

Stockholm School of Economics
Bachelor Thesis in Accounting and Financial Management
May 2024

CEOs' and Directors' Positive Performance Experience & Firm Financial Risk

Alexander Oscarsson
25264@student.hhs.se

Isak Hjärne
25438@student.hhs.se

Abstract

Executives' professional experiences have shown to influence corporate outcomes due to altered individual characteristics. We investigate if positive professional experiences among CEOs and directors influence firms' financial policies using a large sample of Swedish privately owned firms. By identifying top performing firms and their respective CEOs and directors, we analyze the risk-taking behavior of these executives' subsequent firms, proxied by financial leverage and cash holdings. Our findings provide partial evidence for an association between the presence of these CEOs and directors and lower financial risk-taking. We attribute this to a learning effect increasing risk-aversion, stemming from a shift in perception of outcomes relative to a reference point. We can however not exclude the possibility that firm-executive matching is driving the effect.

Tutor: Milda Tylaite

Keywords: Positive Performance Experience, Psychological Characteristics, Financial Risk, Risk-aversion

Acknowledgements: We would like to thank our thesis supervisor Milda Tylaite for valuable feedback and guidance

Table of contents

1.	Introduction	2
2.	Literature review and theoretical development	5
2.1.	Board's effect on company's performance	5
2.2.	Upper Echelons Theory	6
2.3.	Experiences and behavioral biases	7
2.4.	Exceptional performance experience	8
2.5.	Exceptional performance experiences and firm outcomes	8
2.5.1.	Overconfidence mechanism	9
2.5.2.	Risk-aversion and reference points	10
2.6.	Hypothesis formulation	11
3.	Method	11
3.1.	Sample selection	11
3.1.1.	Data source	11
3.1.2.	Sample selection and loss	12
3.2.	Variables	12
3.2.1.	Measuring exceptional performance experience	13
3.2.2.	Exceptional performance experience selection	14
3.2.3.	Corporate outcomes measures	16
3.2.4.	Control variables	17
3.3.	Models for EPE and financial risk-taking	17
3.3.1.	EPE executives' risk-taking in subsequent firms	17
3.3.2.	Inherent or altered risk-taking propensity	18
3.3.3.	Pre-post analysis: before and after the hire of an EPE executive	18
3.3.4.	Statistical concerns	19
4.	Empirical Results	20
4.1.	Descriptive statistics	20
4.2.	Regression Analysis: EPE executive on corporate policies	23
4.2.1.	Results from EPE executives' risk-taking in subsequent firms	23
4.2.2.	Inherent or altered risk-taking propensity	26
4.2.3.	Pre-post analysis before and after the hire of an EPE executive	27
4.3.	Robustness checks	30
5.	Analysis and discussion	33
6.	Conclusion and Implications	37
6.1.	Conclusion	37
6.2.	Contribution	38
6.3.	Limitations and future research	39
7.	References	41
8.	Appendix	46

1. Introduction

The risk profile of a company holds significant importance for multiple stakeholders. Investors seek to gauge the risk-reward balance to determine the attractiveness of investing in the firm compared to other opportunities. Credit institutions assess a firm's risk level to ascertain the probability of repayment. Employees and suppliers depend on the continued operations of the firm. Although an analysis of firm, industry, and market-specific factors provides a foundational understanding of a company's risk profile, these determinants do not fully capture variances in company risks (Lemmon et al., 2008; Malmendier et al., 2011; Dittmar & Duchin, 2016). For example, Lemmon et al. (2008) argues that there is large variation in leverage ratios due to *unexplained* time-invariant effects. In light of this discrepancy, a significant body of literature underscores the importance of additional, more intangible determinants (Dittmar & Duchin, 2016). This stream of literature sheds light on individual characteristics of decision-makers that play a role in delineating why certain firms exhibit disparities in their corporate risk practices and outcomes. While this research suggests that managerial traits and characteristics impact corporate policies, there remains a gap in our understanding of how their decision-making evolves over time, and in particular following transformative professional experiences. This study aims to address this gap by exploring how executives with strongly positive professional experiences, or exceptional performance experience (EPE), influence corporate risk-taking in their subsequent firms.

Hambrick and Mason (1984) pioneered the exploration of how observable and psychological characteristics can explain why decision-makers prefer certain decisions over others through the Upper Echelon Theory (Hambrick & Mason, 1984). Since then, numerous studies have emerged providing insights into how variations among firms can be explained via managers' traits and characteristics. In addition to observable traits, which have proven to be valuable predictors of corporate policies, previous research has also demonstrated how psychological characteristics, or behavioral biases, influence corporate policies (eg. Dittmar & Duchin, 2016; Malmendier et al., 2011). In relation to an individuals' risk propensity, an extensive focus has been on two psychological characteristics, namely, overconfidence and risk-aversion (eg. Pompian, 2011; Kim et al., 2015; Graham et al., 2013; Malmendier et al., 2011; Pope & Schweitzer, 2011; Schneider et al., 2016; March and Shapira, 1987).

Among this stream of literature, some have concentrated on exploring how personal and professional experiences may shape these characteristics of an individual, consequently influencing that individual's future decision-making (eg. Andersen et al., 2019; Kaustia & Knüpfer, 2008; Choi et al., 2019; Chiang et al., 2011). For instance, Kaustia and Knüpfer (2008) finds that, in accordance with the concept of reinforcement learning, personal experiences tend to exert a significant influence on future actions. They show that investors who have experienced favorable returns from previous IPOs exhibit a greater inclination towards investing in subsequent IPOs (Kaustia & Knüpfer, 2008).

In an effort to understand how executives' decision-making evolves following transformational experiences in a professional setting, two studies have explored if firms with a bankruptcy experienced (BE) executive have different risk-profiles than firms without a BE executive (Ivanova et al., 2024; Dittmar & Duchin, 2016). Ivanova et al. (2024) find that firms with BE executives exhibit heightened risk-taking behavior subsequent to a bankruptcy event, as evidenced by their study conducted within the context of private limited liability companies in Sweden. Dittmar & Duchin (2016) find opposing results in a US setting on public companies, suggesting that firms run by CEOs with distress experience hold less financial leverage and more cash reserves. Dittmar & Duchin (2016) also studied if positive performance experiences had an impact on subsequent firms' risk-taking. They find no significant results, arguing in line with the pessimism bias hypothesis. Our study seeks to explore this further within a Swedish context, focusing specifically on private limited liability companies. In line with Ivanova et al. (2024), we argue that private firms afford their CEOs and directors a greater degree of influence due to reduced exposure to the considerable stakeholder monitoring that characterizes public companies (Ivanova et al., 2024).

Examining a large sample of Swedish private firms between 2000 and 2021, we investigate if CEOs and directors with an Exceptional Performance Experience (henceforth EPE executive) are related to the financial risk of their subsequent firms. Executives that have been interlocked with a firm ranked within the top one percentile of firms with the largest increase in abnormal return on assets (ROA)¹ over one year are defined as EPE executives. We show that the presence of an EPE executive is negatively related to a firm's financial leverage. An EPE executive is associated with a 1.0 percentage point decrease in leverage, or a 6.7% decrease in the sample

¹A firm's abnormal return on assets is defined as a firm's ROA less the industry's unweighted average ROA

mean. While we find no significant relationship with cash holdings in our main model, we exhibit significance in both a 1.0 percentage point decrease in financial leverage and a 0.3 percentage point increase in cash holdings when extending the EPE performance measure to a three-year average of abnormal ROA increase. We thus find partial evidence that EPE executives are related to decreased financial risk.

Next, we investigate if the observed effects are linked to the EPE rather than an innate characteristic. We hypothesize that the experience does in fact bring about a learning mechanism, which either could lead to greater overconfidence and consequently increased financial risk-taking (Malmendier, 2011; Hayward & Hambrick, 1997; Pompian, 2011) or heightened risk-aversion and consequently decreased financial risk-taking (Kahneman & Tversky, 1979; Pope & Schweitzer, 2011; Schneider et. al. (2016)). Our findings revealed that EPE executives are inherently linked to increased financial risk-taking, although to a lesser extent than the influence of the learning mechanism subsequent to an EPE. This holds true across all measures, except for cash holdings when using our primary EPE definition.

The results, which suggest that EPE executives are associated with less financial risk, could stem from either firm-executive matching or that executives shape the financial policies of their subsequent firms. To explore the possibility of a matching effect, we conduct a pre-post analysis by investigating if the financial policies of a firm are different following the hire of an EPE executive. While the analysis confirms the earlier found effects (i.e., decreased financial risk when an EPE executive is present), we observe clear trends in the same direction prior to the hire of an EPE executive. Although these observations are not inconsistent with the hypothesized mechanisms, we are unable to eliminate the possibility that matching is driving the results rather than that the executives actively shape the subsequent firms' financial policies, in the direction of the predicted biases.

We also show that the EPE executives' presence in firms is positively related to firm operating performance. Specifically, firms with an EPE executive are associated with a 1.1 percentage point higher ROA than firms without. Interestingly, we observe negative trends in ROA before the hiring of an EPE executive, and a significant increase in ROA when the hiring takes place, opening up for a possible direct positive influence from the executive on the firms. However, we acknowledge that this needs to be studied further before assuming a causal relationship.

The remainder of this paper consists of the following segments; Section 2 discusses related literature to develop our hypothesis, Section 3 describes data and variable selection as well as our research model, Section 4 presents the results, Section 5 provides the analysis and Section 6 concludes the study.

2. Literature review and theoretical development

To investigate the influence of CEOs and directors (referred to as executives) with an exceptional performance experience (EPE) on corporate risk-taking, Section 2.1 will provide a review of relevant theory and literature shedding light on the impact of the board of directors on a firm's corporate policies. This will help us understand how board members, alongside the CEO who is more operationally focused, contribute to corporate outcomes. Following this, Section 2.2 will introduce the Upper Echelons Theory (UET) as a framework to explore how executives' individual characteristics shape decision-making processes. In Section 2.3, we will examine literature that explores the impact of professional experiences on these individual characteristics and, consequently, on corporate outcomes. This foundational understanding will precede the theoretical discussion on two mechanisms that potentially explain why firms with EPE executives (referred to as EPE firms) may differ in their risk-taking profile compared to non-EPE firms. Finally, we will formulate our hypothesis in Section 2.6.

2.1. Board's effect on company's performance

Although executive managers traditionally have held authority in corporate decision-making, several studies have concentrated on demonstrating the capacity of the board of directors to influence the trajectory of the firm's managerial activities (eg. Judge and Zeithaml, 1992; MacAvoy & Millstein, 1999). The board of directors is considered to be the main governance mechanism through which a company is governed and managed (Srivastava, 2015). Board members are appointed by shareholders to communicate the shareholders' objectives and interest to managers (Davis et al., 2007) through directing its operations and by supporting its decision-making (Naciti, 2019). Consequently, they play a crucial role in guiding the firm's strategic direction and monitoring its management (Berk and DeMarzo, 2020).

A study by Judge and Zeithaml (1992) posits that the heightened focus on corporate accountability has led to increased pressure for board engagement in a firm's strategic decision-making process. Additionally, the modern board of directors have recently become more active in their role stating that company boards have evolved from being "managerial rubber-stamps

to active and independent monitors” (MacAvoy & Millstein, 1999). Additionally, findings by Bhagat and Bolton (2008) support the notion that the board of directors plays an active role in shaping corporate strategies and policies. Their findings indicate that several board characteristics, such as board independence and stock ownership, are significantly correlated with a firm’s corporate governance, as well as its immediate and future operating performance.

2.2. Upper Echelons Theory

The following section will serve as the foundation in understanding how CEO and board characteristics may explain corporate policies and in turn outcomes. The Upper Echelons Theory (UET), as proposed by Hambrick and Mason (1984), has garnered considerable attention and recognition within both academic circles and the professional domain. The concept lies in organizational theory and posits that the individual characteristics of decision-makers substantially influence corporate decision-making processes. They argue that the corporate decisions and outcomes of a firm mirror the values and cognitive foundations of its management team within the organization. In particular, the UET considers the composition of such characteristics across the top management team and in turn the corporate outcomes of a firm (Hambrick & Mason, 1984).

Furthermore, decisions are shaped by a multitude of factors that can result in varying degrees of complexity. A natural response to the complexity of a decision is to make a simplified interpretation of the situation. This aspect holds significant importance because the simplified interpretation is shaped by the decision-maker’s underlying values and cognitive bases. Consequently, each decision made, even in close to identical situations, will vary among decision-makers. In essence, the psychological characteristics, including underlying values and cognitive bases, of a firm’s top management become increasingly relevant to the final decision as the complexity of the situation grows (Hambrick & Mason, 1984).

Top management’s psychological characteristics or behavioral biases that shape a firm’s strategic choice can more easily be studied by proxying them to various observable characteristics such as age, tenure, functional background, education, and financial position (Hambrick & Mason, 1984).

The observable characteristics of past experiences therefore become greatly interesting to this study. Executives bring several sets of beliefs, assumptions, and values to the decision-making

process that are shaped by their personal and professional experiences. As the UET predicts, these sets of beliefs, assumptions, and values filter and distort the decision-maker's interpretation of the situation, thereby serving as the fundamental basis for executives' preferences for certain decisions over others (Hambrick & Mason, 1984). In the following section, we will examine studies focused on investigating the linkage between executives' professional backgrounds and the subsequent impact on corporate outcomes. We will then review literature on how two behavioral biases (*overconfidence* and *risk-aversion through reference points*) might explain either potentially higher or lower risk-taking among EPE firms.

2.3. Experiences and behavioral biases

Central to this study is Ivanova et. al.'s (2023) research, which demonstrates a link between previous bankruptcy experience among executives and heightened financial risk in their subsequent companies. They do this by investigating private Swedish limited liability companies, for which they argue that executives might have a more pronounced effect on corporate outcomes than listed firms. A key aspect of their analysis involves the use of leverage and cash holdings as primary indicators of financial risk. They find that firms led by executives with prior bankruptcy experience tend to exhibit higher leverage ratios and lower cash reserves compared to firms led by executives without such backgrounds. This pattern suggests a greater propensity for financial risk-taking, attributed both to an executive's innate behavioral characteristic and learning from previous experiences with financial distress. This study will similarly focus on leverage and cash holdings with the aim to investigate the relationship between executives' positive professional experiences and financial risk-taking within their subsequent firms.

Other studies have also incorporated prior positive executive experiences on future outcomes. Dittmar & Duchin (2016), while primarily focusing on distressed experienced professionals, also explore experience with positive outcomes by measuring the impact of past successful outcomes on the decision-making behaviors of executives in US listed firms. The study specifically examines whether executives who have experienced past successes exhibit different leverage, cash and capital expenditures compared to other firms. The findings suggest that there is no significant correlation between past positive outcomes and risk-taking behaviors in the context of listed firms. They attribute this to the pessimism-bias hypothesis, which predicts that negative outcomes will have asymmetrically stronger effects than positive outcomes. Their significant results from bankruptcy experienced individuals are however in

the opposite direction as Ivanova et. al., suggesting that the different context of listed firms versus private firms have material impact on the outcome, motivating further investigation.

Despite the findings of Dittmar & Duchin (2016), there are reasons to believe that executives' positive experiences may impact future firm outcomes. Hayward & Hambrick (1997) shows that executives having experienced abnormal returns to their firm's stock, paid higher premiums for acquisitions, which resulted in losses on average. This pattern of behavior is attributed to CEO overconfidence, which the authors describe as "exaggerated self-confidence". They argue that these CEOs deem past success as applicable to managing additional entities. Bromily (1991), on the other hand, shows that higher firm performance in the past is negatively related to future risk. Specifically, the study shows that higher past ROA, reduces future risk in terms of the ex-ante uncertainty of a company's revenue stream. This result is attributed to increased risk-aversion in accordance with Prospect Theory developed by Kahneman and Tversky (1979). Such biases motivate further exploration of how positive performance experiences might influence executive behavior in subsequent roles.

2.4. Exceptional performance experience

Following the UET by Hambrick and Mason (1984) arguing that past experiences shape the behavioral biases of an individual, several studies have investigated how such experiences in turn affect various corporate outcomes by using proxies for unobservable psychological characteristics (eg. Ivanova et al., 2023; Dittmar & Duchin, 2016; Hamori & Koyuncu, 2014).

This thesis seeks to complement previous research by examining how executives with positive professional experiences may influence corporate financial policies in their subsequent firms. We posit that an EPE can potentially alter the individual characteristics of an executive through two mechanisms: overconfidence and risk-aversion. Such changes may, in turn, be observable in the financial policies of EPE firms. In the following section, we will delve deeper into these two mechanisms by delineating their relationship to either a potentially higher or lower level of financial risk-taking in subsequent firms.

2.5. Exceptional performance experiences and firm outcomes

A difference in risk-taking behavior observed between executives with and without an EPE could either stem from a potential learning mechanism acquired during an EPE, or reflect an inherent inclination towards more or less risk-taking. Should it adhere to the learning

mechanism, we can further explore whether it aligns more closely with the overconfidence effect or with risk-aversion.

2.5.1. Overconfidence mechanism

The overconfidence bias, stemming from the self-attribution theory, is by the American Psychology Association defined as “a cognitive bias characterized by an overestimation of one’s actual ability to perform a task successfully, by a belief that one’s performance is better than that of others, or by excessive certainty in the accuracy of one’s beliefs”². Self-attribution and overconfidence have been under large scrutiny when it comes to investors and analysts. Hilary and Menzly’s (2006) finds that analysts who have experienced brief success tend to become overconfident in their abilities to accurately predict future earnings. Moreover, a study conducted by Billett & Qian (2008) found evidence that overconfidence in acquisitions stems from past successful acquisition experience. Eshraghi & Taffler (2010) demonstrate that superior past performance amongst fund managers boosts managerial overconfidence in terms of proxies including overoptimism, excessive certainty and excessive self-reference. Important to this study, is Hayward & Hambrick (1997), which uses prior firm performance, in terms of abnormal returns, as an indicator for overconfidence that leads to large premiums paid for acquisitions. Thus, CEOs’ and directors’ abnormal performance might lead to overconfidence bias in subsequent firms.

In turn, overconfidence has been shown to predict emotion-driven behavior, one of which is excessive risk-taking (Pompian, 2011). Adam et al., (2015) shows that managerial overconfidence affects corporate risk management decisions, through increased speculative activities of derivative positions. Kim et al., (2015), showed that firms led by overconfident CEOs face a higher risk of experiencing a stock price crash compared to those led by less overconfident CEOs. This heightened risk is attributed to their tendency to overestimate project returns and to mistakenly perceive projects with negative net present values (NPV) as value creating. Malmendier (2011) develops a theoretical argument of how CEO overconfidence may lead to increased financial risk through two biases; overestimation of financing needs, and overvaluation of future cash flows. The first one, leads to overinvestment which could require excessive fund raising. The second, deems external financing overpriced but debt comparably cheaper to equity, since its price is less sensitive to opinions about future cash flows. Thus,

² American Psychological Association, 2018

while the absolute amount of external financing may go either way, excessive leverage and reduced cash holdings is expected (since cash is cheaper to spend than accessing perceivably overpriced capital markets). In light of these predictions, Malmendier (2011) shows evidence that overconfident managers are more likely to issue debt than equity and choose comparably higher leverage ratios. Thus, we argue that EPE CEOs and directors may exhibit overconfidence biases following previous successes, which in turn may lead to higher financial risk-taking.

2.5.2. Risk-aversion and reference points

In contrast to the *overconfidence mechanism*, another reason for the potential effect of EPE executives on corporate outcomes is their level of risk-aversion. In 1979, Kahneman and Tversky developed the Prospect Theory as a descriptive psychological theory to explain how people make decisions involving risk and uncertainty (Kahneman & Tversky, 1979). One key notion of Prospect Theory is that peoples' attitudes towards risk and uncertainty are influenced by reference points. They argue that individuals evaluate potential outcomes relative to a reference point. Their research indicates that whether potential outcomes are perceived as gains or losses by an individual, relative to their reference point, are predicted to reverse or shift their risk preferences. Thus, individuals facing positive outcomes (gains), tend to exhibit risk-aversion, indicating a preference for certain outcomes over risky ones. Individuals facing negative outcomes (losses) conversely tend to exhibit risk-seeking (Kahneman & Tversky, 1979).

Following Prospect Theory, a significant body of research has investigated how context affects an individual's perception of options relative to a reference point. Specifically, prior achievements have been shown to affect how an option is evaluated. Pope and Schweitzer (2011) provided empirical support that prior success generates loss aversion, in their investigation of risk-aversion among professional golfers during putting scenarios. Employing the hole's par score as a reference point, their research revealed that professional golfers exhibited greater risk-aversion when attempting to achieve a "birdie" (one stroke better than par) compared to their risk behavior when putting for par (Pope & Schweitzer, 2011). Similarly, Huber (1994, 1996) showed that when holding the chance of winning constant, individuals with recent positive events that increased their earnings, make more risk-averse choices. Schneider et. al. (2016), further expands on the importance of prior experiences for an individual's reference points. They argue that an individual's prior experiences generate assimilation effects, where prior success is incorporated into new situations. Positive experiences thus make new

outcomes seem comparably more positive to a reference point, increasing their risk-aversion. Through an experimental study of gambling, they showed that positive experience led to reduced risk-taking. Interestingly, such an effect was not entirely driven by an increase in assets, but rather linked to an individual's perception of "doing well" in relation to their goals. Consistent with this result, in a qualitative study involving over 500 executives, March and Shapira (1987) showed that managers generally believe that fewer risks should be taken when things are going well. One concrete reference point executives might consider is relative status in its industry. Shamesh (2010) shows that CEOs become more risk-averse after receiving status-increasing awards and Plaksina et al. (2019) shows that higher CEO social status leads to decreased risk-taking through reduced M&A activity. Effectively, this allows them to lock-in their relative position towards the peers in their industry.

Operational performance of firms is strongly linked to (1) executives' evaluation, (2) their earnings and (3) their social status (Dikolli et al., 2013; Banker et al., 2013; Crossland and Hambrick, 2007; Hayward et al., 2004). Given the argued mechanism, an EPE could therefore make executives' more risk-averse. Thus, we argue that EPE executives may exhibit lower financial risk-taking in subsequent firms.

2.6. Hypothesis formulation

In line with the theory development in Section 2.1-2.5, we formulate the following non-directional hypothesis:

Hypothesis: *CEOs and directors with an Exceptional Performance Experience are positively or negatively related to the financial risk of their subsequent firms.*

3. Method

3.1. Sample selection

3.1.1. Data source

This study relies on company information on privately held Swedish Limited Liability Companies spanning the years 1998 to 2023. The data was obtained from the Serrano database and consists of comprehensive historical financial and organizational records. Additionally, the database includes CEO and director tenures, as well as birth-year and gender, across the same set of companies and timeframe represented in our sample data. Following the General Data Protection Regulation (GDPR), individual identifiers like names of CEOs and board directors have been excluded from the dataset.

Table 1 specifies the sample selection process from the dataset's total observations. Since we examine private companies specifically, we exclude listed firms. We also exclude subsidiary firms that don't hold the group's consolidated financial statements, to not analyze a group's financials more than once. Additionally, financial institutions and insurance companies are excluded from the study due to significant differences in their operations and reporting standards. Next, we exclude all firms that across their active years have never reached more than SEK 1.5 million in total assets or SEK 3.0 million in revenue to ensure the sample only consists of firms with active operations. Finally, we exclude firms with missing industry classifications, financial data or where a CEO cannot be identified.

3.1.2. Sample selection and loss

The final dataset spans the years 2000-2021 and contains 804,001 firm-year observations corresponding to 123,869 number of unique firms.

Table 1: Sample selection process

	Excluded observations	Firm-year observations
Reporting period < 360 and > 370 days	- 867 485	7 812 115
Subsidiaries in groups	- 1 472 162	6 339 953
Missing industry classifications	- 310 783	6 029 170
Firms operating in financial and real estate industries	- 651 871	5 377 299
Firms below 1.5 mSEK in assets and 3.0 mSEK in revenue over the sample period	- 3 090 698	2 286 601
Firm-observations missing financial data	- 389 767	1 896 834
Listed firms ³	- 6 516	1 890 318
Firm-observations where the CEO cannot be identified ⁴	- 1 086 317	804 001
Final sample		804 001

3.2. Variables

To investigate if there is a relationship between executives' positive professional experiences and financial risk-taking in subsequent firms, we need to identify executives who have perceived an experience as strongly positive. To ensure we capture the intended experience, we need (Sections 3.2.1) a proxy that reflects executives' performance and (Section 3.2.2) isolate

³ Listed firms have been acquired from Nasdaq OMX Nordic and the Swedish Tax Agency (Skatteverket).

⁴ In the absence of a reported CEO, we make the following adjustment: if only one board member is registered or if a chairperson is registered, we designate them as CEO.

experiences that are perceived by the executives as strongly positive. Thereafter, we define the corporate outcome measures we will use to examine risk (Section 3.2.3). Lastly, we state the control variables we use across both governance and firm-level characteristics (Section 3.2.4). All variable definitions are reported in Table 10 in the Appendix.

3.2.1. Measuring exceptional performance experience

The proxy reflecting executives' performance must adhere to two criteria. First, it should directly mirror firm performance. Second, the measure must be universally applicable across industries and firms within the Swedish market to ensure comparability in the EPE executive sample selection process.

Isolating firm-specific performance

To accurately identify and select firms that reflect "best-in-class" performance it is necessary to isolate firm-specific performance by eliminating extraneous factors that influence the whole cohort. Drawing from finance literature, CAPM serves as a widely used conceptual model to determine the relationship between systematic risk and expected return (Aaker & Jacobson, 1987). However, due to empirical challenges with estimating risk on a business level, most studies examine abnormal return by looking at total return, in which the effect of risk is not controlled. This means modeling in accordance with the expectation of the same return across all firms in an industry (Jacobson, 1988). A firm's abnormal profitability can be defined as the difference between its realized profitability and its expected profitability, where expected profitability, in this case, equals the average industry-wide profitability (Waring, 1996). To derive abnormal profitability (F_{ijt}), we therefore subtract the unweighted industry average profitability from each firm's total profitability (Π_{ijt}):

$$F_{ijt} = \Pi_{ijt} - I_{jt}$$

where 'firm' is denoted by i , 'industry' by j , and 'year' by t . This approach enables us to discern how each firm's profitability compares to the industry average (Waring, 1996; Acquaah, 2003). Since executives tend to be evaluated based on relative performance to peers, this approach strengthens our measure's ability to capture a perceived strong positive experience (Fee et al., 2018).

ROA as proxy for firm performance

Prior research in the realm of professional experiences on behavioral biases, such as overconfidence and risk-aversion, and their impact on firm risk-taking, has predominantly utilized stock performance (eg. Hayward & Hambrick, 1997; Dittmar & Duchin, 2016) and acquisition performance (eg. Billan & Qian, 2008) as proxies for assessing professional experience. Given the breadth of our study encompassing all Swedish private limited liability companies, where company valuation data are unavailable and acquisition success levels are unattainable, we argue that the profitability measure Return on Assets (ROA) serves as the most suitable proxy for evaluating the perception of performance.

While accounting measures for firm profitability have received criticism for inaccurately reflecting firm performance (Aaker & Jacobson, 1987), five primary rationales support this choice. First, ROA is a well-established metric in research, facilitating concise comparability across studies (Acquaah, 2003; Waring, 1996). Second, executives and external stakeholders frequently use measures such as ROA to determine management effectiveness (Geringer et al. 2000), thus effectively capturing CEOs' and directors' perceptions of performance. Third, the scope of Swedish limited liability companies makes ROA suitable, as it ensures the most consistent comparison across firms and industries with the data available. Fourth, several studies studying firms' abnormal performance use ROA as their main variable (Hendricks et al., 2008; Dikolli et al., 2014; Bromiley, 1991). Fifth, abnormal stock returns, which sometimes is used as a measure of abnormal performance for public companies (Dittmar and Duchin, 2016; Hayward and Hambrick, 1997), has been shown to be positively correlated with ROA (Hendricks et al., 2008).

3.2.2. Exceptional performance experience selection

We take several measures to isolate strongly perceived performance in the selection of EPE executives. We ensure that the strong performance can be attributed to the executive, that the cutoff point only selects executives with superior performance, that the time span of the superior performance allows for changed psychological characteristics, and lastly that the performance is not due to a firm's erratic performance behavior. The remaining part of this section will go more into detail in how we will achieve this.

Firstly, since our measure intends to capture performances which may be attributed to the executives, we draw from Dittmar and Duchin (2016) in identifying firms with the highest

increase in our performance measure. Thus, we will identify firms with the highest abnormal ROA increase over one year, ΔF_{ijt} . We mark the executives present at the identified firm-year observations and define their involvement as an exceptional performance experience (EPE). When a CEO or director has at least one EPE in the sample, we match and mark their positions in subsequent firms. This enables the creation of a binary variable, *EPE Firm*, which is set to 1 if at least one of the firm's CEO or director possesses an EPE.

We select and mark only the very top experiences as EPEs to disentangle its effect, similar to Dittmar and Duchin (2016). While Dittmar & Duchin (2016) selected executives from the top decile of firms, we will further narrow our selection to the top percentile. This refinement ensures that only executives who perceive the experience as strongly positive with certainty, are isolated. To account for significant industry differences in ROA-levels (Waring, 1996) as well as time specific systematic variations across all observations, we pick the top ranked firms of abnormal ROA increase from each industry and year. The industry is identified based on the two-digit Swedish Industrial Classification.

An additional important factor relates to the time span of which to define exceptional performance. Several studies investigate how psychological characteristics change following a personal or professional experience. For instance, Hillary & Menzly's (2006) research reveals that analysts who outperform the median analyst in forecasting earnings tend to exhibit reduced accuracy in their subsequent earnings predictions, a phenomenon they attribute to overconfidence. In their study, they denote superior performance after four quarters of above average predictions arguing that overconfidence is a short-term phenomenon. Dittmar & Duchin (2016) proxies a positive performance experience as one of three measures: (1) upgrades in credit rating, (2) a positive cash flow change, and (3) a stock price increase, all of which are measured over a one-year period. While other research has relied on events with varying duration such as the success of acquisitions and superior investment returns, they argue that short-term successes influence a decision-maker's behavioral biases (eg. Billan & Qian, 2008; Statman et al, 2006). Similar to our study, Hayward & Hambrick (1997) use a one-year period of abnormal returns to capture positive performance experiences. Drawing from this, our primary definition of an EPE will be measured over one year. We however acknowledge that a longer time-period may capture persistent exceptional performance better. Therefore, drawing from Hendricks et al. (2008), we use a three-year average of firms' abnormal ROA increase as

an additional timespan to capture EPE in a robustness check. For this robustness check, we perform all intended tests on this variable as well.

Moreover, drawing from Ivanova et al. (2023), to be marked as an EPE the CEO or directors must have served for at least one year. If they have served less than one year, we argue that they have yet not had a significant effect on corporate policies and operations. Also, we add the constraint that the marked firm must not have less than SEK 1.5 million in total assets or SEK 3.0 million in revenue, as such observations may experience erratic performance behavior and thus have a high ROA volatility. Furthermore, we impose the requirement that ROA cannot be negative, similar to the approach taken by Dittmar & Duchin (2016). This excludes mainly two types of observations from the EPE categorization; instances where improvements have been made to a very low previous ROA, and instances where a specific industry has negative average industry-wide profitability. Since the observations in both these instances are still unprofitable, the perceived positive performance likely will be less prominent.

Lastly, to ensure the effectiveness of capturing the intended effect of EPE, we exclude observations with erratic performances that may disrupt our measure. Specifically, we filter out observations based on the volatility of abnormal ROA both before and after the observed EPE. This entails excluding instances where a greater or equal effect occurred in the opposite direction during the two years preceding or following the observation, from the possibility of being marked as an EPE.

3.2.3. Corporate outcomes measures

Drawing from Ivanova et al. (2023) and with the ambition to measure firms' risk-taking, the dependent variables of interest in this study are (1) *Leverage* defined as total interest-bearing long- and short-term debt over total assets, and (2) *Cash* defined as total cash and cash equivalents over total assets. We expect the overconfidence effect to explain higher *Leverage* and lower *Cash* and risk-aversion to explain lower *Leverage* and higher *Cash*. While firms' profitability is not this study's main focus, we will explore whether EPE executives influence firm profitability, proxied by ROA. ROA is defined as earnings before interest expenses over average total assets.

3.2.4. Control variables

We include several governance control measures for characteristics that may relate to financial risk. We control for the number of board directors (*Board Size*) since small boards may be related to worse governance (Ghosh, 2010), and CEO duality (*CEO Duality*) due to their increased influence on board functionality (Yang & Zhao, 2014) as well as significant association with improved operating performance (Bhagat & Bolton, 2008). We also control for CEO gender (*CEO Female*) and proportion of gender in the board (*Female Ratio*), since women have shown to be more risk-averse (Eckel & Grossman, 2008). Further, we control for the average number of board positions outside the assessed firm, for both the CEO (*CEO Int*) and board (*Board Int*), since more commitment may distract the CEO from their responsibilities (Rosenstein & Wyatt, 1994) and decrease effectiveness of a board's governance (Fich & Shivdasani, 2006). We also control for CEOs' (*CEO Age*) and average board age (*Board Age*), since risk-aversion may increase with age (Hambrick & Mason, 1984). Additionally, we control for the number of prior executive positions among CEO (*CEO Exp*) and board (*Board Exp*), since experience may be related to decision making (Ivanova et al., 2023).

We also control for several firm-specific characteristics which are related to the dependent variables. ROA (*ROA*), working capital (*WC*) and fixed assets (*Tangibility*) are scaled by total assets and sales growth (*Sales Growth*) is sales scaled by sales in year $t - 1$. Lastly, we control for time-invariant firm characteristics by including firm-fixed effects as well as time specific trends and industry variations by including industry-year fixed effects (Ivanova et al., 2023).

3.3. Models for EPE and financial risk-taking

We will structure our research models as follows. Model (1) will investigate if firms led by EPE executives exhibit a propensity for higher or lower risk-taking compared to firms without EPE executives. Subsequently, Model (2) will examine whether observed differences in risk behavior stem from inherent traits or are indicative of a learning mechanism, as outlined in Section 2.5. Finally, Model (3) will explore whether EPE executives are drawn to firms already inclined towards reduced risk-taking or actively instigate changes in the corporate policies of their subsequent firms.

3.3.1. EPE executives' risk-taking in subsequent firms

To assess how EPE executives relate to financial risk-taking of their subsequent firms, we use similar empirical methods as Ivanova et al. (2023). We firstly investigate outcomes that reflect

corporate policies of financial risk and firm performance. To do this, we estimate a generalized ordinary least squares (OLS) regression model:

$$Y_{ft} = \alpha + \beta_1 EPE\ Firm_{ft} + \sum \text{Governance controls}_{ft} + \sum \text{Firm-level controls}_{ft} + \text{FE}_{FIRM} + \text{FE}_{INDUSTRY - YEAR} + \varepsilon \quad (1)$$

where Y_{ft} is our dependent variable for financial risk-taking and performance, which we proxy for with *Leverage* and *Cash*, and *ROA*. *EPE Firm* is our binary variable described above and control variables are defined in Section 3.2.4.

3.3.2. Inherent or altered risk-taking propensity

Next, we investigate if the potential effect is a learning effect or an inherent trait for the EPE CEOs and directors. To do this, we create a new binary variable, *invEPE Firm*, which is set to 1 if at least one of a firm's executives has acquired an EPE during the entire sample period. We then estimate the same regression as in Model (1) including *invEPE Firm* as an independent variable:

$$Y_{ft} = \alpha + \beta_1 invEPE\ Firm_{ft} + \beta_2 EPE\ Firm_{ft} + \sum \text{Governance controls}_{ft} + \sum \text{Firm-level controls}_{ft} + \text{FE}_{FIRM} + \text{FE}_{INDUSTRY - YEAR} + \varepsilon \quad (2)$$

Where *invEPE Firm* is a proxy for the EPE executives' potential inherent risk-taking, and *EPE Firm* captures potential changes in their risk-taking following the EPE.

3.3.3. Pre-post analysis: before and after the hire of an EPE executive

Several studies conducting research in a similar domain to our study discuss the issue of firm-executive matching (eg. Ivanova et al., 2023; Dittmar & Duchin, 2016; Malmendier et al., 2011; Bertrand, 2003). If we find that EPE executives are associated with different financial risk, this may be due to either matching between firms and executives or that executives shape the financial policies of their subsequent firms. While it is beyond the scope of this paper to establish full causality, to better understand the impact of executives with EPE on the financial policies of their subsequent firms, we employ a pre-post analysis. We follow a similar approach to Bertrand (2003) and investigate treated firms, specifically examining the changes in *Leverage*, *Cash* and *ROA* before and after the hiring of an EPE executive. The pre-post analysis involves two distinct regression models to capture the dynamics of financial decision-making

around the time of hiring an EPE executive, where we include the firms that hire an EPE executive at some point and restrict the sample to four years before and after the treatment. First, we regress:

$$Y_{ft} = \alpha + \beta_1 EPE \text{ firm post hiring}_{ft} + \sum \text{Governance controls}_{ft} + \sum \text{Firm level controls}_{ft} + FE_{FIRM} + FE_{INDUSTRY-YEAR} + \varepsilon \quad (3)$$

where Y_{ft} is *Leverage*, *Cash*, and *ROA* and *EPE firm post hiring* equals zero in t-4 to t-1 and equals 1 in t to t+3. The base year in the regression is t-4. This will isolate the effect of hiring an EPE executive and show us if the years after hiring the EPE executive are significantly different than right before hiring the EPE executive.

Second, we regress:

$$Y_{ft} = \alpha + \beta_n YEAR_{ft} + \sum \text{Governance controls}_{ft} + \sum \text{Firm level controls}_{ft} + FE_{FIRM} + FE_{INDUSTRY-YEAR} + \varepsilon \quad (4)$$

where Y_{ft} is *Leverage* or *Cash* and $YEAR_{ft}$ is the years relative to the hiring (t-4, t-2...t+3). This will allow us to obtain coefficients for the years around hiring the EPE executive, to investigate if there already is a trend in a certain direction before the hiring.

3.3.4. Statistical concerns

Determinants of the selected top one percent of firms

Observational data, characterized by the simultaneous determination of independent and dependent variables, frequently encounters endogeneity issues through omitted variables. To understand whether such endogeneity issues and selection biases are present or not, we will run a regression, similar to Model (1), that determines the relationship between risk-taking (proxied by *Leverage* and *Cash*) and the top one percent selected firms. By exploring the characteristics of the selected top one percent of firms we can uncover if such characteristics are in the same direction as the outcomes from Model (1).

Additionally, to mitigate such potential selection bias, we draw from Dittmar & Duchin (2016) in only observing subsequent firms of an EPE executive, rather than including subsequent years for the individual at the same firm as the EPE occurred. We do this to disentangle the effect from the executives' experiences, from the potential firm effects stemming from the EPE itself.

Heteroskedasticity

Ordinary Least Squares (OLS) regression relies on the assumption of homoscedasticity, where the variance of the error terms associated with all independent variables in the regression is consistent. To verify this assumption, we employ a Breusch-Pagan test, which assesses the presence of heteroscedasticity (see Table 17 in Appendix). If the test indicates heteroscedasticity, it suggests that the variance of the error terms varies across observations. In response, we will employ robust standard errors to address this issue as it provides estimates that are less sensitive to violations of the homoscedasticity assumption.

4. Empirical Results

4.1. Descriptive statistics

In Table 2 descriptive statistics of the entire sample used is shown, and in Table 3 descriptive statistics is shown for the split between EPE Firms and non-EPE Firms. On average, EPE Firms have lower *Leverage*, *Cash*, and *ROA*. The correlation matrix in Table 11 (see Appendix) shows little correlation between most independent variables. As expected, Board Interlock (*Board Int*) and Board Experience (*Board Exp*) as well as CEO Interlock (*CEO Int*) and CEO experience (*CEO Exp*) have a strong positive correlation and *Leverage* and *Cash* have a strong negative correlation. To better investigate the potential issue of collinearity, we perform a Variance Inflation Factor (VIF) test. The average VIF is 2.83, indicating low multicollinearity (see Table 16 in Appendix).

Table 2: Descriptive Statistics

	N	Mean	Median	SD	Min	Max
Leverage	804001	0.150	0.007	0.220	0.000	0.876
Cash	804001	0.231	0.157	0.234	0.000	0.915
EPE Firm	804001	0.109	0.000	0.311	0.000	1.000
CEO Duality	804001	0.595	1.000	0.491	0.000	1.000
Female Ratio	804001	0.331	0.000	0.399	0.000	1.000
Board Int	804001	0.952	0.000	1.911	0.000	11.667
Board Size	804001	1.593	1.000	1.389	0.000	7.000
Board Age	804001	38.282	46.000	23.652	0.000	100.000
WC	804001	0.289	0.291	0.310	-0.647	0.936
Tangibility	804001	0.278	0.174	0.280	0.000	0.959
Sales Growth	804001	0.168	0.043	0.734	-0.889	5.224
ROA	804001	0.148	0.094	0.279	-0.619	1.444
Size	804001	8.573	8.352	1.528	5.333	13.598
CEO Female	804001	0.210	0.000	0.407	0.000	1.000
CEO Int	804001	1.088	0.000	2.039	0.000	12.000
Board Exp	804001	1.900	1.000	2.686	0.000	16.000
CEO Exp	804001	2.302	1.000	2.782	1.000	18.000
CEO Age	804001	50.616	50.000	11.317	19.000	118.000
EPE Firm Per	804001	0.087	0.000	0.282	0.000	1.000

Notes: Table 2 presents descriptive statistics of the full sample comprising of 804,001 firm-year observations and 123,869 unique firms between the years 2000-2021

Table 3: Descriptive statistics – Firm-years with and without EPE executives

	EPE Firm			Non-EPE Firm			Means diff.	t-test
	N	Mean	Median	N	Mean	Median		
Leverage	87296	0.105	0.000	716705	0.156	0.015	0.051	72.187****
Cash	87296	0.202	0.111	716705	0.235	0.162	0.033	39.792****
CEO Duality	87296	0.466	0.000	716705	0.611	1.000	0.145	81.105****
Female Ratio	87296	0.402	0.333	716705	0.322	0.000	-0.080	-54.880****
Board Int	87296	3.064	2.000	716705	0.695	0.000	-2.369	-216.119****
Board Size	87296	2.460	2.000	716705	1.487	1.000	-0.973	-164.885****
Board Age	87296	47.455	51.200	716705	37.165	45.000	-10.291	-159.170****
WC	87296	0.265	0.258	716705	0.292	0.295	0.028	24.193****
Tangibility	87296	0.275	0.154	716705	0.278	0.176	0.003	2.786***
Sales Growth	87296	0.196	0.045	716705	0.165	0.043	-0.031	-10.808****
ROA	87296	0.117	0.075	716705	0.152	0.096	0.035	34.047****
SIZE	87296	9.710	9.481	716705	8.439	8.262	-1.271	-182.876****
CEO Female	87296	0.277	0.000	716705	0.202	0.000	-0.075	-47.319****
CEO Int	87296	2.719	2.000	716705	0.890	0.000	-1.829	-162.928****
Board Exp	87296	4.996	3.500	716705	1.523	1.000	-3.473	-223.795****
CEO Exp	87296	4.727	3.000	716705	2.007	1.000	-2.720	-166.396****
CEO Age	87296	52.170	52.000	716705	50.427	50.000	-1.743	-49.082****

Notes: Table 3 displays descriptive statistics, presenting a comparison between EPE firms and non-EPE firms, including the statistical differences in means for their respective variables. Of the total 804,001 firms in the sample, 87,296 are EPE firms.

4.2. Regression Analysis: EPE executive on corporate policies

4.2.1. Results from EPE executives' risk-taking in subsequent firms

Table 4 shows the results from Model (1). We find that firms with at least one EPE executive have lower *Leverage* compared to those without an EPE executive, with a statistically significant difference of approximately 1.0 percentage point. This corresponds to 6.7%⁵ less than the sample mean. We additionally observe a significant and positive correlation between *ROA* and the presence of EPE executives (positive 1.1 percentage points, or 7.4% higher than the sample mean). However, we do not find any significant association between a firm's *Cash* and having an EPE executive. The control variables included have largely a similar effect to earlier conducted studies (Ivanova et al., 2023; Dittmar & Duchin, 2016). *Leverage* decreases with *ROA* and *CEO Female*, and increases with *Tangibility*, *Firm Size* and *Sales Growth*. *Cash* decreases with *Tangibility* and *Size* and increases with *ROA*.

In addressing the potential selection bias discussed in Section 3.3.4, we observe that the coefficients of *Leverage* and *Cash* in EPE executives' subsequent firms are in the opposite direction from those found in the top one percent selected firms. For the top one percent selected firms (i.e., the firms ranked within the top percentile of firms with the largest abnormal *ROA* increase over one year), *Leverage* was significantly positive by 1.6 percentage points and *Cash* significantly negative by 1.3 percentage points. The regression results of the top one percent selected firms are found in Table 6.

⁵ The economic significance is calculated by dividing a variable's regression coefficient by the corresponding sample mean and multiply by one hundred to obtain the percentage difference relative to the sample mean

Table 4: EPE and financial outcomes

	Leverage	Cash	ROA
EPE Firm	-0.00965**** (0.00116)	0.000840 (0.00131)	0.0114**** (0.00161)
CEO Duality	0.00152 (0.00106)	-0.00124 (0.00108)	-0.00303** (0.00142)
Female Ratio	-0.00136 (0.00127)	-0.00156 (0.00130)	0.00309* (0.00162)
Board Int	-0.00246**** (0.000256)	-0.00151**** (0.000261)	-0.000472 (0.000344)
Board Members	0.00451**** (0.000360)	-0.00326**** (0.000367)	-0.00235**** (0.000457)
Board Age	-0.000214**** (0.0000252)	0.000100**** (0.0000250)	-0.0000851*** (0.0000314)
WC	0.0629**** (0.00260)	0.170**** (0.00230)	
Tangibility	0.274**** (0.00364)	-0.228**** (0.00299)	
Sales Growth	0.00728**** (0.000318)	-0.00492**** (0.000343)	
ROA	-0.0530**** (0.00111)	0.0704**** (0.00128)	
Size	0.00348**** (0.000637)	-0.0120**** (0.000642)	
Female CEO	-0.00634**** (0.00105)	0.00776**** (0.00112)	0.00252* (0.00145)
CEO Int	-0.00264**** (0.000214)	-0.00188**** (0.000213)	-0.00177**** (0.000295)
Board Exp	0.00200****	0.000124	-0.000504

	Leverage	Cash	ROA
	(0.000212)	(0.000234)	(0.000328)
CEO Exp	0.00224****	-0.000108	-0.000420
	(0.000182)	(0.000192)	(0.000284)
CEO Age	-0.00107****	0.000983****	-0.000106**
	(0.0000458)	(0.0000437)	(0.0000522)
Cash	-0.118****		
	(0.00193)		
Leverage		-0.151****	
		(0.00237)	
Sales Growth t-1			0.00547****
			(0.000492)
Size t-1			-0.0141****
			(0.000721)
Leverage t-1			0.0360****
			(0.00339)
ROA t-1			0.209****
			(0.00289)
Asset growth t-1			0.00760****
			(0.00117)
Industry-year fixed effects	Yes	Yes	Yes
Firm-fixed effects	Yes	Yes	Yes
Adjusted R- squared	0.147	0.243	0.054
Observations	804001	804001	764871

Notes: Table 4 displays the estimation results of Model (1) for the dependent variables Leverage, Cash, and ROA to determine the potential relationship between EPE executives and their subsequent firms' corporate outcomes.

4.2.2. Inherent or altered risk-taking propensity

In light of these findings we conduct an additional regression analysis, Model (2), to discern whether the results are attributable to an inherent behavioral characteristic, a learning effect, or both. The results are presented in Table 5. The *invEPE Firm* coefficient is positive for *Leverage* (0.7 percentage points corresponding to 4.9% higher than the sample mean) and negative for *Cash* (-0.4 percentage points, corresponding to 1.7% lower than the sample mean). This suggests a time-invariant inherent risk-taking preference. The *EPE Firm* coefficients for *Leverage* and *Cash* are negative (-1.3 percentage points, or 8.7% lower than sample mean) and positive (0.3 percentage points, or 1.2% higher than), respectively. This suggests the presence of a learning effect for decreased financial risk-taking.

For *Leverage*, the magnitude of the learning effect is greater than that of the inherent which indicates a shift for EPE executives from taking on higher financial leverage to taking on lower financial leverage than non-EPE firms, as evidenced by the results from Model (1). For *Cash*, while we also observe a learning effect connected to an EPE, it seems to eliminate the inherent behavior. However, the magnitude of the learning effect is not great enough to cause significantly higher cash holdings than firms without an EPE-executive, as indicated by the (insignificant) outcome derived from Model (1). For *ROA*, EPE executives are associated with a higher ROA on a time-invariant level (4.7 percentage points). However, the positive effect is partially reduced (-1.1 percentage points) following an EPE.

Table 5: Inherent risk-taking and learning effects

	Leverage	Cash	ROA
invEPE Firm	0.00735**** (0.00143)	-0.00418*** (0.00151)	0.0471**** (0.00203)
EPE Firm	-0.0132**** (0.00134)	0.00285* (0.00149)	-0.0115**** (0.00195)
Control Variables	Yes	Yes	Yes
Industry-year fixed effects	Yes	Yes	Yes
Firm-fixed effects	Yes	Yes	Yes
Adjusted R-squared	0.147	0.243	0.055
Observations	804001	804001	764871

Notes: Table 5 displays the estimation results of the independent variables “invEPE Firm” and “EPE Firm” in Model (2), to investigate the inherent risk-taking behavior of EPE executives and any change attributed to an EPE. The dependent variables proxying risk are Leverage and Cash. The same are presented for performance proxied by ROA.

Table 6: Determinants – selected performances for EPE measure

	Leverage	Cash	ROA
Selected Performance	0.0164**** (0.00102)	-0.0134**** (0.00126)	0.507**** (0.00291)
Adjusted R-squared	0.148	0.244	0.192
Observations	804001	804001	748770

Notes: Table 6 displays the estimation results of the top one percent selected firms to demonstrate potential determinants of the EPE executive selection.

4.2.3. Pre-post analysis before and after the hire of an EPE executive

The obtained regression output from Model (1) shows that EPE executives are associated with lower financial leverage. Since EPE executives can either directly influence their subsequent firms’ corporate policies, or be matched with firms that, prior to the hiring of the EPE executive, have a trend of reduced risk-taking, we employ a pre-post analysis (Model (3) and (4)) to investigate these dynamics.

Table 7: Pre-post of EPE hire – effect of hire

	Leverage	Cash	ROA
EPE_firm post hiring	-0.0161**** (0.00161)	0.00211 (0.00189)	0.0169**** (0.00324)
Adjusted R-squared	0.088	0.142	0.007
Observations	66742	66742	61599

Notes: Table 7 displays the estimation results of Model (3) of the pre-post analysis conducted to compare EPE firms’ difference in risk-taking four years prior to and four years following the hiring of an EPE executive.

Table 8: Pre-post of EPE hire – coefficients over time

	Leverage	Cash	ROA
t-4	0	0	0
	(.)	(.)	(.)
t-3	-0.00105	0.000105	-0.0130**
	(0.00224)	(0.00281)	(0.00557)
t-2	-0.00559**	-0.00115	-0.0197****
	(0.00250)	(0.00314)	(0.00586)
t-1	-0.0125****	0.00109	-0.0388****
	(0.00270)	(0.00335)	(0.00589)
t	-0.0170****	0.00187	0.000462
	(0.00274)	(0.00336)	(0.00574)
t+1	-0.0247****	0.00297	-0.0105*
	(0.00290)	(0.00352)	(0.00589)
t+2	-0.0314****	0.00211	-0.0115*
	(0.00305)	(0.00370)	(0.00606)
t+3	-0.0361****	0.00270	-0.0202***
	(0.00319)	(0.00390)	(0.00622)
Control Variables	Yes	Yes	Yes
Industry-year fixed effects	Yes	Yes	Yes
Firm-fixed effects	Yes	Yes	Yes
Adjusted R-squared	0.094	0.142	0.009
Observations	66742	66742	61599

Notes: Table 8 displays the estimation results of regression (4) of the pre-post analysis conducted to compare EPE firms' difference in risk-taking four years prior to and four years following the hiring of an EPE executive. Year t-4 is set as the benchmark.

The results from the pre-post analysis are presented in Table 7 and 8, which details the differences in *Leverage*, *Cash* and *ROA* for firms before and after the hiring of executives with abnormal performance experience (EPE). The results from Model (3) show that *Leverage* is significantly lower in the four years after the hiring of an EPE executive compared to the four years prior to their hiring. For *Cash* we observe no significant effect, in line with the results from Model (1). For *ROA* we observe a significant increase. In Figure 1, the coefficients from Model (4) provide a year-by-year breakdown of the financial metrics relative to the hiring event. This allows us to visually inspect whether there was a pre-existing trend towards more conservative or aggressive financial policies before the EPE executive was hired. For *Leverage*, we observe that compared to four years before the hiring, a clear trend of decline has already started before the hiring. Thus, we cannot rule out that executives and firms match based on pre-existing trends within the firms. We find no significant changes of hiring an EPE executive for *Cash*, in line with Model (1). For *ROA*, we can observe a downwards trend before the hiring, a clear increase the year of the hiring, followed by another decline.

Figure 1: EPE firms' corporate outcomes before and after the hire of an EPE executive

Figure 1a)

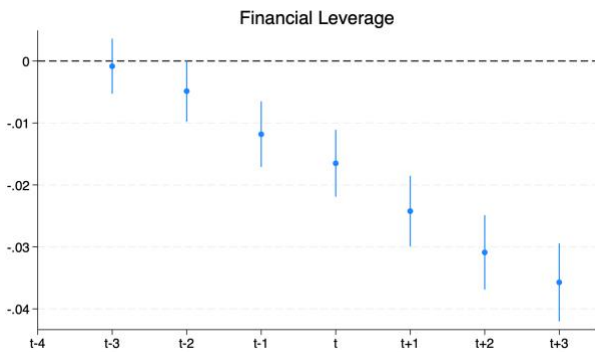


Figure 1b)

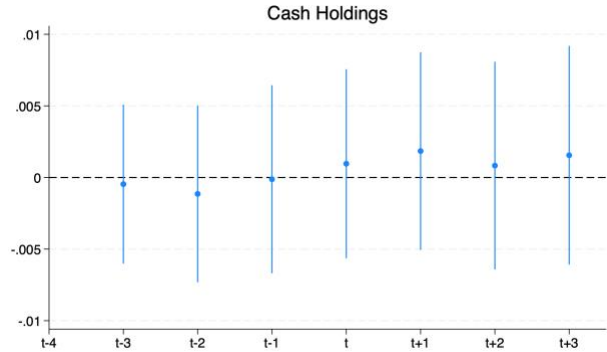


Figure 1c)



Notes: Figure 1 displays the coefficients obtained from the $YEAR_{it}$ variables from Model (4), where the dependent variables (Y_{it}) are compared to year $t-4$ before the EPE hiring. In Figure 1a) Y_{it} shows Leverage, in Figure 1b) Y_{it} shows Cash and in Figure 1c) Y_{it} shows ROA, which is further defined in Table 9 in the Appendix.

4.3. Robustness checks

In this study, one of the primary concerns is the accuracy with which exceptional performance is captured. Our proxy for operational performance, ROA, is frequently utilized in academic literature due to its direct reflection of managerial effectiveness and financial health (Acquaah, 2003; Waring, 1996). However, the time span over which performance is measured can potentially influence the results. To ensure the robustness of our findings, we conduct a robustness check by extending the measurement period of our primary variable, abnormal ROA increase (ΔF_{ijt}), from one year to a three-year average (hereinafter referred to as “Persistent EPE”). This approach is drawn from Hendricks et al. (2008) and aims to capture a more persistent indicator of operational performance, further mitigating the impact of short-term fluctuations and providing a more stable basis for assessing the influence of an EPE on subsequent firms’ financial outcomes. The results are reported in Table 9 and Tables 12-14 in the Appendix.

Starting with Model (1), *Leverage* decreases for firms with at least one executive with a Persistent EPE, with a magnitude of 1.0 percentage point (6.7% lower than the sample mean), which is the same effect as earlier observed for the one-year EPE. For *Cash*, there is a 0.2 percentage point increase (0.9% higher relative to the sample mean), significant at the ten-percent level. Thus, the observed results show lower risk-taking among Persistent EPE executives.

Moving on to the learning mechanism, a similar pattern as previously found for the one-year EPE can be observed in Model (2). For *Leverage*, we find that the time-invariant effect is positive, and the learning effect is negative by 1.0 and -1.4 percentage points, respectively. The learning effect is larger in magnitude, explaining the positive coefficient derived from Model (1). For *Cash*, the time-invariant effect is negative, and the learning effect is positive by -0.3 and 0.4 percentage points, respectively. As for *Leverage*, the learning effect is larger than the inherent risk-taking, consistent to Model (1) robustness results. Thus, this suggests that executives reduce their risk-taking following a Persistent EPE.

Lastly, the pre-post analysis (Model (3) and (4)) confirms that *Leverage* significantly decreases the years after the hiring of an EPE compared to the years before hiring. A clear trend of decreasing *Leverage* is evident for the years before the hiring (see Figure 2 in Appendix). For

Cash, we here find a significant increase associated with the hiring. Similar to *Leverage*, there is a pre-existing trend among the treated firms to increase cash holdings already before the hiring. For *ROA*, we find a similar pattern as for the one-year EPE executives, a significant increase associated with the hiring, driven by a spike connected to the hiring in an otherwise decreasing trend. Overall, the robustness test related to the selection of EPE provides support to earlier findings, and a clearer effect related to cash holdings.

Table 9: Persistent EPE and financial outcomes

	Leverage	Cash	ROA
EPE Firm Per	-0.00999**** (0.00122)	0.00224* (0.00135)	0.00743**** (0.00167)
CEO Duality	0.00157 (0.00106)	-0.00125 (0.00108)	-0.00308** (0.00142)
Female Ratio	-0.00143 (0.00127)	-0.00159 (0.00130)	0.00329** (0.00162)
Board Int	-0.00249**** (0.000255)	-0.00153**** (0.000261)	-0.000362 (0.000344)
Board Members	0.00446**** (0.000359)	-0.00329**** (0.000366)	-0.00219**** (0.000457)
Board Age	-0.000211**** (0.0000252)	0.000101**** (0.0000250)	-0.0000907*** (0.0000314)
WC	0.0629**** (0.00260)	0.169**** (0.00230)	
Tangibility	0.274**** (0.00364)	-0.228**** (0.00299)	
Sales Growth	0.00727**** (0.000318)	-0.00491**** (0.000343)	
ROA	-0.0531**** (0.00111)	0.0704**** (0.00128)	
Size	0.00350**** (0.000637)	-0.0120**** (0.000642)	

	Leverage	Cash	ROA
Female CEO	-0.00639**** (0.00105)	0.00773**** (0.00112)	0.00272* (0.00145)
CEO Int	-0.00265**** (0.000214)	-0.00189**** (0.000213)	-0.00172**** (0.000295)
Board Exp	0.00197**** (0.000211)	0.000106 (0.000233)	-0.000399 (0.000327)
CEO Exp	0.00221**** (0.000181)	-0.000118 (0.000192)	-0.000344 (0.000283)
CEO Age	-0.00107**** (0.0000457)	0.000981**** (0.0000437)	-0.000102** (0.0000522)
Cash	-0.118**** (0.00193)		
Leverage		-0.151**** (0.00237)	
Sales Growth t-1			0.00547**** (0.000492)
Size t-1			-0.0140**** (0.000721)
Leverage t-1			0.0358**** (0.00339)
ROA t-1			0.209**** (0.00289)
Asset Growth t-1			0.00759**** (0.00117)
Constant	0.0465 (0.0369)	0.343**** (0.0636)	0.237**** (0.0437)
Adjusted R-squared	0.147	0.243	0.054
Observations	804001	804001	764871

Notes: Table 9 displays the estimation results of Model (1) for the dependent variables Leverage, Cash, and ROA to determine the potential relationship between Persistent EPE executives and their subsequent firms' corporate outcomes.

5. Analysis and discussion

From our theoretical analysis we expected to find that CEOs and directors that have experienced exceptional performance, proxied by the profitability measure return on assets, undertake either more or less financial risk in their subsequent firms. We argued that these executives are subject to a learning mechanism that manifests as either increased overconfidence or heightened risk-aversion. We expected the overconfidence effect to explain higher risk-taking, and risk-aversion to explain lower risk-taking in subsequent firms, where risk-taking is proxied by financial leverage and cash holdings. We therefore formulated the non-directional hypothesis: *CEOs and directors with an Exceptional Performance Experience are positively or negatively related to the financial risk of their subsequent firms.*

Model (1) and (2)

Our findings provide partial support for our hypothesis and suggest that the presence of an EPE executive is associated with different financial risk-taking, and more specifically lower risk-taking, than firms without an EPE executive. Model (1) reveals that subsequent firms led by EPE executives exhibit lower levels of financial leverage compared to firms without an EPE executive. However, the results found that the presence of EPE executives in a firm does not significantly explain the variance in cash holdings. Interestingly, in the robustness test, where a three-year average of abnormal ROA increase is used to identify EPE executives (described in detail in Section 4.3), we do observe increased cash-holdings, significant at the ten-percent level. Additionally, the results from the robustness test confirms, with a similar magnitude, the significant results on EPE executives' effect on financial leverage. Altogether, the results provide partial evidence for lower financial risk-taking among firms with an EPE executive present. The observed stronger effect in the robustness test may possibly be attributed to that the three-year average better captures firms and corresponding executives that consistently has outperformed the industry. This approach may more effectively filter out firms with erratic performance patterns, resulting in a more precise representation of executives' perception of abnormal performance. Nevertheless, it is clear that the relationship between the presence of EPE executives and cash holdings is dependent on the measure of exceptional performance.

The following analysis focuses on the significant results found in the main regression and the robustness test. The implications of the insignificant result on cash holdings from Model (1) are further discussed below. The outcomes of Model (1) contradict the findings of Dittmar & Duchin (2016), who suggested that positive experiences among executives lack sufficient influence on their subsequent decision-making or corporate financial policies. Our study, in the context of Swedish private limited liability companies, does show an effect that is strong enough to be significant.

Model (2) reveals evidence for a learning effect where financial risk-taking decreases following an EPE in line with a mechanism of heightened risk-aversion, rather than overconfidence and increased risk-taking. Interestingly, the EPE executives are inherently associated with higher propensity for financial risk-taking, although weaker than the effect of the learning mechanism (this holds true for all cases but cash holdings using our primary EPE measure). In other words, following an EPE, executives transition from a higher risk profile to one characterized by reduced risk exposure. The findings of heightened risk-aversion resonate with research suggesting that individuals tend to take less risk following periods of success (March and Shapira, 1987; Schneider et. al., 2016) and when they are performing better than the general expectation (Pope & Schweitzer, 2011; Huber, 1994). Therefore, one interpretation is that following a period of success and consequently a shift in the EPE executive's perception of favorable and unfavorable outcomes, they become more risk-averse as their current position is perceived above their reference point. This assertion relies on the presumption that an EPE in fact results in rewards such as monetary profits or intangible benefits like social status, recognition, or emotional satisfaction. We argue this to be reasonable following Dikolli et al. (2013), Banker et al. (2013) and Crossland and Hambrick (2007).

Considering the EPE executives are selected based on the performance measure ROA, it is an interesting finding that EPE executives hold more risk prior to the EPE. It seems to be an association between financial risk-taking and those executives who manage to achieve a top profitability performance, an EPE. Since lower cash holdings should directly increase ROA, this is expected to some extent. However, since it usually constitutes only a minor portion of total assets, this effect should only be marginal. While cash holdings are directly related to our measure of ROA, financial leverage is not. Despite this, one could argue that both can be indicators of the risk-taking propensity beyond financial policies, for instance a firms' strategic approaches and investment decisions. While one interpretation could therefore be that risk-

taking increases operational performance, drawing such general conclusions requires further investigation, and prior research have drawn mixed conclusions (eg. Aaker & Jacobson, 1987; Bromiley, 1991). For example, while risk might be associated with our selection of high performers, it might also be associated with the executives with lower performance. Bromiley (1991) shows that the effect of risk on ROA differs depending on the level of prior profitability, where risk-taking has a negative effect on ROA for firms with an already low ROA. Nevertheless, in Model (2) we see that the positive effect EPE executives have on ROA is decreased as their risk-taking decreases, which would resonate with risk-taking being associated with ROA.

Model (3) and (4)

With regards to the significant results obtained of changed financial risk-taking in the subsequent firms of executives experiencing abnormal performance, our pre-post analysis gives us more information about how the effect happens. While we are able to show direct significant effects related to the hirings of EPEs with the same signs as Model (1) (leverage changes for EPEs and leverage and cash changes for Persistent EPEs), all of these changes have pre-initiated trends the years before the hiring. While this is not inconsistent with a potential influence exerted from the executives of their own idiosyncratic preference, there is reason to believe that matching based on preferences from either the firm or the executive is taking place. Therefore, at least a part of the effect observed is likely attributed to matching.

Theoretically, such matching from the executives' part is also highly plausible with the risk-aversion mechanism described in Section 2.5.2. Changed risk preferences from a higher reference point could, as Schneider et al. (2016) suggest, generate changed goals for individuals to seek out relatively safer options. Thus, EPE executives' may have updated their goals based on their experiences and matched themselves with firms fulfilling their preferences. While firm-fixed effects account for time-invariant firm characteristics in Model (1), time-dependent trends as those observed in the pre-post analysis may cause this matching. Similarly, firms with this trend may hire the EPE executives as part of their strategy. However, we see no apparent reason in our results to hire EPE executives for this objective, since the exceptional performance itself is not associated with lower financial risk. We can however not fully exclude this option since their unobserved characteristics might drive such matching as well.

Discussion of non-significant results, the pessimism bias, and the overconfidence effect

In addressing the non-significant association between the presence of EPE executives and cash holdings shown in Model (1) using our primary EPE measure, we propose three potential explanations. First, as discussed in Section 2.3, Dittmar & Duchin (2016) find that positive performance experiences do not significantly influence corporate risk-taking. They argue in line with the pessimism bias hypothesis, which suggests that negative outcomes tend to have a more pronounced impact than positive ones (Dittmar & Duchin, 2016). Our findings of EPE executives' insignificant impact on cash holdings, based on a one-year residual ROA increase selection criteria, along with the significant result at the ten-percent level in the Persistent EPE, could be attributed to this bias. Secondly, using both our primary and Persistent EPE measure, Model (2) suggests that EPE executives inherently hold less cash reserves up until the occurrence of an EPE, after which there is a significant increase. Consequently, it is reasonable to infer that they exhibit a learning mechanism, in the form of heightened risk-aversion following an EPE, offsetting the lower cash holdings observed before the EPE. Such findings suggest that any potential differences to non-EPE executives prior to the EPE is eliminated. This might explain the insignificant Model (1) results for cash holdings using the primary EPE measure. Thirdly, we cannot discount the possibility of the presence of the overconfidence effect. Heightened risk-aversion and greater overconfidence may act in tandem resulting in a less pronounced increase in cash holdings. However, since financial leverage is highly significant and with similar magnitude when using both our primary and robust EPE measure, we argue that this cannot not alone explain the insignificant results of cash holdings in firms with an EPE executive present.

EPE executives' impact on performance

Another aspect worth analyzing is the difference in firm profitability in firms led by EPE executives. Model (1), with ROA as the dependent variable, reveals a significant positive association between EPE executives and ROA. This suggests that EPE executives may demonstrate greater efficiency in utilizing a firm's assets to generate returns than non-EPE executives. Thus, this evidence shows that EPE executives to some extents are able to repeat earlier high profitability. As mentioned, Model (2) suggests that the magnitude of the increased ROA is reduced after the EPE. However, if viewing our financial risk-taking measures as proxies for general financial risk as previously mentioned, the combination of lower financial risk-taking and higher ROA than non-EPE firms is noteworthy. Turning to the pre-post analysis, we observe that firms have significantly higher ROA during the four years after hiring an EPE

executive, compared to the four years prior to hiring. In contrast to our measures for financial risk-taking, we observe a pre-existing trend in the opposite direction. For the Persistent EPE executives, we observe a significant ROA increase the year of the hiring. Thus, while further investigations are needed to establish a causal effect, we find no signs that matching is driving the effect.

Validity of our results

A risk of our study worth mentioning is possible omitted variable bias. For instance, the identified group of executives, following the EPE, might receive opportunities at firms of a specific character. Intuitively, these firms may be of higher quality, since the EPE executives have shown evidence of top performance. Then our EPE classified executives may be more of a predictor of those particular firms' risk behavior, than linked to increased risk-aversion among individual executives. This hinges on the fact that such firms are subject to time-variant changes which correlates with our results (otherwise it would be captured by firm-fixed effects). However, large parts of such bias should be captured by control variables such as ROA, size, and sales growth. Additionally, the pre-post analysis unveils that firms hiring an EPE executive seems to be in the trend of declining ROA (from a generally lower ROA average shown in Table 3). While unobserved quality is not fully captured by this measure of operational performance, one could argue that such quality trends are unlikely to fully counter the declining ROA trend. Therefore, we place limited weight on potential bias issues stemming from our selection with regards to the behavior of subsequent firms.

6. Conclusion and Implications

6.1. Conclusion

In this study, we investigated if positive professional experiences among CEOs and directors influence corporate policies in their subsequent firms. More specifically, we explored if such positive performance experiences result in different financial risk-taking, proxied by financial leverage and cash holdings, compared to executives without such an experience. Executives active in a firm ranked within the top one percent of firms with the largest increase in abnormal return on assets (ROA) over one year were defined as EPE executives. As a robustness check, executives were considered Persistent EPE executives if their firms ranked in the top one percent for the largest average increase in abnormal ROA over three years.

We investigated this on a large sample containing 123,869 Swedish private limited liability companies between 2000 and 2021. In Section 2.2 and 2.3 we demonstrated that CEOs' and directors' individual characteristics influence corporate outcomes. Then, drawing from extended literature within the field, we argued that an exceptional performance experience will alter an executives' individual characteristics in the form of either greater overconfidence or heightened risk-aversion, which in turn will influence corporate financial policies. Therefore, we hypothesized that firms with an EPE executive present would undertake either more or less financial risk with respect to firms without an EPE executive.

Our results showed that firms with an EPE executive have lower financial leverage relative to firms without an EPE executive, both using our primary EPE measure and the Persistent EPE measure. While we did not find a significant association between the presence of an EPE executive and differences in cash holdings when using our primary EPE measure, we found support for higher cash holdings using the Persistent EPE measure, suggesting that circumstances on which the measure is constructed leads to different outcomes. Moreover, we found that EPE executives are inherently associated with higher financial risk-taking, although to a lesser extent than the impact of the learning mechanism following an EPE. This showed to be true across all scenarios except for cash holdings when employing our primary EPE definition. However, a learning effect was present across all our proxies for financial risk-taking, giving evidence for heightened risk-aversion after an EPE. These findings align with existing literature indicating that positive experiences result in increased risk-aversion, due to a change in perception of outcomes relative to a reference point (Pope & Schweitzer, 2011; Schneider et al., 2016). However, we do observe clear trends of decreased financial risk-taking the years before firms hire an EPE executive which we interpret as an indication for firm-executive matching. Such behavior is not inconsistent with argued mechanisms, but it challenges our argument that EPE executives are, due to the EPE, exerting influence to change the financial policies at the firm level. Additionally, we do find an association with EPE executives and increased operational performance. Since a significantly positive effect of hiring an EPE executive is preceded by a negative trend, we see no apparent signs for firm-executive matching in this case.

6.2. Contribution

Dittmar and Duchin (2016) investigates how positive work-related experiences relate to corporate policies in the setting of US listed companies. They find no significant relationship

and argue in line with the pessimism bias hypothesis, which posits that negative outcomes carry stronger effects compared to positive outcomes (Dittmar & Duchin, 2016). Our investigation differed in three distinct approaches. Rather than focusing on listed companies, we explored the less investigated private corporate landscape which differs substantially in their exposure to stakeholder monitoring. Additionally, by including directors in addition to CEOs, we are able to reinforce the notion that top management collectively shapes corporate decision-making. Lastly, we select a more narrow group of top performance, comprising the top percentile rather than the top decile of firms, to isolate the potential effects of perceived high performance. Our significant findings show opposing results to the results obtained by Dittmar and Duchin (2016) which highlights the importance of context when examining this relationship.

The findings of this study contribute to managerial circles and theoretical literature in several ways. First, we add to the domain of professional experiences on corporate policies by improving the understanding of how characteristics across top management influence corporate outcomes. More specifically, the results provide support that executives with an exceptional performance experience tend to have lower financial risk in subsequent firms. By looking at both CEOs and directors we support the idea originally proposed by Hambrick and Mason (1984) that personal characteristics of the whole top management team in a firm impacts its decision-making and corporate outcomes. Secondly, we add to the literature of the risk profile of privately owned firms, by highlighting the relationship between an EPE, psychological traits, and financial risk of privately owned firms (Ivanova et al., 2023). This also offers insights for investors, credit institutions, and other stakeholders seeking to assess such firms. Thirdly, in light of research by Pope & Schweitzer (2011) and Schneider et al. (2016), we support the literature investigating how individuals' risk-aversion is altered following successes.

6.3. Limitations and future research

Given this study's limitations and results, there are several aspects to consider for further research in order to improve the understanding of how professional experiences shape corporate decision-making and outcomes. First, our study greatly relied on the measure of an exceptional performance experience to identify and characterize a group of executives who perceived their performance as superior to others. Considering that different EPE measures led to different results, further research could focus on explaining this variation. This might include creating additional measures with different time frames and metrics, for instance a continuous EPE variable, providing a broader understanding of their effects.

Second and linked to the first suggestion of further research, our measure for a positive performance rested on the assumption that it in fact leads to rewards such as monetary gains or intangible benefits like social status, recognition, or emotional satisfaction. By exploring how such rewards differ in their impact on executives and in turn how those executives relate to corporate policies in their subsequent firms, could provide more precise insights into how different types of performance influence corporate outcomes.

Lastly, our study did not aim to establish a causal relationship. Considering that our observations indicate that firms' hiring EPE executives are already trending towards lower financial leverage, future research could explore this further through a difference-in-difference analysis where the time-variant effects of EPE firms are directly compared to the ones of non-EPE firms.

7. References

- AAKER, David. A., and Robert. JACOBSON. "The Role of Risk in Explaining Differences in Profitability" *Academy of Management Journal*, vol. 30, no. 2, 1 June 1987, pp. 277–296, <https://doi.org/10.2307/256274>. Accessed 22 Apr. 2024.
- Acquaah, Moses. "Corporate Management, Industry Competition and the Sustainability of Firm Abnormal Profitability." *Journal of Management and Governance*, 2003, pp. 57–85.
- Adam, Tim R., et al. "Managerial Overconfidence and Corporate Risk Management." *Journal of Banking & Finance*, vol. 60, Nov. 2015, pp. 195–208, <https://doi.org/10.1016/j.jbankfin.2015.07.013>.
- Andersen, Steffen, et al. "Once Bitten, Twice Shy: The Power of Personal Experiences in Risk Taking." *Journal of Financial Economics*, vol. 132, no. 3, June 2019, pp. 97–117, <https://doi.org/10.1016/j.jfineco.2018.10.018>.
- Banker, Rajiv D., et al. "The Relation between CEO Compensation and Past Performance." *The Accounting Review*, vol. 88, no. 1, 2013, pp. 1–30, <https://www.jstor.org/stable/41721933>. Accessed 13 May 2024.
- Berk, Jonathan , and Peter DeMarzo. *Corporate Finance*, 5th Edition Berk and DeMarzo. [Www.pearson.com](http://www.pearson.com), 2019, www.pearson.com/se/Nordics-Higher-Education/subject-catalogue/finance/corporate-finance-5e-berk-and-demarzo.html.
- Bertrand, Marianne, and Antoinette Schoar. "Managing with Style: The Effect of Managers on Firm Policies." *The Quarterly Journal of Economics*, vol. 118, no. 4, 2003, pp. 1169–1208, www.jstor.org/stable/25053937.
- Bhagat, Sanjai, and Brian Bolton. "Corporate Governance and Firm Performance." *Journal of Corporate Finance*, vol. 14, no. 3, June 2008, pp. 257–273.
- Billett, Matthew T., and Yiming Qian. "Are Overconfident CEOs Born or Made? Evidence of Self-Attribution Bias from Frequent Acquirers." *Management Science*, vol. 54, no. 6, 2008, pp. 1037–1051, <https://www.jstor.org/stable/20122453>. Accessed 13 May 2024.
- Bromiley, P. "Testing a Causal Model of Corporate Risk Taking and Performance" *Academy of Management Journal*, vol. 34, no. 1, 1 Mar. 1991, pp. 37–59, <https://doi.org/10.2307/256301>. Accessed 5 May 2024.
- Chiang, Yao-Min, et al. "Do Investors Learn from Experience? Evidence from Frequent IPO Investors." *The Review of Financial Studies*, vol. 24, no. 5, 2011, pp. 1560–1589, www.jstor.org/stable/20869280. Accessed 12 May 2024.

CHOI, JAMES J., et al. "Reinforcement Learning and Savings Behavior." *The Journal of Finance*, vol. 64, no. 6, 25 Nov. 2009, pp. 2515–2534, <https://doi.org/10.1111/j.1540-6261.2009.01509.x>.

Crossland, Craig, and Donald C. Hambrick. "How National Systems Differ in Their Constraints on Corporate Executives: A Study of CEO Effects in Three Countries." *Strategic Management Journal*, vol. 28, no. 8, 2007, pp. 767–789, <https://www.jstor.org/stable/20141947>. Accessed 13 May 2024.

Davis, James H., et al. "Toward a Stewardship Theory of Management." *The Academy of Management Review*, vol. 22, no. 1, Jan. 1997, pp. 20–47.

Dikolli, Shane S., et al. "CEO Tenure and the Performance-Turnover Relation." *Review of Accounting Studies*, vol. 19, no. 1, 1 Sept. 2013, pp. 281–327, <https://doi.org/10.1007/s11142-013-9247-6>.

Dittmar, Amy, and Ran Duchin. "Looking in the Rearview Mirror: The Effect of Managers' Professional Experience on Corporate Financial Policy." *The Review of Financial Studies*, vol. 29, no. 3, 2016, pp. 565–602, www.jstor.org/stable/43866020?seq=25. Accessed 13 May 2024.

Eckel, Catherine C., and Philip J. Grossman. "Chapter 113 Men, Women and Risk Aversion: Experimental Evidence." *Handbook of Experimental Economics Results*, vol. 1, 2008, pp. 1061–1073, [https://doi.org/10.1016/s1574-0722\(07\)00113-8](https://doi.org/10.1016/s1574-0722(07)00113-8).

Eshraghi, Arman, and Richard Taffler. *Fund Manager Overconfidence and Investment Performance: Evidence from Mutual Funds*. Fund Manager Overconfidence and Investment Performance: Evidence from Mutual Funds. 2012.

Fee, C Edward, et al. "Robust Models of CEO Turnover: New Evidence on Relative Performance Evaluation." *The Review of Corporate Finance Studies*, vol. 7, no. 1, 21 Aug. 2017, pp. 70–100, <https://doi.org/10.1093/rcfs/cfx018>. Accessed 30 Mar. 2024.

FICH, ELIEZER M., and ANIL SHIVDASANI. "Are Busy Boards Effective Monitors?" *The Journal of Finance*, vol. 61, no. 2, 9 Mar. 2006, pp. 689–724, <https://doi.org/10.1111/j.1540-6261.2006.00852.x>.

Geringer, J. Michael, et al. "Product and International Diversification among Japanese Multinational Firms." *Strategic Management Journal*, vol. 21, no. 1, Jan. 2000, pp. 51–80, [https://doi.org/10.1002/\(sici\)1097-0266\(200001\)21:1%3C51::aid-smj77%3E3.0.co;2-k](https://doi.org/10.1002/(sici)1097-0266(200001)21:1%3C51::aid-smj77%3E3.0.co;2-k). Accessed 29 Mar. 2024.

Ghosh, Alope, et al. "Corporate Boards, Audit Committees, and Earnings Management: Pre- and Post-SOX Evidence." *Journal of Business Finance & Accounting*, vol. 37, no. 9-10, Nov. 2010, pp. 1145–1176, <https://doi.org/10.1111/j.1468-5957.2010.02218.x>.

Graham, John R., and Campbell R. Harvey. "Managerial Miscalibration." *The Quarterly Journal of Economics*, vol. 128, no. 4, 2013, pp. 1547–1584, www.jstor.org/stable/26372532?seq=2. Accessed 12 May 2024.

Hambrick, Donald C., and Phyllis A. Mason. "Upper Echelons: The Organization as a Reflection of Its Top Managers." *The Academy of Management Review*, vol. 9, no. 2, Apr. 1984, pp. 193–206. <https://doi.org/10.2307/258434>.

Hamori, Monika, and Burak Koyuncu. "Experience Matters? The Impact of Prior CEO Experience on Firm Performance." *Human Resource Management*, vol. 54, no. 1, 24 Sept. 2014, pp. 23–44, <https://doi.org/10.1002/hrm.21617>. Accessed 18 Mar. 2024.

Hayward, Mathew L. A., and Donald C. Hambrick. "Explaining the Premiums Paid for Large Acquisitions: Evidence of CEO Hubris." *Administrative Science Quarterly*, vol. 42, no. 1, Mar. 1997, p. 103.

Hendricks, Kevin B., and Vinod R. Singhal. "The Effect of Product Introduction Delays on Operating Performance." *Management Science*, vol. 54, no. 5, May 2008, pp. 878–892, <https://doi.org/10.1287/mnsc.1070.0805>.

Hilary, Gilles, and Lior Menzly. "Does Past Success Lead Analysts to Become Overconfident?" *Management Science*, vol. 52, no. 4, 2006, pp. 489–500, www.jstor.org/stable/20110528.

Huber, Oswald. "Buying Protection in a Multistage Investment Task." *Acta Psychologica*, vol. 92, no. 2, July 1996, pp. 153–167, [https://doi.org/10.1016/0001-6918\(95\)00009-7](https://doi.org/10.1016/0001-6918(95)00009-7). Accessed 7 Apr. 2020.

Huber, Oswald. "Decision Behavior in a Multistage Investment Task." *Acta Psychologica*, vol. 85, no. 2, Apr. 1994, pp. 139–154, [https://doi.org/10.1016/0001-6918\(94\)90029-9](https://doi.org/10.1016/0001-6918(94)90029-9). Accessed 3 Mar. 2024.

Ivanova, Mariya N, et al. "Yesterday Is History, Tomorrow Is a Mystery: Directors' and CEOs' Prior Bankruptcy Experiences and the Financial Risk of Their Current Firms." *Journal of Business Finance & Accounting*, 12 June 2023, <https://doi.org/10.1111/jbfa.12736>. Accessed 21 Jan. 2024.

Jacobsen, Robert. "The Persistence of Abnormal Returns." *Strategic Management Journal*, vol. 9, no. 5, 1988, pp. 415–430, www.jstor.org/stable/2485953?seq=2. Accessed 13 May 2024.

Judge, W. Q., and C. P. Zeithaml. "INSTITUTIONAL and STRATEGIC CHOICE PERSPECTIVES on BOARD INVOLVEMENT in the STRATEGIC DECISION PROCESS." *Academy of Management Journal*, vol. 35, no. 4, 1 Oct. 1992, pp. 766–794, <https://doi.org/10.2307/256315>.

Kahneman, Daniel, and Amos Tversky. "Prospect Theory: An Analysis of Decision under Risk." *Econometrica*, vol. 47, no. 2, Mar. 1979, pp. 263–292, <https://doi.org/10.2307/1914185>.

Kaustia, Markku, and Samuli Knüpfer. "Do Investors Overweight Personal Experience? Evidence from IPO Subscriptions." *The Journal of Finance*, vol. 63, no. 6, 2008, pp. 2679–2702, www.jstor.org/stable/20487947?seq=3. Accessed 12 May 2024.

Kim, Jeong-Bon, et al. "CEO Overconfidence and Stock Price Crash Risk." *Contemporary Accounting Research*, vol. 33, no. 4, 21 Jan. 2016, pp. 1720–1749, <https://doi.org/10.1111/1911-3846.12217>.

Lemmon, Michael L., et al. "Back to the Beginning: Persistence and the Cross-Section of Corporate Capital Structure." *The Journal of Finance*, vol. 63, no. 4, 2008, pp. 1575–1608, <https://doi.org/10.1111/j.1540-6261.2008.01369.x>. Accessed 12 May 2024.

MacAvoy, Paul W., and Ira M. Millstein. "THE ACTIVE BOARD of DIRECTORS and ITS EFFECT on the PERFORMANCE of the LARGE PUBLICLY TRADED CORPORATION." *Journal of Applied Corporate Finance*, vol. 11, no. 4, Jan. 1999, pp. 8–20, <https://doi.org/10.1111/j.1745-6622.1999.tb00510.x>.

MALMENDIER, ULRIKE, et al. "Overconfidence and Early-Life Experiences: The Effect of Managerial Traits on Corporate Financial Policies." *The Journal of Finance*, vol. 66, no. 5, 21 Sept. 2011, pp. 1687–1733, <https://doi.org/10.1111/j.1540-6261.2011.01685.x>.

March, James G., and Zur Shapira. "Managerial Perspectives on Risk and Risk Taking." *Management Science*, vol. 33, no. 11, 1987, pp. 1404–1418, www.jstor.org/stable/2631920.

Naciti, Valeria. "Corporate Governance and Board of Directors: The Effect of a Board Composition on Firm Sustainability Performance." *Journal of Cleaner Production*, vol. 237, no. 3, Nov. 2019, p. 117727, doi.org/10.1016/j.jclepro.2019.117727, <https://doi.org/10.1016/j.jclepro.2019.117727>.

Plaksina, Yulia, et al. "CEO Social Status and M&a Decision Making." *International Review of Financial Analysis*, vol. 64, July 2019, pp. 282–300, <https://doi.org/10.1016/j.irfa.2019.06.006>.

Pompian, Michael M. *Behavioral Finance and Wealth Management: How to Build Investment Strategies That Account for Investor Biases*. Google Books, John Wiley & Sons, 3 Jan. 2012. Accessed 12 May 2024.

Pope, Devin G., and Maurice E. Schweitzer. "Is Tiger Woods Loss Averse? Persistent Bias in the Face of Experience, Competition, and High Stakes." *The American Economic Review*, vol. 101, no. 1, 2011, pp. 129–157, www.jstor.org/stable/41038785?seq=2. Accessed 12 May 2024.

Rosenstein, Stuart, and Jeffrey G. Wyatt. "Shareholder Wealth Effects When an Officer of One Corporation Joins the Board of Directors of Another." *Managerial and Decision Economics*, vol. 15, no. 4, July 1994, pp. 317–327, <https://doi.org/10.1002/mde.4090150406>.

Schneider, Sandra, et al. "The Effects of Surrounding Positive and Negative Experiences on Risk Taking." *Judgment and Decision Making*, vol. 11, no. 5, Sept. 2016, pp. 424–440, <https://doi.org/10.1017/s1930297500004538>. Accessed 26 Apr. 2024.

Shemesh, Joshua. "CEO Social Status and Risk Taking." *SSRN Electronic Journal*, 2010, <https://doi.org/10.2139/ssrn.1682625>. Accessed 18 Mar. 2024.

Srivastava, Naveen Kumar. "Does Governance Structure Have Any Effect on Firm Performance during the Financial Crisis." *Journal of Strategy and Management*, vol. 8, no. 4, 16 Nov. 2015, pp. 368–383, <https://doi.org/10.1108/jsma-02-2015-0014>.

Statman, Meir, et al. "Investor Overconfidence and Trading Volume." *The Review of Financial Studies*, vol. 19, no. 4, 2006, pp. 1531–1565, www.jstor.org/stable/4123481?seq=1. Accessed 9 Apr. 2024.

Waring, Geoffrey F. "Industry Differences in the Persistence of Firm-Specific Returns." *The American Economic Review*, vol. 86, no. 5, 1996, pp. 1253–1265, www.jstor.org/stable/2118289.

Yang, Tina, and Shan Zhao. "CEO Duality and Firm Performance: Evidence from an Exogenous Shock to the Competitive Environment." *Journal of Banking & Finance*, vol. 49, Dec. 2014, pp. 534–552, <https://doi.org/10.1016/j.jbankfin.2014.04.008>.

8. Appendix

Table 10: Variable Descriptions

<i>EPE Firm</i>	A binary variable equal to 1 if an EPE CEO or director serves in the firm, otherwise 0
<i>invEPE Firm</i>	A binary variable equal to 1 if an EPE CEO or director has or will be active in the firm, otherwise 0
<i>EPE Firm Per</i>	A binary variable equal to 1 if a <i>Persistent EPE executive</i> serves in the firm, otherwise 0
<i>invEPE Firm Per</i>	A binary variable equal to 1 if a <i>Persistent EPE CEO or director</i> has or will be active in the firm, otherwise 0
<i>Leverage</i>	Total debt divided by total assets*
<i>Cash</i>	Total cash holdings divided by total assets*
<i>Board Int</i>	Average number of additional board positions the firm's board member holds in the same year**
<i>Board Size</i>	The number of board members serving in the firm
<i>Board Age</i>	The average age of all board members serving in the firm
<i>Board Exp</i>	The directors' average number of board or CEO positions before year t
<i>Female Ratio</i>	The share of females in the firm's board
<i>CEO Age</i>	The age of the firm's CEO in years
<i>CEO Female</i>	A binary variable equal to 1 if the firm's CEO is female, otherwise 0
<i>CEO Duality</i>	A binary variable equal to 1 if the CEO serves as chairman in the firm, otherwise 0
<i>CEO Exp</i>	The average number of CEO positions of the CEO before year t
<i>CEO Int</i>	Number of (additional) boards a firm's CEO serves in**
<i>WC</i>	Working capital divided by total assets*
<i>Tangibility</i>	Total fixed assets divided by total assets*
<i>Sales Growth</i>	Sales divided by last year's sales*
<i>ROA</i>	Earnings before interest expenses divided by average total assets*
<i>Size</i>	Natural logarithm of total asset*
<i>Asset Growth</i>	Total assets divided by last year's total assets*

*Winsorized at 1% and 99%, **Winsorized at 99%

Table 11: Pearson's correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1) <i>Leverage</i>	1.00																	
(2) <i>Cash</i>	-0.38	1.00																
(3) <i>EPE Firm</i>	-0.07	-0.05	1.00															
(4) <i>CEO Duality</i>	0.05	0.01	-0.09	1.00														
(5) <i>Female Ratio</i>	-0.04	0.01	0.06	-0.31	1.00													
(6) <i>Board Int</i>	-0.06	-0.08	0.38	-0.20	0.03	1.00												
(7) <i>Board Size</i>	-0.02	-0.05	0.22	-0.24	0.20	0.27	1.00											
(8) <i>Board Age</i>	-0.02	-0.01	0.13	-0.47	0.44	0.29	0.61	1.00										
(9) <i>WC</i>	-0.31	0.46	-0.03	-0.02	0.04	-0.06	-0.03	0.03	1.00									
(10) <i>Tangibility</i>	0.45	-0.42	0.00	0.02	-0.02	0.05	0.04	0.01	-0.61	1.00								
(11) <i>Sales Growth</i>	0.00	0.01	0.01	0.00	-0.02	0.01	-0.01	-0.04	-0.04	-0.02	1.00							
(12) <i>ROA</i>	-0.18	0.26	-0.04	0.00	-0.01	-0.04	-0.05	-0.04	0.24	-0.15	0.25	1.00						
(13) <i>Size</i>	-0.00	-0.26	0.25	-0.11	0.05	0.28	0.28	0.13	-0.09	0.24	0.01	-0.02	1.00					
(14) <i>Female CEO</i>	-0.06	0.04	0.06	0.12	-0.06	-0.01	-0.14	-0.18	0.01	-0.06	-0.00	-0.01	0.02	1.00				
(15) <i>CEO Int</i>	-0.05	-0.11	0.28	0.05	-0.03	0.39	0.09	0.03	-0.07	0.09	0.01	-0.04	0.28	0.00	1.00			
(16) <i>Board Exp</i>	-0.06	-0.05	0.40	-0.24	0.13	0.74	0.34	0.39	-0.05	0.02	0.04	-0.04	0.22	0.00	0.26	1.00		
(17) <i>CEO Exp</i>	-0.05	-0.06	0.31	0.06	-0.00	0.29	0.08	0.03	-0.07	0.05	0.05	-0.03	0.20	0.05	0.66	0.38	1.00	
(18) <i>CEO Age</i>	-0.02	0.02	0.05	0.02	0.08	0.02	0.08	0.16	0.08	0.04	-0.09	-0.08	0.07	-0.03	0.09	-0.00	0.09	1.00

Notes: Table 11 displays the correlation matrix of our independent variables. See further discussion in Section 4.1.

Table 12: Persistent EPE - Inherent risk-taking and learning effects

	Leverage	Cash	ROA
invEPE Firm Per	0.00952**** (0.00147)	-0.00340** (0.00159)	0.0187**** (0.00198)
EPE Firm Per	-0.014**** (0.00140)	0.00379** (0.00153)	-0.00122 (0.00195)
Control Variables	Yes	Yes	Yes
Industry-year fixed effects	Yes	Yes	Yes
Firm-fixed effects	Yes	Yes	Yes
Adjusted R-squared	0.147	0.243	0.054
Observations	804001	804001	764871

Notes: Table 12 displays the estimation outcomes of the independent variables “invEPE Firm Per” and “EPE Firm Per” in Model (3), to investigate the inherent risk-taking behavior of EPE executives and any change attributed to a Persistent EPE. The dependent variables proxying risk are Leverage and Cash. The same are presented for performance proxied by ROA.

Table 13: Determinants - selected performances for Persistent EPE measure

	Leverage	Cash	ROA
Selected Persistent Performance	0.00158 (0.000982)	0.00593**** (0.00126)	0.402**** (0.00284)
Control Variables	Yes	Yes	Yes
Industry-year fixed effects	Yes	Yes	Yes
Firm-fixed effects	Yes	Yes	Yes
Adjusted R-squared	0.147	0.243	0.141
Observations	804001	804001	764871

Notes: Table 13 displays the estimation results of the top one percent selected firms to demonstrate potential determinants of the Persistent EPE executive selection.

Table 14: Pre-post of Persistent EPE hire - effect of hire

	Leverage	Cash	ROA
EPE_firm_rob	-0.0195***** (0.00163)	0.00631***** (0.00179)	0.0106***** (0.00300)
Adjusted R-squared	0.099	0.151	0.008
Observations	59059	59059	55000

Notes: Table 14 displays the estimation results of Model (3) of the pre-post analysis conducted to compare Persistent EPE firms' difference in risk-taking four years prior to and four years following the hiring of a Persistent EPE executive.

Table 15: Pre-post of Persistent EPE hire - coefficients over time

	Leverage	Cash	ROA
t-4	0 (.)	0 (.)	0 (.)
t-3	-0.00490** (0.00211)	0.000424 (0.00266)	-0.00796 (0.00516)
t-2	-0.0110***** (0.00245)	0.00161 (0.00305)	-0.0110** (0.00542)
t-1	-0.0177***** (0.00260)	0.00427 (0.00323)	-0.00592 (0.00548)
t	-0.0245***** (0.00275)	0.00681** (0.00327)	0.0125** (0.00535)
t+1	-0.0316***** (0.00290)	0.00988*** (0.00344)	-0.000567 (0.00557)
t+2	-0.0389***** (0.00311)	0.0107*** (0.00367)	-0.00608 (0.00583)
t+3	-0.0466***** (0.00329)	0.0107*** (0.00389)	-0.0122** (0.00599)
Adjusted R-squared	0.106	0.151	0.010
Observations	59059	59059	55000

Notes: Table 15 displays the estimation results of regression (4) of the pre-post analysis conducted to compare Persistent EPE firms' difference in risk-taking four years prior to and four years following the hiring of a persistent EPE executive. Year $t-4$ is set as benchmark.

Figure 2: Corporate outcomes before and after the hire of a persistent EPE executive

Figure 2a)

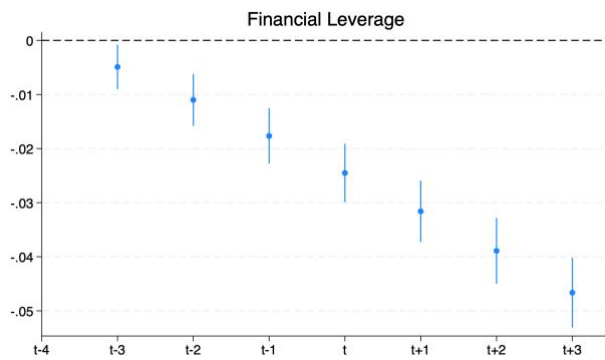


Figure 2b)

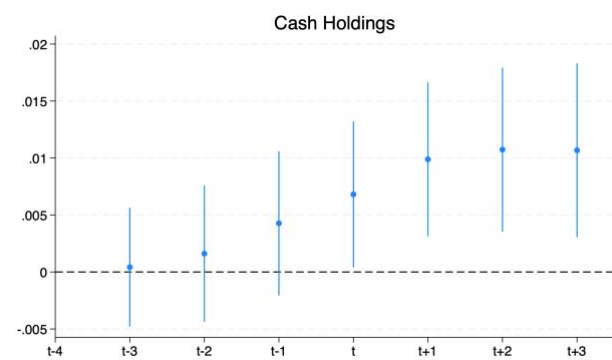
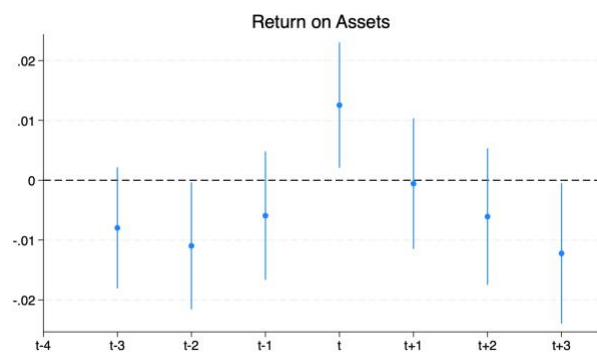


Figure 2c)



Notes: Figure 2 displays the coefficients obtained from the $YEAR_{ft}$ variables from Model (4), where the dependent variables (Y_{ft}) are compared to year $t-4$ before the Persistent EPE hiring. In Figure 1a) Y_{ft} shows Leverage, in Figure 1b) Y_{ft} shows Cash and in Figure 1c) Y_{ft} shows ROA, which is further defined in Table 10 in the Appendix.

Table 16: Variable Inflation Factor (VIF)

Average VIF	2.83
-------------	------

Table 17: Breusch-Pagan Test

Chi-square	~1,300,000
Prob > chi-square	0.0000****

Notes: Table 17 is based on Model (1) with Leverage as dependent variable. Similar results, indicating the need for robust standard errors, are obtained when performing the test for the other dependent variables.