables of interest are added one by one to see how explanatory power of each independent variable affects the overall model. In this section, one-tailed tests are used for explanatory and control variables which have the signs predicted and two-tailed tests for others (similarly to Gong & Wu, 2011).

Table 10 shows the regression results using cash flow, leverage, ROA and private equity experience as

explanatory variables for CEO turnover. Model 1 serves as base model, in which only intercept and control variables are included. There is immediately striking evidence that CEO turnover is associated with high CEO age ( $\beta = 0.07$ ,  $t=2.55$ ,  $p < 0.01$ ) meaning that older and likely retiring CEOs are more often replaced. The coefficient for the proxy of LP-GP agency problem Baa-spread is  $-1.69$  ( $t = -1.44$ ,  $p < 0.1$ ) giving support to the fact that when credit is more tight PE firms look more carefully into the company avoiding all sort of unnecessary hassle and investing *into* the incumbent CEO. This was also apparent in CEO turnover across years presented in table 5 The coefficient for Firm Size is positive with a value of  $0.31$  ( $t = 1.53$ ,  $p < 0.1$ ) suggesting that CEO is changed more often for larger companies. Indeed, this supports proposition of Teerikangas (2012) as well as the fact that for smaller companies CEO is often the entire management (Chowdhury & Lang, 1993) where the management team may possess significant specialized knowledge of the company.

The model 2 exhibits various agency costs in the target company. Leverage is just barely significant in with coefficient of  $-1.81$  ( $t = 1.62$ ,  $p < 0.1$ ) but excess industry-adjusted cash flow does not seem to matter. The model increases the Wald  $\chi^2$  to  $14.56$  ( $p < 0.05$ ) and pseudo- $R^2$  to  $0.147$  but does not give strong support for hypothesis #1 as the results are very borderline. This would imply that agency costs are not *significant* problem, but low leverage may contribute towards CEO replacement in Finnish buyouts.

Contrary to Gong & Wu (2011) profitability variables in model 3 do not seem to cause CEO turnover despite having signs as expected (ROA 1  $\beta = -0.02$ , ROA 2  $\beta = -0.06$ ). Though it does not exclude the fact that CEO might be changed as part of a strategic change, it does imply that the replacement might not be due to industry-adjusted performance and hence hypothesis #2 indeed does not seem to hold either. CEO Age is again as expected highly significant ( $t = 2.52$ ,  $p < 0.01$ ) although with the same small coefficient  $\rho = 0.07$ . Wald  $\chi^2$  is  $12.06$  and significant with  $p < 0.01$ .

In model 4 private equity experience is included to the regression. The effect is highly as expected with coefficient being  $\beta = 0.52$  ( $t = 1.76$ ,  $p < 0.05$ ) suggesting that with experience comes knowledge, networks and confidence of replacing the CEO when needed. Together with Firm Size coefficient of  $\beta = 0.26$  it would further suggest that these more mature buyout funds also buy larger companies. In addition, the Wald  $\chi^2$  is increases to  $15.28$  ( $p < 0.1$ ) with  $R^2$  being  $0.150$ . Hence, based on this and previous analysis the hypothesis #3 seems to hold the strongest. Finally, in model 5 all presented variables are included to make up a full model and the evidence points out that only private equity experience in addition to base model remain significant with Asset Tangibility becoming significant at 10% level.

In appendix 19 this analysis is further repeated with probit-model in order to make sure the results are not due to the logit-transformation function presented in section 5.2.2. It seems that the same results hold, but in the full model leverage variable, which currently is just barely insignificant, becomes significant at

10% level. Considering both models exhibit significance for factors implying support for higher leverage i.e. Asset Tangibility, Firm Size and PE Experience the results would suggest that CEO is more likely to be replaced when firm is little leveraged but could support higher levels of debt. Still, however, this does not automatically make the hypothesis # 1 hold as the result is borderline, cash flow is still insignificant and the previous univariate analysis does not support the findings.

Based on this analysis it would seem that managers are more often replaced when an experienced (and hence likely larger) buyout fund is buying a little levered larger company with debt when GP-LP agency costs are higher and the incumbent CEO is old. This essentially confirms the proposition by Teerikangas (2012), noting that larger private equity firms may have more lenient approach on CEO replacement. In this section the study has looked at portfolio company characteristics in CEO turnover and now ends the theory-testing section of the study. Next these findings will be incorporated with qualitative results from interviews to not only find support for the conclusions in this section but also to shed light on how GPs ensure the incumbent or replacing manager is more suitable than the existing one. Below is a summary of findings so far:

Research question #1: *How often and what determines CEO turnover in Finland?*

Description		Finding
Turnover	CEO turnover % in Finnish buyouts	32%
Significant predictors	Variables that seem to explain the turnover most significantly	PE Experience
		Leverage
		$\Delta$ Spread
		Firm Size
		CEO Age
Initial hypothesis	Description	Finding
Hypothesis #1	Companies with higher agency costs experience higher CEO turnover	No
Hypothesis #2	Companies with deteriorating industry-adjusted performance experience higher CEO turnover	No
Hypothesis #3	Companies acquired by more experienced buyout funds experience higher CEO turnover	Yes

**Table 10:** Logistic regression of CEO turnover

This table presents results for the logit regression factors affecting CEO turnover in Finland. Free Cash is measured as the EBITDA divided by beginning-of-year book value of equity, minus the mean free cash flow of firms with the same 2-digit SIC code in Finland. Leverage is defined as the industry-adjusted ratio of long-term debt to total assets. ROA 1 is as defined by Gong & Wu (2011) measured as net income divided by total assets, minus the mean ROA of firms with the same 2-digit SIC code in Finland. ROA 2 measured similarly but with more traditional EBITDA to Total Assets.  $\Delta$ Spread is measured as annual change in BAA-Euribor spread fetched from Federal Reserve St. Louis database and Eurostat respectively. PE Experience is measured as the natural logarithm of number of deals made by the PE before the deal. Firm Size is the natural log of total assets. Asset Tangibility is measured as property, plant and equipment divided by total assets, except cash. CEO Age is the incumbent CEO's age at the deal announcement date. Firm Age is the date of incorporation in Bureau Van Dijk's Orbis database until buyout transaction. All monetary variables are adjusted for inflation to 2006 euro value based on CPI gathered from Statistics Finland. Huber-White's heteroscedasticity-consistent standard errors are used to calculate the z-statistics (reported in second column). The last column includes variable influence factor (VIF) score for each individual variable in the full model.

	Predictive sign	Model (1) Base	Model (2) Agency	Model (3) Operational	Model (4) PE Experience	Model (5) Full	VIF					
Intercept		-9.04	-2.53**	-9.87	-2.68***	-8.84	-2.48**	-9.59	-2.61***	-10.01	-2.75***	
Cash Flow	+			-0.14	-0.27					-0.25	-0.40	1.18
Leverage 1	-			-1.81	-1.62*					-1.33	-1.23	1.21
ROA 1	-					-0.02	-0.03			-0.08	-0.14	1.20
ROA 2	-					-0.06	-0.51			-0.02	-0.22	1.10
PE Experience	+							0.52	1.76**	0.42	1.61*	1.14
$\Delta$ Spread	-	-1.69	-1.44*	-1.85	-1.52*	-1.57	-1.35*	-1.95	-1.69**	-2.06	-1.81**	1.11
Firm Size	+	0.31	1.53*	0.34	1.66**	0.30	1.44*	0.26	1.28*	0.28	1.31*	1.39
Asset Tangibility	+	0.50	0.47	1.36	1.09	0.61	0.54	0.98	0.79	2.01	1.41*	1.31
CEO Age	+	0.07	2.55***	0.07	2.58***	0.07	2.52***	0.06	2.24**	0.07	2.28**	1.25
Firm Age		-0.01	-0.29	0.00	-0.18	-0.01	-0.30	0.00	0.15	0.00	0.10	1.48
N		91		91		90		91		90		
Wald Chi2		11.57**		14.56**		12.06*		15.28**		19.81**		
Pseudo R2		0.118		0.147		0.116		0.150		0.176		

Significance levels are denoted by: \*p<.1,\*\*p<.5,\*\*\*p<.1 (one-tailed test for variables with predicted signs, two-tailed test otherwise).

## 6.2 Role of top management in buyouts

In this section the paper begins the qualitative part of the study and analyse the cases collected as described in 5.3. To start off, first is looked into what kind of general attitudes do buyout funds have towards top management team in the buy process and whether there exists assessment practices that can be said to be established. From this, the study will build an initial framework, which will provide context for further theory-building and to which will be referred to in following research. Similarly to Bloom et al. (2009) a predetermined scoring grid<sup>27</sup> is used to analyse the answers coded in ATLAS.ti qualitative data analysis software.

To start off, the general attitude towards management is seen as slightly more positive than negative. Often times the top management is seen as a central operational resource and the business plan is heavily crafted together with the current management. Likewise, essentially everyone reported to include at least some kind of material of top management for their investment committee although its weight in their eyes is undefined.

Out of the 12 cases only 2 explicitly said that the target company management is in no way a criteria. These two both thought that investment could be made even with a poor management given that other fundamentals are fine. For them the management is still important, but seen as sort of a separate resource that can be found at sometime during the process. This contrasts the other 10 cases, where management is seen either as an investment criteria or a significant upside in a potential target company.

Coincidentally these two funds are slightly bigger in size, perform slightly bigger buyouts and in general base a significant part of their strategy on acquisitions compared to their peers. These findings fit the Chowdhury & Lang (1993) study as well as Bacon et al. (2008) noting that employees may have more specific skills in growing (and thus often smaller) companies with more value tied to people.

Though it was perhaps not expected to find some buyout companies not having management in the centre, the lack of clearly defined management due diligence practices was not really surprising<sup>28</sup>. Only 2 companies in the sample were perceived to have a coherent idea of how to assess the managers and coincidentally, these two companies' investment sizes were again on the lower end of the spectrum. They are also companies with less experience as measured by the amount of deals made prior to interview date.

The initial idea that more acquisition repetitions would reflect in established assessment practices due to these practices forming in path-dependent way hence do not seem to get justification. An explanation to this could come from the fact that investment sizes follow fund sizes (Humphrey-Jenner, 2012), which in

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<sup>27</sup>Presented in appendix table 21

<sup>28</sup>The appendix 21 describes the meaning and measuring of having "established practices".

turn tend to increase as the amount of track (Kaplan & Schoar, 2005) or in this case deals increase. In other words, as previous results showed bigger companies are not as dependent on the top management as smaller ones and hence only occasional assessment of a CEO is needed. Indeed, this was also the perception demonstrated by one of the respondents with 10 years background in private equity:

*"I believe that if Finland had more bigger companies there would also be more turnover with the CEOs as they are less dependent on a single person. Coca Cola would still perform very well no matter who was in charge. I think - and I believe it's difficult to dig from any data - but my own observation is that the smaller the company the more dependent it is of a single person and it's often the case that only after the company grows bigger can the CEO be changed. It's rarely the case that in a small company the CEO successor question would be completely figured out."*

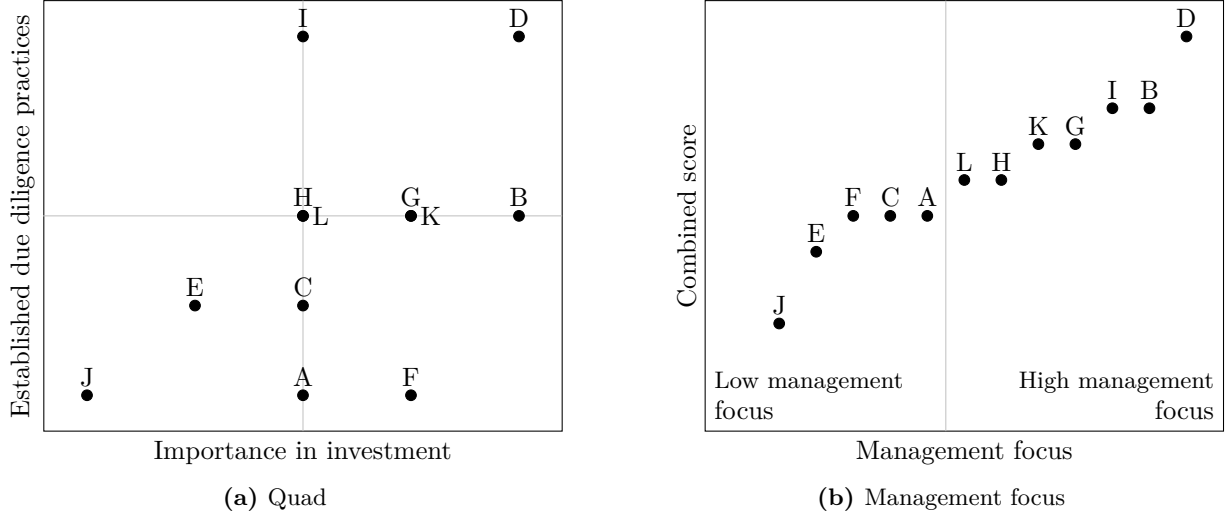
Among the cases analysed this was a common theme as multiple funds (Funds A, B, E, H and I) seemed to take the view that since Finnish company-base is characterised by the existence of small- and medium-sized enterprises the management in a company is often very respectable of the performance of the company. This is representative of the standard agency model by Bertrand & Schoar (2003) together with resource-based theory, where the incumbent manager either enables or hinders the performance of the company (Petaraf, 1993). There hence appears to emerge a contrast among funds that focus on smaller companies versus those that perform bigger buyouts, which was already apparent in the multivariate analysis in section 6.1.

In figure 5 panel (a) is presented this first portion of interviews as a fourfold table with management as an investment criteria plotted against established practices. The companies in top-right can be said to have a management-centric approach to their investments, whereas the companies in bottom-left see the CEO as a resource that can be replaced as needed. On the other hand the ones in bottom-right, mainly Fund F, are those that have very established due diligence processes and can be said to be very thorough in their investments, but still view CEO as a plus at most and focus on other fundamentals in the potential target company.

By combining the results above it becomes possible to divide the cases into roughly two groups; Those with high managerial focus and those with low managerial focus shown in figure 5 panel (b). Table 11 shows a simple small-n non-parametric tests for fund characteristics between ones that have a CEO central approach and those that do not thus confirming the findings above on size-differences among management focus. Various size variables e.g. assets under management and number of investments in current portfolio indicate that smaller funds put more effort to the management in their investment decisions. Also in-line with this proposition, but perhaps otherwise surprisingly, the ones with higher score tend to have fewer employees. Still, this coincidentally fits Smart (1999) findings who also noticed

**Figure 5:** Framework for managerial focus

In subfigure (a) is plotted the respondents answers on investment criteria against answers on due diligence practices. The scores are given based on predetermined scoring grid as shown in appendix 21. The cases in the top right corner can be said to have very human-oriented approach to its investments, whereas the bottom right ones see the role of management insignificant compared to other criteria. The subfigure (b) depicts the division between low and high managerial focus funds as based on their combined score on the scoring grid in appendix 21.

**Table 11:** Non-parametric tests on differences between management practices

This table shows the difference in fund characteristics between ones who have a CEO centric investment approach compared to those lacking one. The division is based on figure 5 panel (b). Low score means that the combined score for management being an investment criteria and establishment of management due diligence practices are less than 5, and high score means the combined score is higher than 5. The scores are based on grid shown in appendix 21. The last column shows significance for non-parametric Mann-Whitney U-test for equality of groups.

Fund variable	High score (N=7)	Low score (N=5)	Mann-Whitney U-test
Assets under management (EURm)	352.0	693.2	2.01**
Employees	8.4	15.0	2.20**
Investments in current portfolio (#)	6.7	13.0	2.20**
Total investments to date (#)	23.6	42.3	0.74
Fund age	18.3	17.8	0.00
Number of funds raised to date	8.0	6.0	0.88

Significance levels are denoted by: \* $p < .1$ , \*\* $p < .5$ , \*\*\* $p < .1$  (two-tailed test).

that bigger funds spend less time evaluating management (even though his focus was explicitly on venture capital). Smart's (1999) theory is that larger funds tend to do a higher frequency of deals per partner and therefore spend less time on human capital factors. Now, this initial finding was heavily present in the quantitative section 6.1 of the study as well since this study noticed more experienced private equity funds being more lenient in replacing the CEOs in larger companies. Hence the first propositions regarding the role of top management in Finnish buyouts:

*Proposition #1: For smaller buyouts the role of management is emphasized and is often an investment criteria*

*Proposition #2: For medium and larger buyouts the management is important, but not necessarily critical for investment*

### **6.3 Formation of replacement decision**

As found in section 6.1 CEO is replaced in 32% of buyouts conducted in Finland. This figure was coincidentally repeated in couple of cases as the respondents brought up the rate of turnover in their own deals<sup>29</sup>. In this section a more qualitative approach is taken on the reasons for CEO replacement digging more into the CEO change, the reasons behind it, under what circumstances funds replace it and whether or not the replacing CEO is assessed in any way differently. The findings here support the results in section 6.1 and vice-versa.

#### **6.3.1 Replacement and related risks**

As shown in previous section many funds consider management as an investment criteria. Indeed in general Finnish private equity companies are rather hesitant to replace the CEO and as some funds put it, if they end up in a situation where they have to replace the CEO the investment has likely failed. Two funds explicitly mentioned that their own empirical findings suggest internal rate of return of the investment being almost always lower in companies where they've had to replace the CEO. This is similar to what Meerkatt and Liechtenstein (2010) found in their own study about performance of private equity companies who focus on the evaluation of the CEO.

At the same time, almost all funds acknowledged that some risks, mainly cultural and motivational but also costs, entail a CEO replacement. Funds F and J reported the biggest risks being cultural. Often times the incumbent CEO has managed to build a certain culture in the company that the new CEO should then fit. Funds A, D and E on the other hand concentrated more on the risks that relate to the CEO itself, and more specifically his motivation. They had both reported having bad experiences of CEOs who had only stayed in the company for very brief period of time despite them emphasizing their motivation before-hand. Only 1 fund mentioned the time and cost factors of replacing a CEO similarly to Warner et al. (1987).

Following the previous findings there's a distinguishable difference in the leniency of CEO replacement

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<sup>29</sup>For example, Fund C mentioned that: "... there are situations where CEO is changed. I would say in around 20-30% of our deals the CEO is indeed replaced..."



based on the size of fund as supported by the multivariate analysis and initial framework presented in table 5. Those funds with low managerial focus and that predominantly invest in larger companies or employ various buy & build strategies<sup>30</sup> have a much more lenient approach to the CEO. In contrast, funds that concentrate on smaller buyouts tend to focus more on the CEO itself and would prefer not to replace him as the CEO is often a significant owner holding lots of intangible value, unless it's clear that the incumbent CEO is not the one taking the company to next level *and* the CEO itself is willing to step down.

### 6.3.2 Timing of replacement

The funds generally agree that the CEO should be replaced as early as possible yet still feel that it's always done too late. This was apparent in one-third of the cases and also supportive of Meerkatt and Liechtenstein (2010) on similar findings. As fund B put this in the context of lessons learned:

*"One thing we've learned through the hard way is that if there's even a slight suspicion that the incumbent CEO is not the right one for this company, the earlier you make the replacement decision the better. The longer you wait well... it doesn't really get better."*

The implication of this is that there exists a certain point where enough evidence has accumulated through deteriorating operational or financial performance ultimately triggering the decision to replace the CEO. As mentioned in two cases when a CEO is replaced too late there occurs "hassle costs" or costs related to having to replace the management during investment period (e.g. similarly to Warner et al., 1987). In fact, Guo et al. (2011) found that operating cash flows are almost always higher for companies who replace their CEO very shortly after the buyout, which was likewise supported by a respondent in Fund I:

*"...It [replacement decision] likely often happens pretty quickly in those cases where IRRs have been good and in those cases where replacement takes a while the returns are likely slightly lower. Hence it's sort of an indicator of how good the investment has been..."*

Interestingly, there was distinct difference regarding the point at which the CEO gets replaced based on where the deals are sourced from. For smaller buyouts, which do not rely on intermediaries such as investment banks in their sourcing as much as their larger peers, the CEO change is often already agreed during the due diligence phase. In these cases the CEO is often also the owner of the company and might

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<sup>30</sup>In buy and build you buy an existing platform and then rapidly grow the company by buying various smaller add-ons. (Smit & Maeseneire, 2004)

be selling on the presumption that he will step down once the deal is completed. In addition, during the due diligence process the fund also gets a good idea if the CEO is suitable for the desired business strategy through their heavy involvement in for example business plan workshops.

In contrast, those - usually larger funds - who source majority of their deals from investment banks or auctions (for example funds C, E, G and J) the access to the management is never complete until after the deal has been completed. Hence, the assessment may be very limited resulting these funds replacing their CEO only shortly after the ownership has been transferred. Fund E explains this situation as follows:

*"... Especially if the CEO comes from sort of outside [i.e. the fund does not have an established relationship with him] and you only meet him during the acquisition negotiations. In these cases it's not possible to discuss with anyone below the management and his assessment becomes more shallow compared to immediately after when we become the owners."*

This is an important distinction as it could suggest alternative explanation for higher CEO turnover in bigger buyout funds. As the CEO cannot be assessed during the due diligence phase, it's likely that the business plan cannot be crafted or designed in close conjunction with the management team. This in turn may lead to disagreements and conflicts among the target company and buying fund after the deal has been completed. Furthermore, Fund E continued to note that CEOs - like people in general - have a tendency to give much rosier picture of themselves than they actually are during the auction process. Also, Fund C notes that the management presentations given during the process are often quite well practised as there's a financial advisor involved and the picture that the CEO gives tends to be overly pleasing.

- *"CEOs, like people in general, tend to talk about themselves in a very positive light. For that reason only part of the negative things, let's say 2/10, emerge during the buy-process. After we have replaced the CEO the other 8 negative things emerge. Preventing this is difficult as it's rather universal phenomenon..."*
- *"Usually they [management presentations] are quite well rehearsed especially if it's an advisor-lead process... But if there's no advisor involved you can quite well see who is outside their comfort zone as they need to tell things to investors they've never thought before."*
- *"... Everybody says that they are extremely motivated [for the CEO position], but what that actually means differs a lot. For example, if a subordinate calls in the evening does he actually answer?..."*

This sort of window-dressing in companies is not really anything new research-wise (e.g. Sias & Starks, 1997) but the proposition that it may extend to CEO behaviour in sort of "CEO window-dressing" is interesting. Hence, the propositions regarding timing of CEO replacement:

*Proposition #3: For all buyouts the consensus is that CEO is always replaced too late*

*Proposition #4: For bigger buyout funds the high CEO turnover culminates to the the limited management access in the auction process*

*Proposition #5: In auction-led buyouts the CEO is more prominent to window-dressing behaviour*

### 6.3.3 Reasons for replacement

The statistical analysis on CEO turnover presented in section 6.1 gives good indicator under which kind of *circumstances* the CEO is replaced. It is, however, very superficial in the sense that it does not reveal whether or not the replacement is voluntary or hostile. From the cases three distinctive reasons emerged for the CEO replacement<sup>31</sup>:

- Specific knowledge required as predefined in business plan, e.g. international expertise (Apparent in cases A, C, D, E, G, H, I, K)
- Incumbent CEO is retiring (Apparent in cases C, B, H)
- Incumbent CEO is a serial entrepreneur wishing to make an exit (Apparent in cases A, E, L)

This would suggest that CEO is most often replaced as a way to implement operational changes. In other words, the CEO needs to fit the predefined business plan in order to boost growth and/or margins and if this is not the case a replacement will be sought. In the perspective of earlier section, if a company is sourced through an intermediary this would mean that the management is little involved in the business plan hence leading to higher CEO turnover at the deal completion This is not to say that the previous findings in the statistical analysis are false, but it is a factor that is extremely difficult to correctly capture in a quantitative variable to be used in regression form. Furthermore, in many cases the CEO is replaced simply because he's getting closer to retirement, which was also supported by the the analysis in section 6.1. Finally, in many cases the company has grown so big that the serial entrepreneur is no longer capable or willing to lead it forward and hence is being replaced.

*Proposition #6: For all buyouts the misfit to business plan is a major reason for CEO replacement*

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<sup>31</sup>See appendix 24 for relevant excerpts

### 6.3.4 Other replacements

Though CEO was in the focus of all companies the respondents also often brought up the replacement of CFO in the context of required replacements. Six funds - C, E, F, G, I, J and K - all considered CFO in their investment decision<sup>32</sup>. For example, Fund C commented that:

*"... In order for the board to get timely information it is often the CFO who we need [for assessment]... Many things are linked to CEO and CEO is more difficult to change compared to CFO. For CFO the turnover happens certainly more often. In many cases this is because CEO is also investing..."*

This would strongly suggest Siegel et al. (2011) findings that the CEO and CFO may be both closely involved in dealing with the financial problems of the firm, creating a sort of cleavage between them and the rest of the team. It would hence suggest that in a buyout they are actually both assessed in tandem. Furthermore, the reason for this is also rather intuitive: since CFO does a lot of reporting towards the buyout fund the new owners want to make sure that they can monitor the progress of their investment in a precise and timely manner. For example the excerpts from funds E and I:

- *"... Finance people [referring to CFO] are essentially always replaced because when we seek growth the approach often needs to be changed"*
- *"... This is because CFO will supplement CEO. The role of CFO in our portfolio companies is critical..."*

Indeed, Acharya & Kehoe (2008) found that in 33% of cases the CFO was also replaced within the 100 days of investment. Additional reasons for this could be that the CFO may lack a broader relationship with other financial backers such as the banks and need to act in the interests of all (Siegel et al., 2011). Still, however, there was no cases where a fund would focus only CFO and *not* on CEO. CEO was essentially always found more important than the CFO<sup>33</sup>, something that was also found by Bertrand & Schoer (2003) in his study on CEO and CFO management styles.

*Proposition #7: In addition to CEO the CFO is in majority of cases also in the target of assessment*

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<sup>32</sup>Excerpts in appendix 25

<sup>33</sup>As Fund C put it: "... I will probably regret this but in majority of the cases CEO matters more than CFO..."

## 6.4 Management assessment

In this subsection the paper starts looking into *how* the management assessment is performed in buyout funds. The terminology and methods used (interview, work samples, reference checks, document checks and job analysis) in assessment are based on Smart (1999) study, which in turn are based on rooted psychology literature. The qualitative analysis is started by briefly going through the relevant observations regarding each individual method and afterwards make relevant propositions. As found in section 6.3.4 it should be noted that although every private equity company reported to assess the CEO, many also include other members, mainly the CFO, in their evaluation. Furthermore, depending on the size of the company, sometimes there is no real existing corporate governance mechanism in place, in which case only the entrepreneur may be targeted. Full excerpts for chain of evidence have been put in the appendix 26.

### 6.4.1 Assessment methods

#### Interviews

In general, for many respondents these are the first kind of tests for the top management team when evaluating a new deal. This was also present in every analysed case, which weren't surprising considering Milia (2004) findings that interviews are used in 97% of management assessments. Initially, these are conducted very early on in the process and is more of a screening method to test whether or not to move the case forward. As an example, two of the interviewed funds said to have as much as 5-10 interviews with the top management team before considering whether or not to take a next step with the investment. Additionally, Fund C gave an example of a potential investment, where based on the initial interview with the target management the case was dropped due to lack of interest in leading the company. Yet these interview-like discussions tend to continue thorough the purchase process. For example this excerpts from Fund A:

*"We've known the management from quite a while before the data room has even opened... After a week and a half [after opening the the data room] we invite the entire management team for interviews. At that point, we have a long list of questions... A good way to do this [the interview] is by applying slight pressure on the management while focusing on the business, maybe even sort of aggressively grill the management... It's important to see how they react because it reveals things..."*

Indeed, two of the funds (Fund A and F) reported to put the management deliberately under a pressure test to see how they act under stress. The benefit of this, as seen in above excerpt, is that in these situations they may reveal something about themselves or the business they really hadn't thought. These

seem to happen relatively late on the buy-process when a business plan has already been drafted and due diligence is well under-way. Also, both of these funds reported that at some point they tend to gather the entire management team under the same table and put them under a difficult situation to e.g. talk about the common view or goal of the company and see if they are able to resolve internal conflicts.

There was also a distinctive division between funds that use informal meetings with the management and those that prefer formality. Funds D, F, G, and J explicitly mention having informal meetings with the management that in majority of the cases are lunching or grabbing drinks with them. Though no sports activities nor other forms of entertainment were reported, one fund reasoned the benefit of these informal meetings being that when the managers are relaxed they *"tend to easily tell all sorts of things, which you can then grab into in a good way"*.

### **Reference checks**

Reference checks were also done in every single case but only after the case was at least slightly of interest. This is because in multiple cases (for example Cases A & E) the references checks are based on information found on CVs, which in turn were reported to be available after the opening of data room. There was, however, slight variation in who was called and in what sort of situations. In most cases the references were checked from people "above" the management team for example ex-investors (if any) or any previous superiors from past positions. One fund also relied calling to colleague and one even mentioned hearing the opinions of other advisors involved in the due diligence process.

Only two of the cases (Cases B & G) reported calling a client of the company. This was for two very different reasons: Fund B called not explicitly to get info on the management team, but the target company itself while acknowledging that if the client said good things about company it often indicated that something is being done correctly in the management:

*... More often we call the customers and ask their opinion of the company and yes specifically the company, not the people [of the potential target company]. If the customer says good things about the company, then the management likely knows his stuff. Sometimes they may of course say a thing or two about the management as well...*

In other cases the client was called because the fund saw the buyout process rather sensitive and an insider getting aware of the process could potentially throw a spanner in the works. Fund F also mentioned to refrain from calling references from a company insider. Indeed, it would seem that in most cases the references are checked from clients and/or ex-investors or superiors.

As touched in section 6.2 it seems that the general consensus among funds targeting smaller companies in that a good company track is also representative of the capabilities of the management. It hence carries a

lot features from the upper-echelon theory (Hambrick and Mason, 1984), where top managers essentially shape the company, which when twisted the other way around, implies that companies are essentially just reflections of their managers.

- *"... The results [of the management] is visible in a small companies and in the company's life..."*
- *"Yes I agree, the entrepreneur's CV is essentially the company. If the company is doing well, the entrepreneur is certainly doing something right..."*
- *"... We want to see that the manager has done the same thing before. That usually tells a lot about him..."*

Hence the proposition at this point:

*Proposition #9: For small and medium buyouts good (bad) management reflects in good (bad) company*

### **Document checks**

Based on the cases this is done in tandem or prior to reference checks as CVs give a good indication of who could give references about the management. Still, very few funds put any real emphasis on document checking and if any documents were checked, it was basically always only the CV of the management. It was by far one of the most insignificant methods of assessment.

- *"... We do not really reflect our views on documents..."*
- *"No we don't systematically check credit reports nor criminal records... It's [document checking] on the CV-level if anything"*

The argument often heard was that if a successful entrepreneur or CEO the company manages to get on the radar of a buyout fund he's likely already doing something right. Hence, the biggest reported reason for neglecting this assessment method is that the CV frankly doesn't matter due to the company itself being a proof of record. As Fund F put it, *"many entrepreneur's don't even have a CV because they've been entrepreneurs their entire life"*.

Press releases and articles are in majority of cases not deliberately checked. Only funds F, E and G reported to look into these in their due diligence. Likewise, credit reports and criminal records are only checked in very few funds. Funds D and E reported to perform these checks, while Fund H noted that these are part of their legal due diligence and hence not performed by themselves.

Only one fund reported having checked the degree certificates of the CEO and that was for an exceptional

case where the CEO was repeatedly emphasizing the amount of his degrees with a PhD from slightly unorthodox university.

### **Work samples**

With work samples this study refers mainly to workshops, management audits and management presentations, similarly to Smart (1999). Based on the respondents answers these are often done fairly late into the due diligence process after the target company has passed the initial screening and after the private equity company has made tangible commitments to the investment. Often times external advisors are already hired when these work sample methods are utilized. All these methods relate to the process of figuring out what the management actually knows about the business, industry or customers.

Generally speaking, three distinctive ways of assessing these elements raised from the cases. First, funds D and I heavily utilized workshops in their due diligence process. These involved multiple sessions with the target management, where they assessed the current markets and what strengths/weaknesses the company has to compete there. In addition in the workshops various value creation strategies are crafted that will ultimately be pursued. These funds reported that during this process they get a feeling of the management's know-how and whether he is suitable to execute this business plan.

*"We do a lot of workshops with the management and owners, who often tend to be the same people. The concept includes several workshops before forming the ultimate investment decision, where we form the business plan together i.e. what we're planning to do and how. In this process the management is heavily involved and you can really examine his capabilities and willingness for a change ..."*

Second, Funds E, F, I and J preferred management reviews in their due diligence. These are often conducted by external consultants and usually performed by funds with a tendency to replace the CEO. The funds that use this are characterised by the lack of an established management practice and/or don't really look it as a criteria in their investment decision. It's also rarely conducted systematically.

*"In one company we're in the process of starting a management review with an external consultant. Those [management reviews] are utilized a lot also in the investment process ... Yes it [the most important method] is management review. That being said, however, it is only one input and actually spending time with the management is important as well."*

Finally, funds C and G reported the use of management presentation as a way of figuring out the expertise of management. The funds mainly look at the management's business knowledge, how they see their competition and the chemistry between management members.



## Job analysis

Job analysis is a slightly ambiguous term but refers to the process of figuring out what expertise is required for the venture to succeed in the first place (Smart, 1999). Not surprisingly, it's usually made around the same time as the business plan since many respondents reported that it's not until this they realize what expertise is actually needed.

- *"It is [the required know-how] thought while we're doing the business plan along the pluses and minuses. We look at what kind of experience the company already has and what kind of experience is missing in order to execute this business plan."*
- *"If we make consolidation [as a business strategy] then we need a CEO with some mergers and acquisitions experience. If we aim to boost exports, then we need a CEO with international experience..."*
- *"We don't really write them [required expertise] down, but we do reflect it to the business plan and see whether this is a right person capable of executing it. It happens during the process, more or less."*

However, in many cases this analysis is rather unsystematic. The required expertise is rarely something that's written down anywhere and is more of stream of thought. There appears to be a slight difference among those funds with high managerial focus compared to those who mainly see management as a resource. For example, Fund F noted that *"... If we have to start thinking what kind of CEO the company needs it probably isn't our kind of a case..."*

### 6.4.2 Assessment focus

Next, this paper will look at *what* is actually looked in the management. The cases reveal that the buyout funds essentially look at two distinct traits: chemistry and track record. Perhaps surprisingly, in vast majority of the cases (7) the respondents emphasized the need for good chemistry and the fact that the people involved get along well. And not just between the individual people in the management team, but more importantly between management team and the buyout fund. As fund H notes:

*"... we form an opinion on their professional competency and development areas. But we also put lots of emphasis on how we get along. If we don't get along now, we certainly don't get along post-investment either.. "*

In the high managerial focus funds this mismatching chemistry can even act as a deal breaker. When asked Fund F about what could prevent a deal from completing she immediately and without hesitation

answered not matching chemistry with the CEO. As a way to assess this Fund F reports putting the management team on same table:

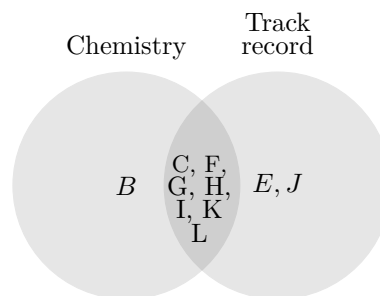
*"... What we often look in a company is how the core team, two or three persons, work together. In other words, how their chemistry matches... As one example, when we were merging two companies we simply called both management teams on the same table to see how they would fit together... No matter how experienced the CEO is, if the chemistry doesn't match we will not make the investment."*

As much as chemistry is looked into, a private equity houses also requires track record - a more hard trait apparent in also 7 cases. Considering buyout funds invest with the presumption that they will achieve their business plan they need to be sure that the management team and CEO is such that it can be executed. Fund G notes:

*"First and foremost we want to see track from the management team. They've managed to do the same trick before and that this same track record supports what we want to do with the company in the future... It requires prior experience from the CEO, which is rarely found from a person who has been doing mainly Finnish business and then attempts go international [talking about a case where they expanded Sweden]. He basically needs to have international sales and/or marketing experience which then enables him to succeed in the CEO position"*

**Figure 6:** Venn diagram on assessment focus

Based on the respondents answers this Venn diagram depicts the bisect of their assessment focus. In very few cases only chemistry or track record as a standalone mattered. Instead in vast majority of cases the interviewees mentioned to look at them both in tandem.



Above Venn diagram further reflects interesting contrast between smaller and larger funds. The cases that only mentioned looking at track record (E & J) were clearly bigger funds, whereas the only fund with chemistry as a focus was on the smaller scale. Other traits mentioned in minority of the cases were leadership- and social skills (2 cases), cultural fit (2 cases) and proactiveness (1 case).

These findings are interesting since Kaplan et al. (2012) concluded in his widely-cited study that some CEOs may endogenously match with different types of companies while agreeing that this kind of chem-

istry is difficult to capture in a natural experiment. According to the answers given by the respondents, it would indeed seem that this is at least partly the case. Chemistry was also something that was pointed out by Teerikangas (2012) in her study on human capital in private equity. Hence the proposition:

*Proposition #9: For all buyouts chemistry is a big factor in the CEO decision but only in the presence of other substance skills*

### 6.4.3 Intuitiveness in assessment

Before moving on to final section, a very big theme emerged from the analysis. Though not necessarily surprising considering the nature of the subject many respondents mentioned the presence of intuitiveness, or feeling, in their assessment. This was especially prone regarding the final investment decision and was found in cases B, D, E, F, G, H, I. The below excerpt from fund B describes this mentality well:

*"For a negative decision [of whether or not to invest in target company] any fact-based information is enough. If none such exist then the positive decision will be made with a feeling. You can't calculate the future and it's especially funny to see young business graduates calculating returns with three point decimal precision when in reality none of the numbers are actually known... A positive decision is based on a feeling and that's when personal meetings [with the CEO] are essential."*

Now, of course the difficulty of capturing the management's value is nothing new research-wise (see e.g. Smart 1999; Garman & Phillips, 2006; Harcourt & Wood, 2007; Wood & Wright, 2010) yet this still reinforces the fact that despite the availability of data and tools a lot in CEO selection is still based on subjectivity as noted by e.g. Bambacas & Patrickson (2009) and Teerikangas (2012). Alternatively, this could simply prove that the funds are not aware of all the methods of assessing the CEO. Especially if a company is of high growth, it could be really difficult to get a sense what is even required from the CEO in the due diligence phase. The funds that did *not* explicitly mention subjectivity (Funds A, C, J) had in all cases a low management focus (as defined in 6.2) implying that the management is of lower importance to them and that their investment decision is more based on the analyzable data in addition to consultants opinions. Hence, the final proposition:

*Proposition #10: For buyouts with primarily high managerial focus a lot is based on intuitiveness, or feeling, they get from the management and the company*

## 7 Discussion of results

In this section the results are discussed by looking into the emerged propositions in relation to existing literature and then finally forming conceptual frameworks as a way to tie together the findings on the subject.

### 7.1 Discussion of propositions

The purpose of this thesis was to shed light on the role of top management in Finnish private equity buyouts. In order to discuss earlier results in clear and precise manner the propositions emerged from the cases have been divided into three central themes. This first theme is related to the initial framework on the role of top management with the proposition #1-2 regarding the categorical division that guided the research and analysis. The second theme with proposition #3-6 regards the formation of replacement decision. The final theme regards the actual assessment of CEO with proposition #7-10 belonging to that group. Table 12 summarises the propositions.

Regarding the first theme, it seems that top management is important in Finnish buyouts. There, however, does exist difference in *how* important it is as smaller buyout funds targeting smaller companies report management as deal-breaking criteria more often than their larger counterparts. Such funds also tend to have existent assessment practices in-places guiding their evaluation of CEO. This finding is consistent with studies regarding management as an enabler of venture success (e.g. Cooper et al. 1994, Crook et al. 2011, Nadolska et al. 2014) though previous literature hasn't really contrasted smaller and larger buyouts. An explanation for this is that Finnish buyouts, on average, are rather small as shown in section 2.4.2 allowing noticeable differences to emerge among extremes.

The second theme touches the replacement decision with topics there generally finding a place in the literature. Meerkatt and Liechtenstein (2010) found that CEO is often replaced too late, which was heavily present in this paper's cases as well. However, a central finding regards the higher CEO turnover of more mature buyouts as found in section 6.1, with an explanation culminating to sourcing channels characterised by auctions and intermediaries. Though for example Gong & Wu (2011) found positive relationship between experienced private equity companies and CEO turnover they left the explanation for this correlation completely open. Furthermore, CEO window-dressing is phenomenon related to Goel & Thakor (2008) theory where CEO tend to display a specific set of skills that are in favour of him climbing up the corporate ladder, or in this case, the M&A process. The behaviour is also recognized by Kaplan et al. (2012) who notes that CEOs may try to game interviews in a way that will benefit them.

Finally, the CEO tends to be replaced if he doesn't seem capable of executing the business plan as set by

**Table 12:** Proposition groups

Role of top management	
Proposition #1	High-managerial focus buyouts tend to be smaller funds targeting smaller companies with management being an investment criteria
Proposition #2	Low-managerial focus buyouts tend to be medium- and larger-sized funds with management being essential, but not necessarily an investment criteria
Replacement decision	
Proposition #3	For all buyouts the consensus is that CEO is always replaced too late
Proposition #4	For bigger buyout funds the high CEO turnover culminates to the the limited management access in the auction process
Proposition #5	In auction-led buyouts the CEO is more prominent to window-dressing behaviour
Proposition #6	For all buyouts the misfit to business plan is a major reason for CEO replacement
Assessment	
Proposition #7	In addition to CEO the CFO is in majority of cases also in the target of assessment
Proposition #8	For small and medium buyouts good (bad) management reflects in good (bad) company
Proposition #9	For all buyouts chemistry is a big factor in the CEO decision but only in the presence of other substance skills
Proposition #10	For buyouts with primarily high managerial focus a lot is based on intuitiveness, or feeling, they get from the management and the company

the buyout fund. Plenty of studies have recognized that CEO is replaced in order to implement operational improvements (e.g. Lehn & Zhao, 2006; Gong & Wu, 2011) and although it was not supported by the statistical analysis in 6.1, the perspective emerged from the cases was slightly different in the sense that the post-deal CEO only needs to ensure that the performance will improve in the *future*<sup>34</sup>. These findings combined suggest that further research regarding CEO turnover should extend the period of which CEO replacement is calculated from one year as it is now (e.g. Guo et al., 2011; Gong & Wo, 2011) and include a different approach to capture the forward-looking concept of operational performance where CEO is changed due to misfit in business plan.

The last theme regards the management assessment. There is slight indication that management reviews are more often done by low managerial focus funds that utilise advisors in their due diligence whereas

<sup>34</sup>Besides, Murphy (1999) note that CEO age is more important determinant than performance, which this paper fully supports

high managerial focus funds tend to use workshops with management highly involved as their access to them is less limited. Although no real notable best practices regarding assessment methods were found, other relevant discoveries find support from literature. When talking about management assessment respondents naturally brought up assessing CFO in addition to CEO. The finding is not exactly surprising as in management related literature CFO has often been studied alongside with CEO. E.g. Bertrand & Schoar (2003) similarly broke down management into "CEO", "CFO" and "Others" while Acharya & Kehoe (2008) looked at CFO turnover in addition to CEO turnover. Still most notably, the findings would suggest that the view Finnish buyout companies have on top management represents a standard agency model approach (Bertrand & Schoar, 2003) with roots tightly in the upper-echelon theory by Hambrick & Mason (1984). There's a implicit consensus among interviewees that for each different business plan, or scenario, a certain set of skills are required from the management, which calls for matching CEO capable of forming the company as set in plans (e.g. similarly to CEO styles in Bertrand & Schoar, 2003). Hence, by agreeing that the management does indeed possess various skills required for success the general view leads to resource-based theory (e.g. Newbert, 2007) where competitive edge, followed by returns, start with superior management. (e.g. Crook et al., 2011). Furthermore, the findings in this theme also suggest that endogenous factors i.e. chemistry between buyout and target company plays a central role in CEO evaluation as e.g. noted by Kaplan et al. (2012) in their widely cited private equity study on CEO characteristics.

## 7.2 Conceptual framework on the role of management

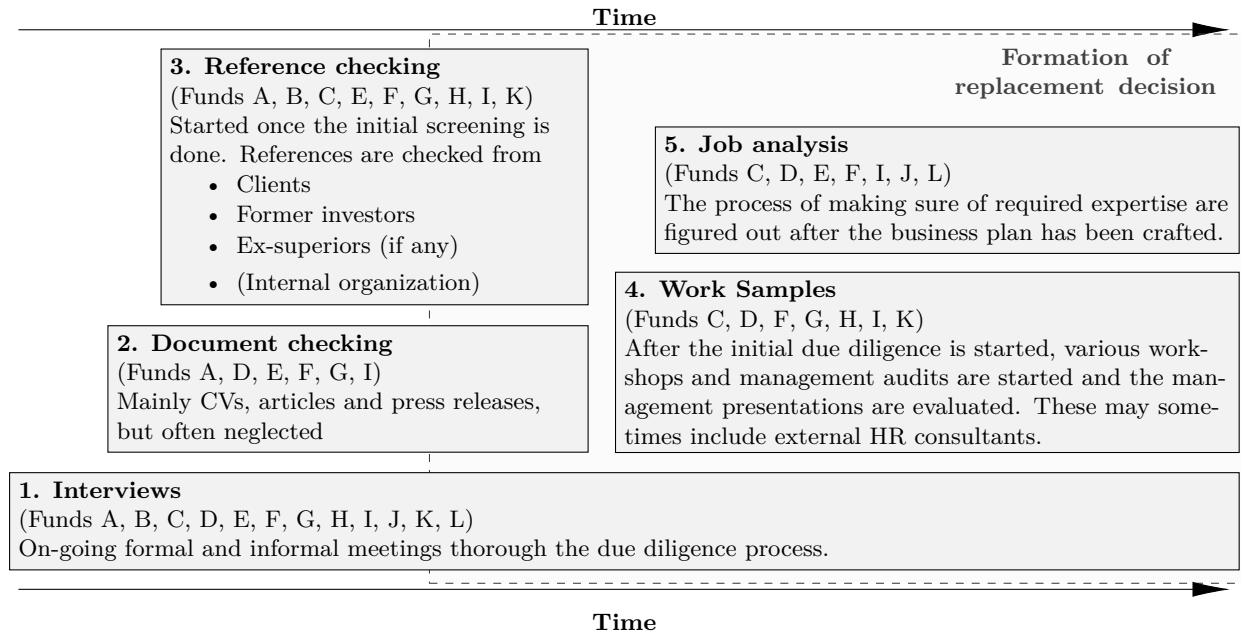
Before moving on to final section and concluding this study, central broader concepts from the findings are summarized as suggested by Yin (1994). To start off, one central research question was to figure out how exactly is the CEO is assessed. Although the cases do not reveal any distinctive differences between assessment methods a conceptual pattern regarding the evaluation *process* emerged from the cases.

This pattern could be depicted as a framework presented in figure 7. Very early on, many buyouts start their analysis by simply interviewing the management team either in formal or informal setting as a sort of first-phase screening. Then, if the investment case is deemed attractive enough an initial due diligence phase is entered. Here, the private equity professionals perform reference checks towards clients and/or ex-investors receiving feedbacks of company and/or CEO basing the view on upper-echelon theory as explained in previous section (Proposition #8). Some documents such as CVs, articles and sometimes credit reports may also be checked, but more rarely. In this phase, if the CEO does not seem fitting and it's not intermediary-lead process the case is likely dropped as the investment thesis is still not strong enough to justify the hassle of replacing the CEO.

The cases then revealed a sort of second phase in the due diligence. In this phase funds will start to

**Figure 7:** Conceptual framework of assessment methods

Below depicts a framework of various management assessment methods based on respondents' answers. The methods are based on psychological literature collected by Smart (1999). Appendix 26 shows excerpts of respondents' answers on assessment methods.



get an idea where the company will be taken, and what kind of CEO it will require, meaning the CEO replacement decision begins to be formed. At this stage also differences among high- and low-managerial focus funds start to emerge.

For funds with high-managerial focus if the case seems interesting enough the fund begins to work more closely with the management. With the management team's heavy involvement the business plan is crafted together in a series of workshops, where the fund will also try to see whether or not the CEO is capable enough to proceed with the investment (Proposition #6). Perhaps if small expertise from the team is seen missing, the fund may try to start a recruiting process to strengthen the team e.g. get a CFO (Proposition #7), but are reluctant to replace the CEO without really compelling reason. In many cases it is more likely that the case would be dropped rather than the CEO replaced and if he ends up being replaced it is often agreed beforehand.

For low-managerial focus funds a slightly more resource-based view emerges where management is considered more separately from other investment. For these funds the sourcing is more likely to come from an intermediary and for this, the access to management is also more limited due to presence of advisors (Proposition #4). Since this also prevents some assessment methods such before-mentioned workshops from being utilized these funds tend to use reference calls and externally conducted management reviews slightly more often. If the CEO ends up being replaced, the decision will be formed only after the ownership has been transferred as the access to the company is paved. Only then, the full picture of CEO

begins to shape as in an auction-process CEOs have tendency to tell things in more positive way than actually might be the case (Proposition #5). Yet, after all this the final decision is made with a feeling (Proposition #10). The table 13 shows an extended framework on the role of management in more detail.

**Table 13:** Extended framework for managerial focus

This table collects together all relevant findings among low- and high managerial focus funds presented in previous sections. Note that the findings are applicable in Finnish context only, and hence "big" here may mean not the same in global context.

	Low managerial focus (Funds A, C, E, F, J)	High managerial focus (Funds B, D, G, H, I, L, K)
Characteristics of PE firms	Bigger funds, sourcing from investment banks, lots of deal experience, perhaps implements buy & build	Smaller or low-medium-sized buyout funds targeting entrepreneur-lead small firms
View on management team	Management is a resource as everything else. Good management team is plus, but not always necessary.	Management is a big investment criteria. Very hesitant to entry without good management team, but can be done if must
Replacement criteria	Management is often replaced post-ante after the deal has been completed due to auction processes preventing complete management access	Usually agreed beforehand or because the entrepreneur is not experienced enough to handle growth
Assessment methods	Prefers external consultant and uses management audits slightly more often. Reference checks to support decisions. Tend to lack internal management due diligence practices	Workshop heavy processes, where incumbent management is deeply involved. Also lots of on-going face-to-face interviews. Still, often also just "trying something" rather than clear process.
Assessment focus	Mainly track record required	Endogenous factors i.e. chemistry important but only in the presence of track record
Dominating theoretical grounding	Resource-based Theory (e.g. Petaraf, 1993)	Upper-echelon theory (Hambrick & Mason, 1984)

## 8 Robustness

### 8.1 Statistical robustness

All the regressions are performed with Huber-White's heteroskedasticity robust standard errors. This means that the sub-populations are not subject to differing variance and hence should not yield biased standard errors nor disturb statistical significance. For univariate tests Mann-Whitney U-test results are used in order to take into account the fact that the results may not be normally distributed<sup>35</sup>.

<sup>35</sup>Which seems likely following the Shapiro-Wilk results in appendix 17



Furthermore, extra care was taken in accounting for multicollinearity. The regressions presented variance inflation factors (VIF) that were used to identify possible signs of multicollinearity. As VIF test can only be done for linear regression, the order of the independent variables in the logit-model were changed and VIF tests on each respective variable was conducted against each other with OLS-regression. Accordingly, this paper showed correlation matrices for the models in section 6.1 and noticed that only very few variables having significantly high correlation with each other. Still, none of the variables exceed the generally accepted threshold VIF value of 10 (O'Brien, 2007) concluding that multicollinearity is of no concern.

As a robustness check the same multivariate analysis on CEO turnover with probit model in appendix 19 is performed. Probit-model essentially gives a very similar fit with most major difference originating from the link-function. (e.g. Hahn & Soyer, 2005) Hence, in order to make sure that the results are not due to unfortunate coincidence in log-transformation this robustness check proved suitable. The results hold for both logit-/probit-models, though the link-function does have some effect as Leverage-becomes significant at 10% level. Yet considering that this is a borderline observation and univariate analysis does not support the finding, it does not seem major discovery.

Finally, acknowledging that fundamental data is more likely available for larger, more mature companies in Bureau van Dijk's Orbis a Heckman selection model is executed on central observations to see whether selection bias exists in the sample. The results in 20 show that the findings are significance-wise almost identical to previous results suggesting that the loss of 20 samples when going from 114 samples with CEO turnover data to 92 with also fundamental data is not subject to selection bias.

## 8.2 Conjoint analysis on investment decisions

Acknowledging that the interviewee is subject to certain bias in a semi-structured interview situation requires robustness checks. For example, a certain known problem in surveying literature is that the respondent will give answers that he thinks the interviewer wants to hear (e.g. Bertrand & Mullainathan, 2001). In an attempt to tackle this, every participant was asked to perform an additional experiment in the last minutes of the interview.

The analysis, called conjoint analysis is designed to identify factors which affect the participants' decision making. More precisely, it requires the participant to evaluate hypothetical profiles of potential target firms that are described through combinations of different levels of criteria or attributes. By making judgements about varying combinations of different levels of variables, conjoint analysis allows the researcher to identify the relative contribution of each attribute (Hair et al., 1998; Dawson, 2009).

The underlying idea here is that if the participant has praised management's role and his approach to

management due diligence, the human capital factors should then also be important in the participant's investment decision-making. To put it simply, all else being equal the participant should find a company with strong human capital more attractive than similar target with weaker human factors. If the participant has praised his company's management due diligence processes, but obviously human capital isn't relevant in his investment decisions, it could be concluded with relatively high certainty that the answers he gave were influenced by the presence of the researchers. Hence, aggregating the results would give an overall robustness check to the qualitative portion of the study.

Conjoint analysis should be suitable for robustness test as it is free from most biases regarding questionnaires (e.g. Shepherd & Zacharakis, 1999) and has been used in many private equity studies (e.g. Shepherd et al., 2003; Choi & Shepherd, 2004; Dawson, 2009).

In essence, each participant was shown 10 profiles of a hypothetical investment resulting in a final sample of  $n = 120$ . Because the decisions are nested within individuals (i.e. 120 decisions nested within 12 respondents) the data was analysed using hierarchical linear model (HLM), a practice also used by Dawson (2009). It is preferred over a standard OLS with fixed-effects as HLM does not aggregate the data in a similar manner hence not ignoring the potentially meaningful individual level variance in the outcome measure. As importantly, HLM recognizes that there might be autocorrelation in the decisions taken by each individual. (Raudenbush & Bryk, 2002) An example of a conjoint profile shown to a respondent is shown in appendix ???. This relative high sample then allowed this study to perform statistical tests with results in figure 14.

The results show that three out of four management indicators were highly significant with most significance in the management-related variables management leadership and management industry expertise ( $\beta = 1.13$ ,  $p < 0.001$  and  $\beta = 1.02$ ,  $p < 0.001$ ). This was closely followed by personnel factors with  $\beta = 0.99$  and  $p < 0.001$ . Only the variable representing replacement possibility of the CEO was just barely significant. Fundamental-based control factors still dominate the decision making (e.g. firm profitability  $\beta = 1.31$ ,  $p < 0.001$ ) but availability of leverage is not found to have any effect on the investment decision.

Overall, the point of interest here is the broad picture given by the analysis, not the results as per variables. In this context, it seems that the findings are in line with rather positive general attitude towards top management in investment decisions, as found in qualitative section. Still, one should not exclude the possibility of mischievous participant "gaming" these results as well.

### 8.3 Reliability and validity in case study

Case study method has been long prone to concerns regarding methodological rigour in terms of validity and reliability (e.g. March et al., 1991). Hence in this subsection this study assesses the research in terms

**Table 14:** Conjoint analysis results

This table shows the results of conjoint analysis aggregated amongst all interviewed buyout funds. It reveals investment decision factors of private equity funds by applying a hierarchical linear model (HLM) for various decision factors with dependent variable being the likelihood of investing. The variables itself are of not of interest in the analysis itself but the broader picture the results give. P-values are shown in last column along with standard errors.

	Coefficient	Standard error
Intercept	0.12	0.29 <sup>***</sup>
Experienced human capital	0.99	0.22 <sup>***</sup>
Management industry experience	1.02	0.29 <sup>***</sup>
Management leadership experience	1.13	0.30 <sup>**</sup>
Replacement possibilities of CEO	0.43	0.24 <sup>*</sup>
<i>Control</i>		
Industry growth	1.13	0.24 <sup>***</sup>
Availability of leverage	0.30	0.31
Company profitability	1.31	0.18 <sup>***</sup>

n = 120

of construct validity, internal validity, external validity and reliability. Construct validity refers to the question of whether the data appropriately depicts the studied phenomenon. Internal validity in turn refers to the credibility of causal arguments while external validity can be considered generalizability of the results. Finally, the study can be said to be reliable if a researcher can successfully repeat the results in this study. (Yin, 1994)

Arguably the main threat to this study comes from the construct validity i.e. whether this paper is examining what it claims to be examining. Because of the qualitative nature of the research questions 2 and 3, the biggest threat is subjectivity. Indeed, people who have been critical of case studies often point to the fact that a case study investigator fails to develop a sufficiently operational set of measures and that "subjective" judgements are used to collect the data. (Yin, 1994) This can be overcome in several ways: First researchers should establish a clear chain of evidence to allow the reader to reconstruct how the researcher went from initial research question to the conclusion. (Yin, 1994; Gibbert et al., 2008) To comply with this all the relevant excerpts and scoring grids have been included as an appendix to this study. Second, it is suggested that the researcher *triangulates* i.e. uses different data sources and data collection methods as a basis to adopt different angles from which to look at same phenomenon (Denzin & Lincoln, 1994; Yin, 1994). That has been done by collecting cases from many different private equity companies and by utilizing both qualitative and quantitative approaches in the research process. Both of these approaches also *highly* support each other. Finally, Yin (1994) suggests that the researcher should have a draft report reviewed by the interviewees. This, however, was not done beforehand due to pre-agreed publishing event by FVCA where interviewees were invited as well.

In terms of internal validity the biggest concern is whether there exists some variable  $z$  that would also

lead to same conclusion *y*. (Yin, 1994) In other words, to violate this we'd have to miss some other explanation not examined in this paper that would contribute to role of management in private equity buyouts. According to Eisenhardt (1989) the best way to tackle this is to constantly review the material to previous findings and literature on the same subject. While collecting the cases cross-case analysis is constantly performed as described in 5.3.3 and the resulting findings have been tied to literature by e.g. noticing how in smaller buyouts the management team is often also owners and hence in these cases they are more in focus of investment decisions. (e.g. Chowdhury & Lang, 1993).

However, as Yin (1994) notes internal validity is difficult to conform. Despite having a comprehensive literature review from both private equity side and management theory side there is always the chance that this paper has missed something that could well explain the rather high role of management in Finnish buyouts. Also, because similar studies with similar geographical focus are practically non-existent there exists a lack of benchmark against which to compare the results as a whole.

Considering external validity, the multiple case design used together with quantitative extension and the use of replication logic give a good assurance that the results of this study can be analytically generalized, but only in the Finnish context. As noted by researchers cultural differences may play big part in explaining some of the findings (Hofsteden et al., 2010) as already pointed out in the field of private equity (e.g. Spliid, 2011). Following the guidelines of Eisenhardt (1989) this kind of theory-building study is further generalizable only in the *analytical* sense and statistical generalization is not reasonable unless a theory-testing research is conducted. A more rigorous quantitative testing would be hence needed in order to reach statistical generalization.

Finally, this study has laid out all steps necessary to repeat the research if needed. In section 5 is described the sample gathering process and methodology of the study. Each of the necessary steps used in conducting the interviews have been laid out, which themselves are adapted from pioneering, industry standard case study guidelines such as Eisenhardt (1989) and Yin (1994). In addition, all relevant excerpts and scoring grids used in analysing the qualitative sample are included in the appendix for peer scrutiny and repeatability. As suggested by Yin (1994) all the qualitative sample documents were stored in a single hermeneutic unit inside ATLAS.ti database. In this regard, the study can be said to fulfil the requirements of reliability.

This paper finds that in Finnish buyouts CEO is replaced in 32% of deals conducted between 2006-2016, which is slightly less than in comparable studies. To put this in perspective, Gong & Wu (2011) found that CEO is replaced in 51% of deals within two years of purchase, Guo et al. (2011) found the figure being 37.2% within one year of conducting a deal and Acharya & Kehoe (2008) found that in the first 100 days a bit over one-third of CEOs gets replaced.

**Table 15:** Summary of tests on research quality

This table summarizes the four criteria on the quality of research design as introduced by Yin (1994) in his established paper on guidelines for case studies. Generally speaking, the qualitative part of this study satisfies all of his criteria with the exception of external validity due to narrow geographical focus of the study.

Criteria	Description	Fulfilled?
Construct validity	Does the study examine what it claims to examine?	Yes
Internal validity	Have all the alternative explanations for the phenomenon been studied?	Likely
External validity	Is the study generalizable beyond the immediate case study?	Yes, but only in analytical sense and in Finnish context
Reliability	Can the study be repeated by another researcher?	Yes

## 9 Conclusion

This study has looked into the CEO replacement and the role of top management<sup>36</sup> in private equity buyouts using a novel qualitative theory-building and quantitative theory-testing approach. To do this the paper has analysed a sample of 92 deals with data on CEO turnover and utilized multiple case study method interviewing 12 buyout-focused private equity companies together with a consultancy firm Mercuri Urval in an attempt to construct a coherent theory on the role of top management in Finnish buyouts.

It was found that on average CEO is replaced less than in global comparison. In 32% of buyouts the CEO is changed within one year of conducting a buyout and the likelihood is increased when an experienced buyout-fund is buying a larger company at times when credit market is lenient. These findings suggest that there may exist some sort of agency problem between LP-GP at times when economy is doing well and credit is readily available although respondents did not bring this up. Contrary to previous studies, there does not seem to be evidence for CEO being replaced due to deteriorating performance nor agency costs despite the nascent indication of lowly levered companies experiencing higher turnover, but more importantly the cases reveal that CEO is primarily changed due to misfit to business plan. In other words, it would seem that buyout funds look CEO in relation to what they want to achieve in the future - a sort of forward-looking view that is difficult capture in a measurable variable. The results were robust for probit-model, selection bias and multicollinearity.

<sup>36</sup>In this study, management *always* refers to at least CEO but in the respondents' answers it tends to include CFO as well

The theory-building approach suggests that Finnish private equity companies could be roughly split into two categories in their approach to the target company management: those with high-managerial focus in the buyouts and those with low-managerial focus. In the former group tend to be smaller or lower end of medium-sized buyout funds (e.g. average AUM €350m, 8.4 investment professionals and/or 7 investments in portfolio) targeting smaller entrepreneur-lead companies. Here the buy processes are often less structured with frequently long established relationships with the selling party ensuring better access to the management early on to the deal. For them, a poor existing management is often a deal-breaker and if it ends up replaced it has been agreed beforehand with the CEO, which most often is also the entrepreneur and/or owner in these sorts of companies. This sort of funds were majority in the study, which in turn could explain the relatively lower turnover rate compared to existing studies.

Low-managerial focus funds tend to be larger private equity firms (e.g. average AUM €690m, 15 investment professionals and/or 13 investments in portfolio) targeting larger companies with tendency to base a high portion of their strategy on buy & build. Main differentiator is also that they primarily source their deals from an intermediary such as an investment bank, which highly limits their access to the management and makes them prone to so called CEO window-dressing behaviour. These facts combined could explain their relatively higher likelihood of replacing the CEO as management is less involved in crafting the business plan early on the buy process. These larger buyout funds also have more resources available and more often tend to use some sort of management review performed by external consultants relying on their view of the management. These theory-building qualitative propositions were robust for conjoint analysis on private equity buyout decision-making and were also highly supported by quantitative result.

Finally, this study noticed that the view Finnish buyout companies have on top management fits the upper-echelon theory by Hambrick & Mason (1984) representing an extension of standard agency model (Bertrand & Schoar, 2003). This means that there is a consensus among interviewees that for each different business plan, or scenario, a certain set of skills are required from the management. This calls for matching CEO capable of forming the company as set in plans or shaping the firm to look like "himself". Hence, by agreeing that the management does indeed possess various skills required for success the general view leads to resource-based theory (e.g. Newbert, 2007) where competitive edge, followed by returns, start with superior management. (e.g. Crook et al., 2011). Furthermore, the findings in this theme also suggest that endogenous factors i.e. chemistry between buyout and target company plays a central role in CEO evaluation as noted by Kaplan et al. (2012) in their widely cited private equity study on CEO characteristics.

The results suggest that future research on CEO turnover should also include forward-looking variables capturing the fact that buyout funds are more interested in what the CEO *will* achieve instead of what it *has* achieved in the past. The broader, economical implication of this is that buyouts help speed the necessary changes in companies by implementing a growth strategy and replacing the CEO when

expansion is hindered due to for example CEO lacking international expertise. These studies should also consider the size of the buyouts, sourcing channel (i.e. intermediary vs. network), and what time period to use for measuring CEO turnover, as buyout firms generally feel the replacement decision is always prolonged. Furthermore, since significant portion of this study was dedicated to theory-building research, future studies could try to focus on applying, replicating and most of all testing the emerged theory perhaps with a broader international sample. The theory could also be reinforced by including more junior interviewees to the study, which may have a lot different view on the topic than the partners which were mainly interviewed in this paper.

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