UNIVERSITY OF AGDER

Compensation committee presence and their effect on CEO salaries

Measuring the impact of compensation committees in firms listed on Oslo Stock Exchange and Oslo Axess

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Abstract

This thesis explores the relationship between compensation committee presence and chief executive officer salaries in firms listed on Oslo Stock Exchange and Oslo Axess. Using a self-collected, unbalanced panel data sample consisting of 76 companies spanning from 2007 to 2015, we have gathered observations of CEO salaries and compensation committee presence. We have applied standard econometric methods to measure the effect of compensation committees and incentive-based salaries. Our results suggest that firm size and owner concentration are more likely to impact proportion of incentive-based salary than compensation committee presence. Moreover, larger companies are found to be more likely to have implemented compensation committees. We find that the proportion of incentive-based pay has a significant positive impact on the size of CEO remuneration, while we find partial support for an effect of compensation committees presence on the size of CEO pay.

Preface

This thesis is written as the final part of the graduate program in Business Administration at the University of Agder.

We chose corporate governance as a theme for our thesis based on several subjects, where we found the topic of organizational structures and agent behavior fascinating. Accordingly, we contacted Trond Randøy when finalizing our plans for the thesis.

Working as a team on this paper has been rewarding, as we have been able to discuss and develop our understanding of relevant theories and econometric while writing.

We would like to express our gratitude to our supervisor Trond Randøy for his excellent advice while choosing the topic of our thesis, which we believe to be both highly relevant and of interest to several participants within the Norwegian economy. We would also like to thank him for directing us towards relevant theories and econometric methods, and his helpful comments regarding structure and contents.

The content of this thesis, including any possible mistakes, misrepresentations or inaccuracies is our responsibility.

June 1st 2017, Kristiansand

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1 Introduction

1.1 Background and motivation

In this thesis, we will explore whether the presence of a compensation committee is likely to lead to higher pay-for-performance sensitivity for the salary of chief executive officers (CEOs) in firms listed on Oslo Stock Exchange (OSE) and Oslo Axess. Furthermore, how has this relationship affected total CEO salaries?

The salary of CEOs has been a topic of discussion since the 1990s (Economist, 2000), when the use of stock programs, stock options, and bonuses for executives led to a rapid increase in total CEO compensation. Typically, CEO pay is determined by negotiations between the CEO and the board, on behalf of the shareholders (Randøy & Strøm, 2014). Some firms have delegated these tasks to a sub-committee; the compensation committee (Conyon & Peck, 1998). Larger companies tend to have larger and more competent boards and are therefore more likely to implement these sub-committees than smaller firms (Randøy & Skalpe, 2010). Compensation committees are typically found in enterprises listed on stock exchanges. Ideally, this committee will meet several times a year to discuss the implementation of remuneration schemes and means of motivation for the CEO. In the US and the UK, the use of compensation committees is strongly recommended (Sarbanes-Oxley Act; UK Corporate Governance Code), after several independent researchers found these committees to be helpful in attaining "good" compensation packages for CEOs (Cadbury Committee report; Greenbury report). Thus, compensation committees are meant to help the board implement independent and thorough remuneration policies. On stock exchanges in the US, such as New York Stock Exchange,[1] and Nasdaq,[2] implementation of a remuneration committee is mandatory. At the time of writing, Norwegian firms are not required to implement compensation committees, but norsk anbefaling for eierstyring og selskapsledelse Section 9, recommends the use of these sub-committees, similarly to the UK Corporate Governance code.

Present literature on compensation committees is mainly based on the Anglo-Saxon governance system. This thesis attempts to extend this research to Norwegian firms and

[1] https://www.nyse.com/governance

[2] https://listingcenter.nasdaq.com/MaterialHome.aspx?mcd=LQ

explore the relationship between compensation committee presence and CEO salaries. An indication of support for a significant association between compensation committees and CEO salaries could be useful for firms considering to implement these measures.

The salary of CEOs still attract significant attention, and news outlets regularly report updates of CEO salaries perceived to be extreme. One recent example is the pay of Google CEO Sundar Pichai in 2016 who earned USD 199.7 Million in 2016,[3] of which fixed salary only were USD 650 000. In Norway, the CEO of Opera Software ASA Lars Boilesen, received NOK 31 Million in 2016.[4] According to Dagens Næringsliv, Boilesen has received a total of NOK 150 Million during the last seven years, making him one of the most highly paid CEOs on Oslo Stock Exchange. Both Opera and Google have established compensation committees, which according to leading scholars should affect CEO remuneration, all else equal. A well-designed compensation program has three primary purposes (Jensen, Murphy & Wruck, 2004, p. 19):

1. Attract the right executives at the lowest costs,
2. Retain the right executives at the lowest costs,
3. Motivate executives to take actions that create long-run shareholder value and avoid actions that destroy value.

Our research question is: Does the presence of a compensation committee impact the salary of CEOs in firms listed on Oslo Stock Exchange and Oslo Axess?

We have performed tests to infer a relationship between compensation committee presence and the proportion of incentive-based salary. We have also analyzed the relationship between the ratio of incentive-based salary and total salary, and compensation committee presence and total CEO pay. For this purpose, we have gathered data from firms listed on Oslo Stock Exchange and Oslo Axess between 2007 and 2015. There is some uncertainty as to whether the amount of performance related salary is due to firm size or compensation committee presence, and whether larger companies, in general, are more likely to have implemented compensation committees. We have made an attempt to assess this possibility in our thesis. We have measured CEO salaries on two dimensions,

[3]https://www.dn.no/nyheter/2017/05/03/0948/Teknologi/han-tjente-like-mye-som-1800-storebrand-ansatte

[4]https://www.dn.no/nyheter/2017/05/03/1335/Finans/opera-sjefen-har-tjent-150-millioner-kunne-tjent-mye-mer (subscription required)

based on the Securities and Exchange Commission standard (Murphy, 2012):

- Fixed salary, comprised of base salaries, benefits in kind, and pension agreements.
- Incentive-based salary, comprised of bonus, stock option, stock grants, and long-term incentives.

1.2 Theoretical foundation

Building primarily on agency theory, we expect compensation committee presence to increase the proportion of incentive-based salary due to agency theory's dominance as an explanatory theory regarding CEO remuneration. Furthermore, we are analyzing the relationship between the ratio of incentive-based wages and total CEO salary, expecting to find a positive relationship, since management power theory predicts that boards are unable to control managers. According to this view, bonuses and other incentive-based pay do not replace or substitute for other remuneration, but it is instead a form of rent extraction by executives. Finally, we believe that inertia, social norms, and habits will induce compensation committees to impact CEO salaries, expecting the market to value these actions.

We would expect companies that link CEO pay to financial returns to regularly outperform those that do not. According to agency theory, the inclusion of incentives for CEOs to increase shareholder value will result in long-run benefits for the company. However, Randøy and Oxelheim (2005) found no significant relationship between incentivized salary and financial returns. These findings may indicate that the actual benefit of compensation committees is control of public perception and reduced social outrage due to salaries perceived to be unreasonably high. Similarly, Randøy and Nielsen (2002) found no significant relationship between market-based measures of returns and CEO pay in Norwegian and Swedish firms. In a meta-analysis, Tosi, Werner, Katz, and Gomez-Mejia (2000) found that around 5% of CEOs salaries were explained by stock returns, while firm size accounted for over 40% of the variance.

1.3 Limitations

The sample consists of self-collected, non-random observations of firms listed on Oslo Stock Exchange and Oslo Axess from 2007 to 2015. We have gathered all data manually. Therefore, there are some issues with regards to validity and reliability.

We have not been able to validate our observations against other samples. Due to the lack of, or non-enforced reporting standard for salaries, we are also unable to state with certainty whether our figures represent the present value of future options or the actual value of exercised options in the reporting periods. Also, several firms have not reported the primary data of interest in our study, and therefore we removed these companies from the sample. Survival bias may be present in our sample, due to firms being bankrupted, delisted, or insufficient reporting standards. Companies delisted within the period have rarely made their financial statements available. Therefore, we were unable to obtain relevant information for these firms. Another possible bias may be due to larger companies preparing more informative and transparent reports. We have performed tests for bias in our sample against a group of companies left out of the original sample. In total, our sample consists of 76 firms, while the out of sample group consists of 29 firms.

1.4 Structure of the thesis

Section 2 outlines previous research on the development of compensation committees, and CEO salaries in the US and Norway. Section 3 contains a summary of existing theories on executive remuneration. Section 4 details how we collected data, what type of data methods we used, and how we have controlled for skewed data and bias. Section 5 outlines and assesses the data with regards to the statistical methods used, while Section 6 contains our results and robustness tests. In Section 7 we present a discussion and conclusion, with suggested future research.

2 Literature review

2.1 Development of compensation committees

Compensation committees are meant to increase board independence from the CEO in the pay-setting process, in order to reduce CEOs impact on their pay (Conyon & Peck, 1998). Clearly, there is no quick fix to the agency problem of CEOs. Several non-observed factors impact both executive remuneration and behavior independently, such as CEO personality and how risk-averse the CEO is, board independence, and length of board service, for example. In the 1980s, several researchers began recommending that boards should have a particular focus on CEO remuneration schemes and the establishment of compensation committees. Williamson (1985, p. 313) remarked that "Unless an independent compensation committee exists, for example, an understanding of the contract between firm and manager is complicated by the fact that managers apparently write their contracts with one hand and sign them with the other." The increased attention paid to CEO remuneration has led to several distinct research focuses. Some examples are pay-for-performance sensitivity (Jensen & Murphy, 1990), social comparison processes (O'Reilly III, Main, & Crystal, 1988), CEO pay slice (Bebchuk, Cremers, & Peyer, 2011), behavioral agency theories (Pepper & Gore, 2015), and CEO pay as a result of a Lake Wobegon effect (Hayes & Schaefer, 2009). In this context, the Lake Wobegon effect implies that CEO salaries rise because boards believe that the market values highly paid executives. A higher compensation is thought to signify a competent CEO.

Jensen (1993, p. 862) stated that "the job of the board is to hire, fire and compensate the CEO, and to provide high-level counsel." The task of deciding upon compensation is often delegated to a sub-committee (Conyon & Peck, 1998), intended to focus on aligning the interests of CEOs, the board, and ultimately shareholders (Main & Johnston, 1993). However, grounded in Kahneman and Tversky's anchoring theory, some researchers has questioned the effectiveness of compensation committees (O'Reilly III et al., 1988, p. 271). They remarked that committee members anchor their beliefs on fair pay, social norms, and "self-referential starting points" based on pay in their own firms, and then possibly increasing these figures. Main and Johnston (1993) presented support for this view.

They found that executives in companies where compensation committees were present received significantly larger pay packages. Finally, in line with the Lake Wobegon effect, some researchers have developed a "bidding-up" hypothesis, wherein relatively underpaid CEOs experience salary increases, while "overpaid" CEOs experience no parallel pay reduction (Conyon & Peck, 1998).

In the UK, the Cadbury Committee Report (1992) Article 4.42 stated: "boards should appoint remuneration committees, consisting wholly or mainly of non-executive directors and chaired by a non-executive director, to recommend to the board the remuneration of the executive directors in all its forms, drawing on outside advice as necessary." In 2003, a Norwegian workgroup consisting of representatives from 9 separate organizations was established to work on a new recommendation for codes of conduct in the corporate governance of Norwegian companies, norsk anbefaling for eierstyring og selskapsledelse. Since January 1st, 2015, the organization has consisted of 8 organizational members. It is also a member of European Corporate Governance Institute, a network established to implement guidelines for corporate governance in countries within the European Economic Area. The establishment of standard corporate governance guidelines focused particularly on companies registered on stock exchanges. Companies listed on Oslo Stock Exchange and Oslo Axess handle a substantial part of both growth and wealth development in the Norwegian society. It is in the stakeholders best interest that companies comply with certain routines, procedures, and guidelines that allow for further growth and development (Bråthen, 2006). Section 9 in norsk anbefaling for eierstyring og selskapsledelse recommends that compensation committees should be selected to ensure fair and independent treatment of CEO compensation, similarly to the Cadbury committee report and the UK Corporate Governance code. In general, norsk anbefaling for eierstyring og selskapsledelse follows a "comply or explain" principle. The Norwegian standard is legislated by Norwegian Accounting law §3-3b, which states that companies should clarify its practice and policy for corporate governance.

2.2 Historical review of CEO salaries

Measuring how well a manager is performing relative to his salary or a firm's profitability is problematic, as determining the CEOs impact could be nearly impossible. A CEOs

impact will rarely be apparent until several years into the reign, with a few possible exceptions. For example, some researchers have found evidence of write-offs in the first year of newly hired-CEOs (Nikolai, Bazley, & Jones, 2010). According to prevailing motivational theories, owners must align executives' interests with their own. That should maximize company value and incentivize CEOs to make optimal, value-creating decisions. The board's monitoring is often restricted due to limited available time for board members, and executives have more insight into day-to-day business issues and opportunities. Management is, therefore, better able to evaluate these than owners that rely on the management's information. According to Jensen et al. (2004), companies should focus on creating remuneration schemes that encourage top management to act in ownership's best interest. In other words, instead of solely focusing on the size of CEO compensation, they should focus on:

1. total benefits,
2. composition of the benefits,
3. relation between pay and performance, the pay-for-performance sensitivity.

In the US, inflation adjusted CEO compensation increased from USD 850 000 in 1970 to over USD 14 Million in 2000, before declining to USD 9.4 Million in 2002. Much of the increase was due to a substantial growth in the use of option grants, where average values grew from close to zero in 1970 to USD 7 Million in 2000, before declining to USD 4.4 Million in 2002. However, average executive cash remuneration, i.e. fixed salaries and bonuses, also increased from USD 850 000 to USD 2.2 Million from 1970-2002 (Jensen et al., 2004, p. 24). Interestingly, the increase and reduction in performance-related pay seem to align with years of boom and decline of the general economy. We will discuss this further in our descriptive analyses in Section 6.

During the 1980s, shareholders began demanding more shareholder value and aggressively handling firms' that did not deliver this (Murphy, 2012). Accordingly, companies began unloading unprofitable branches and investments. Enterprises resisting change were often bought out and liquidized. In turn, firms started lobbying for stronger protection against "corporate raiders" earning exorbitant sums on these transactions (Murphy, 2012). The hostile takeovers made firms more aware of the role of corporate governance

and agency problems. Thus, companies began to focus more on these issues, rewarding profitability and desired behavior, rather than determining pay based on firm size. Additionally, incompetent CEOs were left with less money to waste (Murphy, 2012). Increased literature on agency problems from academia induced firms to increase the equity payments of CEOs to raise alignment of interests. Investors hoped that this would reduce poor investments intended to build empires since CEOs would then suffer themselves.

The movement also led to an increased focus on the role of board members and calls for board independence. At the end of the 1990s, the number of independent board members had risen to 80% in the US, from around 50% previously (Horstmeyer, 2016). The increased independence of board members had not reduced the use of options, lending support for those believing that boards are more focused on interest alignment than restraining CEO salaries (Murphy, 2012). According to Jensen et al. (2004), the massive increase in the use of options in US companies was partly due to Securities and Exchange Commission's regulations of disclosure and tax rules that reinforced stronger links between stock performance and executive pay, and increased focus on equity-based compensation. They also contend that corporate boards fail to comprehend, or do not care, how costly the options are - because US legislation does not demand inclusion of option grants in profits and loss statements. However, Bebchuk and Fried (2003) argue that increased CEO compensation is mainly due to increased management power, and not any misunderstanding of the actual cost of option grants. According to their paper, bonuses and equity payments are treated as an added incentive and do not replace the fixed salary.

2.3 CEO Salaries in Norway

Norwegian CEOs has experienced a substantial increase in total salary since the 1990s: An average yearly increase of 16% in the years between 2004 and 2008, while the average Norwegian employee received an increase of below 5% (Randøy & Skalpe, 2010). Although the growth of executive salary in Norway has been rapid, Norway's egalitarian structure has led to a relatively small CEO-employee wage gap (Randøy & Nielsen, 2002), and the gap is still relatively modest compared to most other countries (Randøy & Skalpe, 2010). It may also be wise to consider the years leading up to the end of Randøy and Skalpe's

study, which were "boom" years for the Norwegian economy (Randøy & Skalpe, 2010). In the years following 2008, CEO salaries had a more random fluctuation, before increasing again after 2013 (Gitmark, 2015). In 2013 and 2014 the average CEO was paid 124% of an average worker's salary, while the figure was rising slightly to 130% in 2015 (Norsk ledelsesbarometer, 2016). The wage gap between CEOs and employees has not decreased since 2010, and as in most other developed countries, the wage gap is still increasing (Piketty, 2014).

The use of options in Norwegian companies has, similarly to US firms, increased since the early 1990s. From practically non-existent, until comprising 34% of total CEO remuneration in 2005 (Randøy & Skalpe, 2007). The Norwegian tax authorities have implemented a tax on future benefits of stock option grants to reduce the problem of "hidden" CEO salary increases (Randøy & Skalpe, 2007). The legislation alleviated the problem somewhat, but firms were able to bypass the option benefit restriction by implementing a strike price at market value, with 1% monthly increase. Thus, the options had no taxable value at grant date for the CEO (Randøy and Skalpe, 2007). The Norwegian government is an unusually large shareholder in Norwegian firms compared to other governments. In 2006 the government put a halt to option payouts to CEOs in businesses where the Norwegian state was the majority shareholder, forcing companies with large state ownerships to settle any remaining option agreements immediately.[5] This, in turn, led to a massive public outrage when the CEO of Hydro, Eivind Reiten, received options amounting to nearly NOK 28 Million. Eivind Reiten later renounced NOK 8 Million.[6]

Some scholars have cited the increased foreign ownership in Norway and other Scandinavian countries as a contributing factor to the growing use of options and bonuses for CEOs (Oxelheim & Randøy, 2005; Norsk Ledelsesbarometer, 2016; Randøy & Nielsen, 2002). In 2004, Norwegian authorities published the first draft of norsk anbefaling for eierstyring og selskapsledelse, intended to both direct and support the corporate governance structures in large Norwegian companies. Norsk anbefaling for eierstyring og selskapsledelse follows a "comply or explain" principle, in which companies registered to Oslo Stock Exchange and Oslo Axess shall either follow regulations, or explain why they

[5]https://www.regjeringen.no/no/aktuelt/nye-retningslinjer-for-statens-holdning-/id437736/
[6]http://www.dn.no/nyheter/energi/2007/08/06/reiten-gir-slipp-pa-atte-millioner

differ from the standard. The standard requires firms listed on Oslo Stock Exchange to determine and disclose their guidelines for executive salary, while the use of compensation committees is non-mandatory. There are three main approaches to the theoretical discussion of CEO salary in Norway (Randøy & Skalpe, 2010):

1. The distribution perspective focuses more on equality, and the perceived "fairness" of salary, and possible social discord concerning high CEO salaries.
2. The owner perspective, which could be considered part of agency theory, wherein the problem of asymmetric information is present. Therefore, CEOs must be paid to act in shareholders' best interests.
3. The economic growth perspective focuses on how CEO salaries impact macroeconomic growth in general by signaling that well-performing firms will lead to CEO rewards. This reasoning has weak empirical support and is less used than the first two.

The most popular reasoning for high CEO salaries has two primary contentions (Gitmark, 2015): The first argument for a large CEO wage gap is that CEOs are more skilled and have more responsibility than the average worker, and deserves fair compensation. Secondly, it is a competitive market, and firms have to pay the going rate for the best CEOs. Research performed by Kuvaas (2005) challenged this view. He found a significant discrepancy between what motivated respondents themselves, and what they expected others to be driven by. Respondents would often state a challenging job was their primary motivation for switching jobs, rather than a salary increase. However, when asked what they expected others to be motivated by, the same respondents typically cited salaries (Gitmark, 2015). Furthermore, Randøy and Skalpe (2010) found that low cross-border hires of CEOs have led to weak international competition and less direct impact on Norwegian CEO salaries. Increased foreign ownership may affect CEO wages, especially due to a lower pay gap sensitivities and more familiarity with equity-based pay.

Some researchers have questioned the notion of a market value of CEOs. First, boards will typically hire consultants to organize the process. These consultants are hired and often paid a commission based on the new CEOs salary. Therefore, they will have incentives to try to increase the pay for the new CEO by either pursuing highly paid

executives or impacting the compensation by other means (Conyon, 2011; Peetz, 2015). Secondly, no one can accurately determine the market value of a CEO, since these jobs are rarely available and even less regularly openly advertised (Bebchuk & Fried, 2003). Finally, Randøy and Skalpe (2010) criticized the hiring process of CEOs, wherein the CEOs are selected and often announced before finalizing salary negotiations. These situations provide the candidate with possibilities of opportunistic actions, such as extreme wage demands. Executive salary packages in listed firms are often very complicated and contain several elements. For our purpose, we have selected six forms of compensation. Three of them are classified as fixed, and three are incentive-based, or performance related (Murphy, 2012):

Table 2.1: Salary components

Type of salary	Description	Classified as
Base salary	Not dependent on performance and will not fluctuate unless re-negotiated	Fixed
Benefits in kind	Car allowance, free use of telephone, etc. Not dependent on performance, included in the CEOs negotiated salary agreement.	Fixed
Pension costs	Will often exceed minimum requirements by law for CEOs.	Fixed
Bonus	For performance tied to firm relative or absolute performance, and may be measured in numerous ways.	Incentive-based
Share options	The CEO is permitted to buy stocks at a predetermined price, at a predetermined point in time. This has zero downside for the CEO.	Incentive-based
Stock grants	The CEO is granted stocks in the company. This is intended to increase CEO ownership, induce "skin in the game", and reduce agency problems.	Incentive-based
Long term incentives	The CEO is required to spend her bonus on stock in the company, and hold for a predetermined number of years.	Incentive-based

Own representation based on Securities and Exchange Commission (SEC) guidelines (Murphy, 2012)

CEO prospects of alternative employment will impact the level of salary a firm is required to offer to recruit and retain top talent. Both the size and the composition of remuneration packages vary widely between years, different industries, and by firm size. In industries with many job opportunities, especially in big and traditionally international industries, CEOs may be tempted by bigger salaries and opportunities in either larger Norwegian firms, or abroad. As an example, Helge Lund, the former Statoil CEO resigned in February of 2015 to become the CEO of British Gas at a massive salary increase. After the employment agreement had been made public, public outrage forced British Gas to reduce the value of stock grants from GBP 10M to GBP 4,7M.[7] Recently, Dagens Næringsliv reported that Lars Boilesen, the CEO of Opera Software had turned down

[7]http://e24.no/jobb/statoil/helge-lund-begynner-i-ny-jobb-foer-tiden/23391687

generous offers from foreign firms to remain chief executive officer of Opera. While his salary is large relative to other Norwegian companies, the chairman of Opera stated that his salary is in the "fourth division" of international IT companies, indicating that he could have earned far more as CEO of another firm.[8] Clearly, the salaries of executives require extensive attention by boards of large firms, and we believe that an analysis of the effect of compensation committee establishment is highly relevant to firms considering implementing this committee and complying with the Norwegian Corporate Governance code guidelines.

[8]https://www.dn.no/nyheter/2017/05/03/1335/Finans/opera-sjefen-har-tjent-150-millioner-kunne-tjent-mye-mer (subscription required)

3 Theory

Several theories have attempted to explain the development of executive remuneration. Baumol (1967) claimed that US firms paid their executives as public bureaucrats, with low levels of pay-for-performance sensitivity, and that salaries were mostly dependent on company size rather than profitability (Randøy & Strøm, 2014). Baumol (1967), and later Jensen and Meckling (1976), Fama and Jensen (1983) and Jensen and Murphy (1990) argued that CEOs should receive salaries with higher pay-for-performance sensitivity. The increased sensitivity was meant to align the interests of management and owners, and changes came in the form of stock options grants, stock grants, and bonus schemes. This induced boards and compensation committees to increase the use of equity-based payment during the 1980s, which led to an explosive executive salary increase in the US, outpacing profitability by a large margin (Randøy & Strøm, 2014).

The two main theories used to explain the increase in CEO salaries have been agency theory and management power theory. These are not mutually exclusive, and according to Frydman and Jenter (2010), one should consider these as complementing approaches rather than rigidly adopting one of them. Murphy (2012) states that the policies implemented in the 1990s were affected by agency theory, and allowed self-serving CEOs to extract rent. However, policies intended to reduce agency problems, such as independent board members, have created new agency problems between the shareholders and the board. There are several different stakeholders in these processes; shareholders, government, boards, CEOs, and the general public. An overemphasis on various and competing theories may have led researchers to ignore policies implemented by governments as a response to CEO salaries. At the same time, these policies may have affected the development in itself (Murphy, 2012).

3.1 Agency theory

Agency theory was developed in part by Baumol (1967), Jensen and Meckling (1976), and Fama and Jensen (1983), and has been the dominant theory used to explain CEO salary and its relation to corporate governance (Main, Jackson, Pymm, & Wright, 2008). In corporate governance systems, there are many examples of the principal-agent relationship,

e.g. between owners and the board, and the shareholders and other stakeholders. In this thesis, we are focusing on the relationship between the board and the CEO. According to agency theory, management and owners have different interests, and executives are self-serving. It is used to describe situations wherein the principal (owner) engages an agent (CEO) to act on his behalf, and the two parties' interests do not coincide. The primary objective of the board and owners is long-term value maximization, while the CEOs objective is to reach the long-term goals set by the board through the daily operations. Furthermore, agency theory presumes a level of asymmetric information between the principal and the agent. The board's lack of control over the day-to-day operations gives the CEO a better understanding and more information about company operations. Thus, moral hazard may be an issue. Assuming both parties are utility maximizing, any situation where there is a difference in preferences or information will lead to conflicts of interest. This, in turn, may lead to the agent making suboptimal decisions on behalf of the principal. The difference in value between the actual choice made by the CEO and optimal decision for owners is defined as residual cost (Jensen & Meckling, 1976).

The income of executives is dependent on their compensation from the company, which relies on the firm's survival. Meanwhile, owners can diversify their investments and will prefer the company to take on some risks to achieve higher returns on their investment. To alleviate the moral hazard problem, the CEO is either monitored or motivated through compensation, though both are generally required. Most researchers agree that monitoring is costly and reduces CEO motivation (Jensen & Meckling, 1976). Thus, incentive schemes intended to induce desirable behavior are preferable. By incentivizing the CEO to reach a predetermined goal, the board induces the CEO to act in the best interest of ownership. Agency theory relies on another assumption of arms-length contracting, in which owners are required to develop remuneration schemes to incentivize executives to maximize shareholder value at the lowest possible cost.

According to Bruce, Buck, and Main (2005), the key metric of CEO contracts is the pay-performance sensitivity. Therefore, the board should design the remuneration scheme to 1) align interests, and 2) develop a strong pay-performance sensitivity. The optimal contracting model assumes that management and owners have different interests and that executives are self-serving. It relies on the previously mentioned assumption of arms-length contracting, in which owners are required to develop remuneration schemes

to incentivize executives to maximize shareholder value. Thus, CEOs are paid the optimal amount, i.e. the necessary amount needed to attract the most skilled agent for the position as CEO. The contract is intended to maintain CEO motivation in the future, as well as making him act predictably and obeying the intentions of the board (Holmström & Milgrom, 1987). According to Bruce et al. (2005), board members both interact with and are dependent on information from management. However, social forces affect the assumption of arms-length negotiation.

3.1.1 Empirical support

Agency theory has been the primary theoretical approach to CEO salary research since the 1970s, and numerous studies have attempted to explore the relationship between the composition of CEO wages and the profitability of firms. Jensen and Murphy (1990) found that for every USD 1 000 change in shareholder wealth, CEO wealth changed by USD 3.25. They contended that restraints implemented by the US government hindered the pay-for-performance sensitivities of CEO contracts, leading to sub-optimization of the value of incentives. Hall and Liebman (1998) presented evidence of CEOs pay-for-performance sensitivity having increased rapidly during the 15 years preceding their study. Their results indicated that CEO wealth sensitivity was much larger than Jensen and Murphy's study from 1990.

Scott Wallsten (2000) found that executives typically had a higher pay-for-performance sensitivity than average employees. The agent should be able to impact the performance of which he is being measured, which is an important feature of the incentivized motivational framework. Therefore, the effect of rewarding firm profitability is reduced as one moves down the hierarchy. Lower-level employees rarely impact this measure to a significant degree. Furthermore, Wallsten found that CEOs were rewarded for good years, while not being punished for years of average or lower profitability. According to agency theory, this should reduce risk aversion and increase firm profits (Wallsten, 2000). However, when incorrectly applied it can lead to undesirable consequences (Gerhart, Rynes, and Fulmer, 2009). Gerhart et al. (2009) remarked that increasing pay-for-performance sensitivity can be a powerful and helpful tool as long as the contract is correctly defined. However, if the contract is not sufficiently specified, it can lead to several possible

unintended consequences. Therefore, they concluded that no perfect fit-for-all solutions exist, and the board needs carefully evaluate the potential rewards and pitfalls of CEO contracts.

3.1.2 Criticism

The ultimate goal of for-profit organizations is generally to maximize return on capital. Therefore, one would expect to find a significant relationship between correctly applied pay-for-performance sensitivity and firm profitability. However, several studies have been unable to find any close relationship between profitability and salaries of CEOs. Research has found either non-significant or negligible positive or negative relationships (Berrone & Otten, 2008; Oxelheim & Randøy, 2005; Tosi et al., 2000). Bebchuk has been a notable critic of agency theory (Bebchuk, Fried, & Walker, 2002; Bebchuk & Fried 2003; Bebchuk, Grinstein & Peyer, 2010; and Bebchuk, Cremers & Peyer, 2011) and has presented several arguments and empirical results conflicting with the optimal contracting approach. Critics of agency theory contend that the agency problem may not only exist between the board and the CEO but that there are further agency issues between owners and the board. Bebchuk et al. (2002) theorized that this was due to the board members wanting to keep their positions and were increasing the likelihood of this happening by satisfying the incumbent CEO. Social interactions and friendship between members of the board and the incumbent CEO may also impact board members. Furthermore, the assumed market forces of CEO labor markets may not be strong enough to create efficient CEO salaries in general.

Murphy (2012) stated that institutional investors and active shareholders had increased pay-for-performance sensitivity for CEOs. These forces have shifted management from an accounting based view to a focus on market returns. The pay-for-performance schemes have led to further agency problems, since CEOs are able to barely beat targets. They will often get paid either way. In turn, they are more likely to surpass targets in several periods to maximize the likelihood of receiving bonuses, rather than present value as soon as possible. Similarly, CEOs of firms where goals are not attainable have taken "heavy hits" in order to maximize the likelihood of producing profits in the following years (Murphy, 2012). Since stock markets focus on expected returns, management has

opportunities and incentives to increase expectations to receive their bonuses (Murphy, 2012). In support of this criticism, Lie (2005) found evidence of abnormal stock returns shortly after CEOs received option grants. He concluded that the effect was evident and increasing over time, in both scheduled and unscheduled awards. However, the effect was stronger when option rewards were unscheduled. Accordingly, he suggested that CEOs either are becoming increasingly skilled at forecasting future market developments, or a backdating of option grants occur. Researchers have found a relationship between the value of options given to the CEO and financial restatements (Murphy, 2012). Bruce et al. (2005) criticized agency theory for becoming "overly narrow," and thereby reducing cross-country application of principles.

3.1.3 Behavioral agency theory

In later years agency theory have been criticized for being unable to adequately explain both the variation of CEO compensation, and CEO behavior in relation to profitability and returns by focusing on monitoring costs and interest alignment (Pepper & Gore, 2012; Randøy & Strøm, 2014). In response to this, behavioral agency theory has become a popular theoretical framework. Behavioral agency theory argues that the motivation of the agent (CEO) is the primary driver of interest alignment. Motivation could be attained through other means than purely monetary rewards (Randøy & Strøm, 2014; Pepper & Gore, 2012). The main point is that the view of financial rewards through compensation packages as a quick fix is too simplistic.

Behavioral agency theory suggests several adaptations to the original agency theory to illustrate the fact that CEO motivation is more complex than previously thought. The assumption of CEO discounting the value of long-term incentive plans is critical to behavioral agency theorists, and the framework relies on the presumption of risk-averse agents that values immediate rewards more highly than uncertain rewards in the future (Pepper & Gore, 2012). Benefits are required to be vast to induce the expected motivation in the CEO. Issues of bounded rationality may also be present, wherein the CEO is unable to adequately value complex remuneration schemes and thereby undervalue the salary. Furthermore, CEOs tend to be affected by an "inequality factor" and perceptions of fairness, i.e. CEOs may dislike and lose motivation by unreasonably high remuneration.

3.1.4 Hypothesis 1

Agency theory predicts that the principal and agent will have different interests. Since most available research has focused on agency theory and alignment of interests between the participants, most practitioners are likely to support these theories. Therefore, we believe that the presence of a compensation committee with the sole purpose of determining the CEO salary in order to align interests will increase the use of performance related pay.

Hypothesis 1: The presence of a compensation committee leads to a larger proportion of incentive-based salary for CEOs.

3.2 Management power theory

Building on the assumption that agency theory is under-socialized, researchers have analyzed CEO compensation focusing on the executives receiving payment, rather than the owners developing the payment scheme (Bruce et al., 2005). Agency theory assumes rational decision-making, wherein the board determines acceptable results, and then rewards these after the fact. Management power theory states that boards are unable to control and determine executive salary. This line of research argues that "pay regimes are an artefact of socially-derived executive power" (Bruce et al., 2005, p. 1495), designed for CEOs to extract rent from other stakeholders. In other words, CEOs seek to maximize benefits while minimizing the risk of payment and are self-serving. Salary schemes are, according to this theory, a camouflage of rent extraction, i.e. CEOs have an incentive to obscure and attempt to legitimize their rent extraction (Bebchuk et al., 2002). CEO salaries are mostly limited by "social contracts," or the outrage of the general public when CEO compensation is perceived to be extreme.

Management power theory is grounded in the research of Berle and Means (1932) and Jensen and Meckling (1976). According to Bebchuk et al. (2002), the managerial power approach is not meant to replace the optimal contracting approach. Instead, the theory complements and helps explain effects that optimal contracting has been unable to account for. Management power theory also questions the assumption of arm's length principle for negotiations between the CEO and the board. Even if market forces affect

executive compensation, these forces are unable to compel the optimal contract approach (Bebchuk & Fried, 2003). As a result, CEOs can use their power to influence compensation arrangement and extract rent.

Bebchuk et al. (2002) recommended that boards counteract these effects by reducing board dependence on management. This could be achieved by reducing time served on boards, using non-employees and independent hires as board members, and reducing board memberships on other companies where the CEO has relationships with executives (Randøy & Strøm, 2014). Section 8 of norsk anbefaling for eierstyring og selskapsledelse recommends at least some independence from management for board members, but this independence could simply be considered a formality in many instances. It does not necessarily eliminate the issues of reliance on management information. Boards should instead attempt to attain better information and improved control of executives, to create better compensation packages and schemes with higher pay-for-performance sensitivity. Implementation of compensation committees with a sole focus on CEO performance and their appropriate remuneration could achieve this (Randøy & Strøm, 2014). It is also possible to benchmark against comparable firms, or adjusted for macroeconomic effects. According to management power theory, remuneration schemes should also avoid short-term bonuses. The board could reduce the risk of rent extraction by primarily using long-term incentives (Randøy & Strøm, 2010).

3.2.1 Empirical support

Building on research showing that company size is closely related to executive salary, researchers have found that CEOs often prioritize mergers and acquisitions that are not necessarily profitable for shareholders. This enables them to "build empires", and achieve better reputation and higher salary (Bebchuk & Fried, 2003; Jensen & Meckling, 1976; Randøy & Strøm, 2014; Wiseman & Gomez-Mejia, 1993). This effect has been more common in the US than in Norwegian firms. Due to the dispersed ownership of US firms compared to Norwegian companies, the individual share owners has less power in US companies. Core, Hulthausen, and Larcker (1999) found that ownership structure and board size has a significant impact on CEO salaries. Further supporting the management power view, research has found indications that income over which the CEO has no control,

influence CEO pay in the same way as other income (Bertrand & Mullainathan, 2001). According to Bebchuk and Fried (2003), this evidence of "lucky dollar payments" undermines the agency theory's view of rational contracting processes. If CEOs are rewarded for creating profitable firms, as the optimal contracting approach states, lucky dollars should not be rewarded equally to relatively good performances compared to benchmark competitors.

The pool of prospective CEOs for most large firms is typically slim. In order to hire the most competent CEO, companies hire consultants to locate the most talented CEOs (Murphy, 2012). The CEO is often selected before salary negotiations have begun, leading to increased bargaining power for executives. Bebchuk et al. (2002) remarked that these negotiations often are held between a professional negotiator on behalf of the CEO and the compensation committee or HR department of the firm. In these instances, Bebchuk et al. (2002) believed that management power theory was dominant since the HR department knew that the new CEO soon would be able to affect their situations. Thus, they might be willing to grant excessive compensation.

3.2.2 Criticism

One of the leading agency theorists, Holmström (2005) evaluated the management power model in a historical perspective. He stated that the model had several fair and thorough propositions. For example, the use of short-term options, wherein CEOs are allowed to unwind early and have incentives to manipulate the share price. However, he believed that the model was unable to adequately explain the development of CEO pay, or replace the present models completely. Management power theory contended that CEO power has increased since the 1980s. Holmström (2005) disagreed with this proposition, stating that it probably had decreased. According to Murphy (2012), every measure of board independence has improved since the mid-1980s. Furthermore, the rise in CEO salaries during the 1990s boom should have been mirrored by a similar increase during the 1960s boom for the theory to hold, according to Holmström (2005). This did not occur. Holmström (2005) believed that the theory could be better served focusing more on the agency problem between the board and shareholders, and increased shareholder power. This relationship, he felt, may have impacted board behavior in the pursuit of "shareholder

value." Holmström (2005) further questioned the assumption of arms-length contracting, and the ability of boards to determine CEO value without having benchmarked accurately against comparable firms. He held the belief that CEO pay rise was somewhat affected by the increased demand for talented CEOs, but the primary drivers had been increased institutional pressure and greater shareholder influence. The new type of shareholders focused on shareholder value. This forced boards to develop pay schemes to induce CEOs to increase shareholder value, typically by stock and option grants. This, in turn, led to several high-profile examples of myopic and outright fraudulent behavior, and cases of share value influenced decisions and processes in large firms, such as Enron, Worldcom, and KPMG (Jensen et al., 2004).

Support for agency theory was presented by Edmans and Gabaix (2009), stating that the optimal contracting approach was able to explain pay-increases, low pay-for-performance sensitivity, and pay-for-luck adequately. They point to the lack of significant difference between firms with dispersed ownership and concentrated ownership, where management power assumes a difference in corporate governance mechanisms. With regards to the "new CEO problem," Murphy (2012) stated that the overpayment of outside hires was an agency problem, where the boards were paying with shareholder money. He contends that it is not a managerial power problem since boards are not held captive. Rather than focusing on increased board independence, the solution could be improved negotiation processes (Murphy, 2012). Daily, Johnson, Ellstrand, and Dalton (1998) were unable to find support for a positive relationship between the size of CEO compensation and "captured" committee members. Furthermore, Murphy (2012) believed the "problem" of overpaying for a talented CEO was less critical than hiring a less talented one. Salaries for lawyers, investment bankers, hedge-fund managers, venture capitalists, private-equity managers and athletes follow the same pattern as executive compensation (Kaplan & Rauh, 2010). This development is attributed to market effects. Therefore, Murphy (2012) believed that it was unproductive to attribute gains in other comparable sectors to another explanation than for executives.

Although Bebchuk and Fried (2003) strongly disagreed with the notion that boards were unable to determine the economic costs of granting options accurately, Murphy (2012) contends that many practitioners and board members he had interviewed have confirmed this view. Furthermore, he stated that 95% of options granted were not given

to the CEO of firms, but to lower level employees and that this was inconsistent with the management power-view, wherein CEOs exploit boards with these arrangements. Therefore, Murphy (2012) believed that his statement about the misunderstood alternative cost still was the most likely answer. New York Stock Exchange's listing requirements could help explain Murphy's findings. Companies were able to bypass shareholder votes for option plans by granting to a sufficient percentage of eligible employees in addition to management (Murphy, 2012).

3.2.3 Hypothesis 2a

Management power predicts that boards are unable to control the salary increase for CEOs, due to multiple factors, such as owner dispersion, friendship, inertia, and agency problems between owners and the board. Theorists subscribing to this model believe that CEOs are able to extract rent from firms, and are only kept in check by fear of reactions by the general public, and other endogenous factors. Based on this, we believe that a higher proportion of incentive-based salary should result in higher wages in general.

Hypothesis 2a: More incentive-based pay leads to higher total salary.

3.3 Neo-institutional theory

Some theorists believe that common remuneration schemes are caused by institutional norms, "rules of thumb," and inertia (Main et al., 2008). This leads to an apparent similarity between compensation plans, "with a strong tendency towards imitation" (Main et al., 2008). Heavily impacted by sector and country norms, boards, perhaps subconsciously, do not want to act unconventionally (Main et al., 2008). For example, Westphal and Zajac (1993) found that a significant number of firms in the US adopted long-term incentive plans in the 1990s, but the actual substance of these programs was limited. Furthermore, their results indicated that early adopters had a higher likelihood of attempting to put the plans to use to reduce agency costs. Firms that adopted these plans at a later stage were less likely to implement these plans fully, indicating that these measures may have been symbolical (Westphal & Zajac, 1994). When deciding upon pay packages boards will typically "go with the norm," to avoid having to justify their decisions publicly. Traditional

schemes from one culture, country or industry will then be transferred and applied in another setting with slight adaptations, which in many instances may lead to suboptimal pay packages (Main et al., 2008). This line of thinking opposes with traditional beliefs that boards customize specific remuneration schemes to link pay and performance for every firm. It does not refute traditional agency theory or management power theories entirely, though it offers an explanation of the apparent standardization of compensation packages and suggests that boards are influenced by bounded rationality (Main et al., 2008).

3.3.1 Empirical support

The neo-institutional framework focuses on rent extraction and remuneration schemes. Peetz (2015) concluded that status, norms and endogenous factors are the reason for overpaid CEOs, and reducing compensation would conflict these internal and external expectations. Further supporting this theory, Berrone and Otten (2008) found evidence of higher gaps between CEO remuneration and average salaries in countries and cultures where differences in a social hierarchy are more accepted. Hayes and Schaefer (2009) have proposed a Lake Wobegon effect, wherein the market is thought to value highly paid CEO, as found by Peetz (2015). This leads firms to pay more than the average CEO salary to appear to have a skilled CEO to the market.

According to Peetz (2015), there exists a "relative pay deprivation": CEOs rate themselves as being above average and therefore deserving of higher relative salaries compared to other comparable CEOs (Dierynck & Renders, 2014). This leads to "pattern bargaining," wherein executives aim at a salary above the mean of the reference group. In turn, this creates a "ratcheting effect." Whenever one CEO exceeds the average CEO salary, others will bargain to earn higher salaries as well. Similarly, a 1992 study in Australia found that other CEO salaries were the most important determinant in CEO pay-setting, not shareholder interests (Peetz, 2015).

3.3.2 Criticism

Greenwood, Hinings, and Whetten (2014) argued "that institutional theory has become so preoccupied with the institutional level of analysis that it has lost sight of" studying organizations, treating them as though they were all the same. Therefore, they proposed a return to the comparative analysis of organizations in order to recognize and understand organizational differences. Kostova, Roth and Dacin (2008) remarked that the neo-institutional theory has "fallen short in understanding the theoretical implications of the multinational corporation context."

3.3.3 Hypothesis 2b

Since neo-institutional theory predicts a significant inertia in CEO compensation, we believe boards will act according to norms, and rarely deviate from traditional remuneration schemes. However, a sub-committee designated to monitor and incentivize the CEO should impact CEO salaries, compared to firms where the entire board or a single member handles CEO compensation as a side duty. Accordingly, we expect compensation committee presence to be likely to introduce different salary schemes than comparable firms without compensation committees.

Hypothesis 2b: Compensation committee presence leads to higher total salary.

3.4 Conceptual framework

Based on this discussion, we will be testing three hypotheses related to the theories and their influence on CEO pay. Our research question is: *Does the presence of a compensation committee impact the salary of CEOs in Norwegian publicly listed firms?*, and our hypotheses are:

Hypothesis 1: The presence of a compensation committee leads to a larger proportion of incentive-based salary for CEOs.
Hypothesis 2a: More incentive-based pay leads to higher total salary.
Hypothesis 2b: Compensation committee presence leads to higher total salary.

Figure 3.1: Conceptual framework: Hypothesis 1

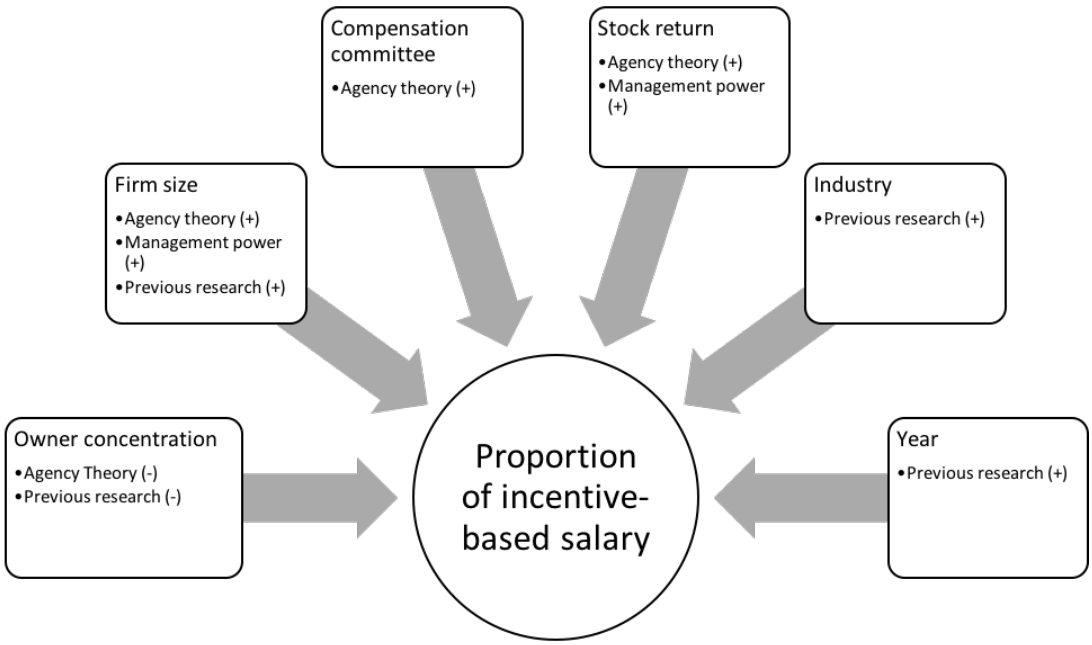
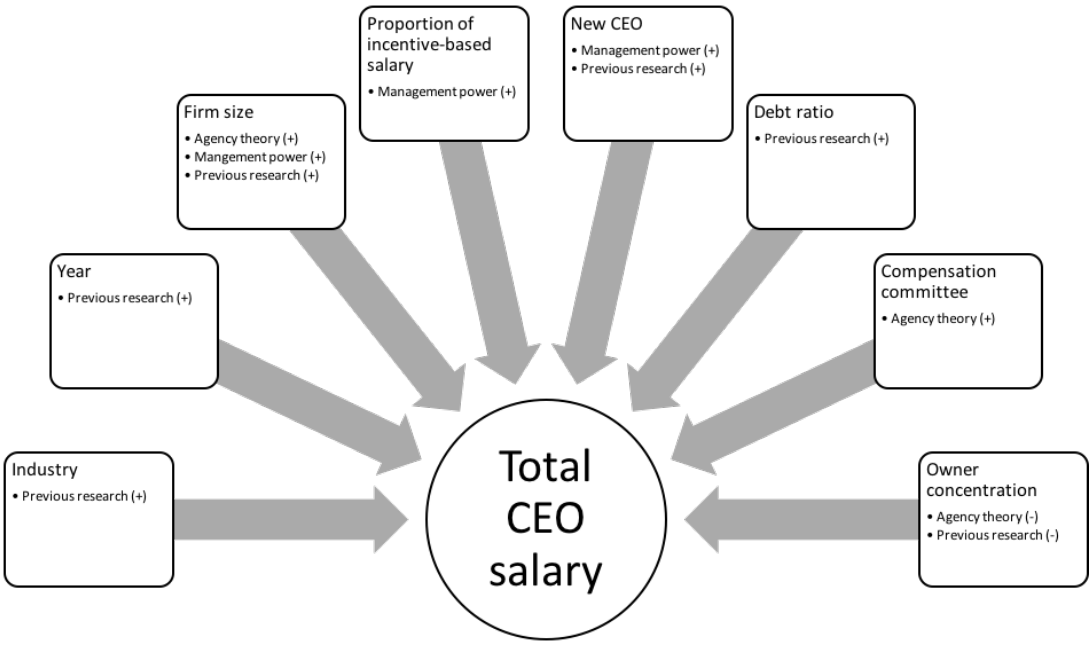


Figure 3.2: Conceptual framework: Hypothesis 2



4 Data

4.1 Methods, research design

This thesis has been written using quantitative research, which allows researchers to present social phenomena using numbers instead of words. Researchers are then able to infer causality and present support for theories (Wooldridge, 2010). We have used a longitudinal design for our study. Since we gathered data from firms with a different number of years included, it is classified as unbalanced panel data (Brooks, 2008, p. 487). However, all firms included in our sample have at least three years of complete information to avoid misrepresenting information based on outliers. Panel data allows the researcher to analyze and monitor relationships between variables, and control for unobserved cross-section heterogeneity (Wooldridge, 2010). Since compensation committees are not mandatory for Norwegian firms, tracing of effects of these committees is made possible by differences within the sample. For hypothesis 1 we have used t-tests and regression analyses to analyze the relationship, while we used regression analyses for hypothesis 2.

Some bias may be present in our sample, since CEO pay reporting is not standardized, in spite of norsk anbefaling for eierstyring og selskapsledelse recommendations. Larger companies seem to have more detailed and transparent reports, perhaps due to fear of reactions by investors and the public. Additionally, firms delisted from Oslo Stock Exchange have been excluded due to missing reports. Therefore, survival bias may be present. We have taken steps to assess the bias, using four control variables. Section 4.2 and Appendix, Section E presents the differences between our sample and firms left out of our sample.

4.2 Population, sampling and possible bias

Methods of data collection includes surveying annual reports, the Titlon-database developed by University of Tromsø,[9] and accounting information were collected from Proff Forvalt.[10] Both CEO compensation and compensation committee information were ob-

[9] https://titlon.uit.no/
[10] www.forvalt.no

tained from firms' annual reports. Market capitalization and dividends have been retrieved from the Titlon-database, while debt ratio primarily has been gathered from forvalt.no, which contains accounting reports from Norwegian companies. Some accounting figures were verified by surveying annual reports, due to missing or insufficient information at www.forvalt.no. Firm sectors are based on Oslo Stock Exchange's reporting.

Table 4.1: Firms included per year, and number of firms with and without compensation committees

Year	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Number of firms	43	48	51	57	63	68	74	74	74
With compensation Committee	19	23	28	30	38	43	48	48	49
Without compensation committee	24	25	23	27	25	25	26	26	25
Relative use	44%	48%	55%	53%	60%	63%	65%	65%	66%

As seen in Table 4.1, the number of observations of compensation committees, and the relative use of compensation committees have increased between 2007 and 2015, indicating that a larger proportion of firms are adhering to norsk anbefaling for eierstyring og selskapsledelse.

The relevant population for our thesis is all companies listed on Oslo Stock Exchange or Oslo Axess between 2007 and 2015. However, due to mergers and acquisitions, bankruptcy, insufficient reporting (Gitmark, 2015; Norsk Ledelsesbarometer, 2016), and company turnover on Oslo Stock Exchange, we were unable to obtain information on several firms. The entire sample consists of 76 firms, with different numbers of years included. A significant number of the companies listed between in the years between 2008 and 2012 were delisted before 2015. This has led to a few possible biases, which we attempted to measure using four different standard variables; Debt ratio, Owner concentration, Stock return and Market capitalization.

The out of sample group consists of companies removed from our original sample due to insufficient reporting. It contains 29 individual firms, with at least three years included for each company. It consists of firms excluded from the original sample due to inaccurate or missing information for the primary variables, such as compensation committee presence and valuation of bonuses or stock grants. We gathered information from Titlon, Proff Forvalt, and annual reports, to obtain complete sets of variables for the

firms left out of sample. There is a significant difference between our sample and the out of sample group for owner concentration and market capitalization, and non-significant differences for debt ratio and stock returns. A list of companies included in our samples and t-tests for differences between our sample and out of sample group have been reported in the Appendix.

We expected to find a significant difference in size between our sample and the out of sample group, for at least two reasons: 1) Larger firms will generally prepare more transparent and comprehensive reports, and are therefore more likely to be included in our sample (Main & Johnston, 1993), and 2) larger firms tend to survive, while the mortality of smaller companies is higher. As mentioned, several firms listed in 2007 have since been delisted, and several firms listed in the years between 2008 and 2012 have been delisted before 2015.

4.3 Operationalized variables for hypothesis 1

The variables used in our analyses of the hypotheses are presented below, along with a description of why we included them, transformations and possible issues. If the same variable is used in more than one hypothesis, we have shortened the description in the following section. When testing hypothesis 1 we used a t-test, and Tobit, ordinary least squares, and fixed effect regression to infer causality and discern possible endogenic effects. Therefore, we operationalized several variables for this hypothesis.

4.3.1 Proportion of incentive-based salary (dependent variable)

Since our first hypothesis states that firms using compensation committees have improved the alignment of CEO and shareholders interests through more performance-sensitive remuneration schemes, we have gathered information about fixed and incentive-based salaries for every firm. Fixed salary includes base salary, benefits in kind and pensions, while incentive-based salary includes bonuses, options and stock grants, and long-term incentive agreements. Please refer to Section 2 for in-depth explanations. Due to firm size affecting both total salaries and therefore total incentive-based pay, we have chosen the proportion of incentive-based salary as our dependent variable. The variable is measured

as a ratio. The dependent variable has severe issues with regards to kurtosis and skewness, and there are multiple observations with zero value, as seen in Figure 4.1.

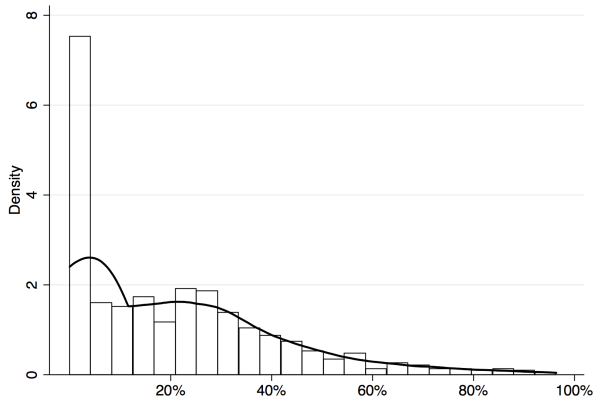


Figure 4.1: Proportion of incentive-based salary.

4.3.2 Independent variables

We believe that firms, where the compensation committees have been established, are more likely to increase the pay-for-performance sensitivity. Compensation committee has been included as a categorical (dummy) variable (Conyon, 1997; Conyon & Peck, 1998; Main & Johnston, 1993). As mentioned, norsk anbefaling for eierstyring og selskapsledelse states that Norwegian listed companies should either establish a compensation committee, or explain why they have deviated from this recommendation. Therefore, nearly all firms have stated whether or not they have implemented the committee. We were able to retrieve information for every firm and year included in our sample. In total, we found 326 observations where compensation committee had been implemented, while in 226 observations the committee was not present. For some firms, the compensation committees were implemented during the surveyed time frame.

Table 4.2: Compensation committee observations

Compensation committee present	**Average CEO salary**	**Number of observations**	**Average number of firms per year**
Yes	7 177 696	326	36
No	4 072 017	226	25

Firm size typically impacts both the size of the compensation and the complexity of the remuneration scheme (Conyon & Peck, 1998; Jensen & Murphy, 1993; Randøy &

Strøm, 2014). Since large firms tend to have larger and more competent boards, these firms are also more likely to implement more sub-committees and adhere to the recommended guidelines (Main & Johnston, 1993). Both due to the perceived benefits, and social contracts (Bebchuk & Fried, 2003). Therefore, we deemed it necessary to include this variable in the multiple regression models to determine whether larger firms tend to have a larger proportion of incentive-based salary, independently of the implementation of compensation committees. Firm size is measured by market capitalization. However, revenues, the number of employees, total assets and several other measures have been used in previous research (Randøy & Nielsen, 2002). In the robustness tests in Section 6.5, we have measured size by assets instead of market capitalization. We have included stock return as a control variable, since we expect executives to be rewarded for profitable years (Conyon & Peck, 1998; Eisenhardt, 1989; Tosi et al., 2000). Stock return has been calculated by the standard formula:

$$\text{Stock return} = \frac{\text{Market capitalization}_{\text{t-1}} - \text{Market capitalization}_{\text{t}} + \text{Dividends}_{\text{t}}}{\text{Market capitalization}_{\text{t-1}}}$$

Owner concentration is measured by the accumulated ownership of the five largest shareholders. Previous literature has indicated that a higher concentration of ownership should, all else equal, lead to lower total salary and less need for interest alignment through performance-related salaries (Randøy & Strøm, 2014). Agency theory predicts that higher owner concentration should result in a lower proportion of incentive-based salary since owners are willing to spend more time on monitoring, and free riders are less of a problem (Grossman & Hart, 1980; Randøy & Skalpe, 2007; Randøy & Strøm, 2014). In other words, higher owner concentration will often lead to more active shareholders (Randøy & Strøm, 2014). Thus, the need for interest alignment may be reduced. However, Edmans and Gabaix (2009) did not find substantial differences in governance mechanisms with different degrees of dispersed ownership. All Norwegian firms are required to report the 20 largest shareholders in their annual fiscal reporting, so this figure is readily available for our sample firms. Due to changes in the proportion of incentive-based salary between the years of our sample, we included years as a control variable for inter-year deviations.

4.4 Operationalized variables for hypothesis 2

4.4.1 Total CEO salary (dependent variable)

The variable total CEO salary is heavily influenced by company size, type of industry, year, in addition to several non-observed factors (Randøy & Strøm, 2014). There are severe issues of both kurtosis and skewness present for the variable total CEO salary, mainly due to some observations of high CEO wages. This problem has also led to researchers often preferring to use the median instead of mean values when analyzing variables with this type of distribution. For our model, we have normalized the variable by applying the natural logarithm, which has reduced the issues of extreme observations and outliers in regression.

4.4.2 Independent variables

We included firm size in hypothesis 2 due to the close relationship between company size and size of CEO salaries. Please refer to Section 4.3.1 for further information and reasoning for inclusion. The absolute value of incentive-based salary is heavily affected both by the size of total compensation and firm size. We added a dummy variable for a change of CEOs since we included the total salary of both CEOs in these instances. Moreover, Murphy (2012) states that compensation committees almost invariably pay "too much" for newly appointed CEOs. Years has been included as a control for inter-year variations, measured as dummy variables. We have also included the variable compensation committee presence since these committees are the focus of our thesis, and we believe that these committees may impact salaries. Owner concentration has been included for the same reasons as in Section 4.3.1. We have measured debt ratio by the ratio of total liabilities to total equity at the end of each accounting period. While debt ratio not necessarily directly impacts profits, and might even reduce accounting profits, some theorists believe that a higher debt ratio disciplines management and forces them to provide higher returns to service the debt (Bøhren, 2012; Jensen & Murphy, 1990; Randøy & Nielsen, 2003). This reduces possibilities of investing in unprofitable projects or extracting rent. Therefore, we have included this variable as a control variable. The variable is measured as a ratio and is generalizable to all firms in the sample without any transformation.

4.5 Data transformation

To reduce the problem of outliers and distribution of errors, we have transformed several variables in our regression models. According to Ringdal (2013, p. 424) transformation of variables has two main functions, 1) reduce the impact of skewed distribution and extreme observations, and making extreme observations more symmetrical, and 2) Enhancing the theoretical fit of the model since a value change will be measured in percentages and not absolute values. Transformation could be achieved by transforming the variables or removing observations. However, Brooks (2008) remarks that researchers must take caution when removing outliers since they represent actual values and researchers are in danger of misrepresenting true relationships. This might lead to researchers creating an artificial fit to infer a relationship between variables (Type I error). We have log-transformed several variables. This has improved the fit of our variables by reducing the effect of outliers, and variance.

Due to the ratio scale, we do not believe any transformation of the variable owner concentration is required. Stock return is measured as a percentage figure, which should increase generalizability compared to absolute values. However, due to mergers and acquisitions, market fluctuations and other macroeconomic influences, some values were found to be extreme. Naturally, a significant share of the observations was negative. When transforming the variable, we first had to standardize and add 2 to every observation to achieve only positive values without skewing the relative relationships between observations. Finally, we applied the natural logarithm to reduce variability and impact of extreme observations. We have used the natural logarithm on market capitalization to lessen the possibility of outliers and extreme values distorting the results. However, the variable is still not normally distributed.

When analyzing and testing our sample, we found some extreme values and outliers. After performing tests and visually observing these values, we have removed six years of observations from the sample: 1) we removed 2007-2009 for Kongsberg Gruppen due to extreme variations in stock returns, and 2) American Shipping Company was removed due to extreme debt ratios and stock returns. We believe this to be justified due to the strong influence and distortion of extreme observations, and their effect on the regression model as a whole. Other than these six observations, none have been removed.

5 Econometric theory and analyses

Non-observed factors affecting the dependent variable are often present in research on social phenomena. Profitability may depend on macroeconomic changes, CEO motivation, CEO salary, loss of contracts or clients, and so on. To reduce noise and lessen the impact of endogenous factors, we have gathered data for every company over several years. This enabled us to measure changes and tendencies within companies, as well as between years and firms.

5.1 Tobit

It is not uncommon to find variables with limited observation range in econometric analyses, such as variables that cannot possibly be negative (Brooks, 2008), e.g. investment in research and development, military spending, and hourly salary. Variables such as these, with an actual and observed limit, are typically referred to as censored data, and will typically have a cluster of observations at, or close to the limit (Brooks, 2008; Greene, 2012; McDonald & Moffitt, 1980). However, there are instances where these limits are synthetic, and observations of the variable above threshold limits are not reported at their actual value. Researchers might have created an arbitrary maximum range; this is truncated data. One commonly used example of this is the measurement of car speeds, where the speedometer was previously capped at 120 mph in many vehicles. However, it was still possible to exceed this limit in most cars.[11] Truncated data may then present sample selection issues since the researcher cannot know if observations present actual population means. Stata does not produce fixed effect Tobit models, so we have used the random effects model. The random effects Tobit model is presented as (Wooldridge, 2010, p. 708):

$$y_{it} = \max\,(0,\, \psi + X_{it1}{}^{*}\beta_1 + X_{it2}{}^{*}\beta_2 + \ldots + X_{itk}{}^{*}\beta_k + \overline{x}_i\xi + \alpha_i + \mu_{it}),$$
$$\mathrm{t} = 1,\, 2,\, \ldots\, ,\, \mathrm{T}$$

As discussed in Section 4.3.1, the variable is highly skewed due to non-negative observations, and a large number of zero observations, in other words, censored data (Greene,

[11] https://stats.idre.ucla.edu/sas/output/truncated-regression/

2012 p. 891). Thus, we applied the Tobit model, censoring at zero. There were 135 observations of zero, out of a total 545 observations. The Tobit model does not only predict a cluster of zeros (or limit values) but a grouping of observations close to the limit value, as well (Greene, 2012, p. 895). As seen in Figure 4.1, the dependent, variable proportion of incentive-based salary, fulfills these requirements. According to Greene (2012), researchers have often computed ordinary least squares estimates in these instances, despite their inconsistency. Ordinary least squares estimates will "almost without exception" provide lower coefficients than maximum likelihood estimates (Greene, 2012). Since a large number of observations are at zero, a change in independent variables will not lead to appropriate changes in the dependent variable (Greene, 2012). A possible solution to the grouping of variables at, or close to, the limit is an exclusion of limit values. However, this would lead to potentially valuable information being lost (Brooks, 2008). In our sample, we would have lost 135 of 545 observations. Additionally, creating a synthetic cut-off of observations may reduce the censoring problem, but ordinary least squares regression will affect the error term of the regression, and the error term would be correlated with explanatory variables (Brooks, 2008). The estimates would still be inconsistent and biased. Therefore, while solving the issue of clustering at the limit and censoring problems, we would have created a truncation problem (Greene, 2012).

According to Brooks (2008, p. 536), the Tobit model has two significant limitations: 1) It is much more sensitive to heteroscedasticity and non-normality issues than regular ordinary least squares regression (Arabmazar & Schmidt, 1982; Wooldridge, 2010), which will lead to biased and inconsistent results. 2) The model is based on a grouping of values close to the limit, not only limit observations. To counteract the first problem, we have applied a bootstrap method to create robust standard errors in Section 6. The second issue has been discussed in a previous paragraph and, as seen in Figure 4.1, should not be a problem in our model.

5.2 Ordinary least squares

The normal method of analyses for panel data is regression (Brooks, 2008). There are four main types of regression analyses: 1) Ordinary least squares, 2) fixed effects, 3) random effects, and 4) random parameters (Greene, 2012, p. 386). In this thesis, we have applied

ordinary least squares and fixed effects regression. The ordinary least squares regression model is often presented as (Wooldridge, 2010):

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + ... + \beta_k X_k + \mu$$

Where $X_1, X_2, ...X_k$ are the independent variables, while β_0 indicates the constant, and β_1 to β_k indicates the direction and impact of independent variables. μ is the unexplained error.

In ordinary least squares regression, a fitted line predicts the relationship between one dependent and one or more independent variables. In other words, the fitted line is the best available prediction of the variance in the dependent variable and is estimated by the independent variables (Brooks, 2008). The lower the observed variance, the more variation of the dependent variable can be explained by independent variables (Brooks, 2008). For ordinary least squares regression to present reliable results, some assumptions need to be fulfilled (Brooks, 2008). The intuition behind the assumptions will be explained in this section, while tests of the assumptions are performed in the Section 5.2.1.

5.2.1 Ordinary least squares assumptions

Linearity - If the regression is to provide reliable results, there should be a linear relationship between the dependent and independent variables. If the relationship between the variables is not linear, the fitted regression line misinterprets the variance (Brooks, 2008).

Homoscedasticity - Homoscedasticity relates to the variance of error terms. Ideally, the variance of errors is constant, i.e. not changing or deviating from the fitted line as the independent variables change (Greene, 2012). Homoscedasticity can be checked by visually assessing plot of observed error values, and using Breusch-Pagan / Cook-Weisberg, and White's tests for heteroscedasticity. If this assumption is not fulfilled, it could seriously affect the standard error terms and the validity of predicted values.[12] However, the presence of heteroscedasticity is not uncommon, and models that account for the effect exists.

[12]http://www.statisticssolutions.com/homoscedasticity/

Multicollinearity - If multicollinearity is present, two or more of the independent variables have a strong correlation (Greene, 2012). This may inflate the relationship between individual independent variables and the dependent, leading to researchers incorrectly inferring relationships when these are not present. Multicollinearity is tested by extracting a correlation matrix between the variables included in a regression model, and their particular relationship. Correlation over 0.50 is considered high, 0.30-0.50 is considered moderate but acceptable, and below 0.30 is considered low.

Correlation is measured using a Pearson's correlation matrix. The Pearson's correlation matrix measures the degree of linear association between independent variables (Brooks, 2008). The matrix values range from a minimum of -1, to the maximum of +1. -1 describes a perfect negative relationship between variables, and +1 describes a perfect positive relationship between variables. If variables have a correlation of zero, they are orthogonal (Brooks, 2008). These variables are perfectly independent of each other's values. Thus, the inclusion of these variables will not affect the relative coefficients.

In addition, a variance inflation factor test could be performed. Variance inflation factor tests will assess the existence of any multicollinearity by quantifying how the individual variable's variance is inflated by the presence of other independent variables. By examining each independent variable, and how they are impacted by other independent variables, we can assess whether there exists any multicollinearity between independent variables. The variance inflation factor tests, any value below ten is typically considered acceptable. O'brien (2007) concludes that the variance inflation factors needs to be assessed in the context of other factors that influence the stability of the estimates of the regression coefficient.

Normally distributed error observations - The error variance should be approximately normally distributed, i.e. no significant skew either over or under the mean (Greene, 2012). A violation of the assumed normal distribution might reduce or hinder the ability of researchers to calculate precise confidence intervals or if coefficients are significantly different from zero (Greene, 2012). The error distribution is sometimes skewed by the presence of outliers, which might create biases. It may then be necessary to remove these outliers in order to present more reliable results (Brooks, 2008). A visual presentation may be helpful to determine the extent to which a distribution is non-normal. In

economic and social sciences, error distributions are often skewed, have kurtosis, or both. Skewness is the bias of the distribution, or the degree to which the distribution is slanting to either side of the mean. Kurtosis measures the size of the tails. According to Brooks (2008, p. 161), leptokurtic distributions are common in financial and economic time series, and in the residuals of these series. Leptokurtic distributions have "fatter" tails and a higher peak than normally distributed variables.

The dataset should not show significant forms of outliers, high leverage points, or highly influential points. Significant outliers are checked using scatter plots and the studentized residuals in a stem and leaf plot. All values that exceed the absolute value of 2 are then evaluated more carefully. As mentioned in Section 4.2, it is not necessarily wise to remove outliers, since these represent actual and possibly valuable observations. Even though they skew the predictions, removing too many may artificially improve the fit of the model (Brooks, 2008). We used stem and leaf plots to test for high leverage points and the leverage versus squared residual plot. Observations which exceeded the value of ((2*k)+2)/n, where k is the number of independent variables and n is the number of observed values, are carefully evaluated. The leverage versus squared residual plot produces an overview on how each outlier affects the regression. Cook's distance is used to check for highly influential points. All values above 4/n are listed and thoroughly assessed. The higher the value, the more influential the data point is with regards to the predicted line.

Autocorrelation - Regression is based on independence of observations. When autocorrelation is present, however, the value of observations are likely to be affected by previous observations, i.e. a dependency within the data.[13] Autocorrelation is often present in samples where the observations are not picked randomly, but from the same source, such as panel and time series data. The impact of autocorrelation in regression models is inefficient ordinary least squares estimators (Brooks, 2008, p. 149). This is likely to reduce the predictive value of independent variables and inflate the R-squared value, or predictive value, of the model (Brooks, 2008). When testing for autocorrelation, the tests are conducted on residuals, since the population disturbances cannot be observed (Brooks, 2008, p. 149). To test whether autocorrelation is present, we performed Wooldridge's test for autocorrelation in panel data (Wooldridge, 2010). This test will reveal whether there is

[13]http://www.statisticssolutions.com/autocorrelation/

any autocorrelation. However, it will not indicate which particular type of autocorrelation (Petersen, 2009).

Clustering - One subgroup of autocorrelation is called clustering. Clustering issues are common in panel data sampling since observations are drawn over several years for the same firms (Cameron & Miller, 2015; Wooldridge, 2010). Constant time or firm effects may lead to misstated standard errors in the standard ordinary least squares regression. When clusters or groups, rather than individual units are drawn from a population, it is referred to as cluster sampling (Wooldridge, 2010). The clusters can be assumed to be independent of each other, but observations within a cluster are correlated. This is due to endogenous factors impacting the unit similarly over time. This effect is referred to as "unobserved cluster effects" (Wooldridge, 2010, p. 853). Clusters may appear in two different forms: "Across time within the same individual and across individuals within the same group." (Wooldridge, 2010, p. 876). If there are firm or time effects, standard error values will be lower in the unadjusted procedures. However, if the sample contains a large enough number of clusters, with an appropriate cluster size, it is possible to control the effect and calculate more accurate standard errors (Wooldridge, 2010). When a large number of clusters is present in the sample, researchers should base their inferences on cluster-robust standard errors (Cameron & Miller, 2015). If not, there is a risk of misstating the standard errors and confidence intervals. If there are no time or firm effects, normal ordinary least squares estimates will be correct (Petersen, 2009).

When clustering on years, the consistency depends on a sufficiently high number of years. Petersen (2009) has indicated that ten years may be a too small cluster. It is possible to cluster to account for either firm and year effects, or both simultaneously. When the number of years included is too low, the Fama-Macbeth standard errors is typically more accurate (Petersen, 2009). Whether one should cluster on firm, years or both depends on the source of dependence. If the time effects are not fixed, clustering on units will not provide accurate standard error estimates, and one will typically have to cluster on firms and years simultaneously (Petersen, 2009). However, when one dimension has significantly fewer clusters than the other, clustering on the largest dimension will commonly yield nearly identical results to clustering on both dimensions (Petersen, 2009, p. 460). We will perform Rogers test for standard errors in Section 5.2.2, and report standard errors when clustering on years, firms, and normal standard errors. However, in

our fixed effects regressions in Section 6.4 and ordinary least squares in Appendix, Section C.1, we will cluster on firms, due to the previously mentioned reasons, i.e., a much larger number of companies than years.

5.2.2 Analyses of assumptions

We have used Stata to interpret the econometric results in our sample. The tables presented in this section have been re-scaled from the Stata output, to create more intuitive and simplified tables. The regression models we have used for our thesis are as follows:

Hypothesis 1: The presence of a compensation committee leads to a larger proportion of incentive-based salary for CEOs.

$$\textit{Proportion of incentive-based salary} = \alpha + \beta_1 \textit{*Compensation committee} + \beta_2 \textit{*Firm size} + \beta_3 \textit{*Owner concentration} + \beta_4 \textit{*Stock return} + \mu$$

Hypothesis 2a: More incentive-based pay leads to higher total salary.
Hypothesis 2b: Compensation committee presence leads to higher total salary.

$$\textit{Total CEO salary} = \alpha + \beta_1 \textit{*Proportion of incentive-based salary} + \beta_2 \textit{*Compensation committee} + \beta_3 \textit{*Firm size} + \beta_4 \textit{*Owner concentration} + \beta_5 \textit{*Debt ratio} + \beta_6 \textit{*New CEO} + \mu$$

Please refer to Section 5.2.1 for definition and discussion of the assumptions.

Linear relationship - All independent variables should have a linear relationship with the dependent variable.

Hypothesis 1: There is a linear relationship between the dependent variable and independent variables.
Hypothesis 2: There is a linear relationship between the dependent variable and independent variables.

Heteroscedasticity - Errors should not appear to deviate too much across the mean. We have performed tests for heteroscedasticity using the Breusch-Pagan / Cook-Weisberg

and White's test for heteroscedasticity based on our models for hypothesis 1 and 2.

Table 5.1: Breusch-Pagan / Cook-Weisberg and White's test for heteroscedasticity, kurtosis and skewness

Hypothesis	**Breusch-Pagan / Cook-Weisberg**	**White's test**	**Kurtosis**	**Skewness**
Hypothesis 1	0.0012	0.0001	0.1605	0.0000
Hypothesis 2	0.0712	0.0992	0.0887	0.6760

Hypothesis 1: The p-value is 0.0012 in Breusch-Pagan / Cook-Weisberg, and 0.0001 in White's test. Therefore, heteroscedasticity is likely to be present, and the null hypothesis of homoscedasticity is rejected. The model has significant skewness, and a leptokurtic distribution.

Hypothesis 2: The p-value is 0.0712 in Breusch-Pagan / Cook-Weisberg, and 0.0992 in White's test. Therefore, heteroscedasticity is likely to be present, and the null hypothesis of homoscedasticity is rejected. The model has significant kurtosis, and a leptokurtic distribution.

Multicollinearity - Independent variables should not have a high correlation. Please refer to Section 5.2.1 for definition and discussion of the assumption of no multicollinearity. We have applied Pearson's correlation coefficient to assess the relationship between independent variables. In Table 5.2, correlation coefficients and their significance values are presented. Two coefficients exceed 0.5. As previously stated, this is regarded as a high value, and multicollinearity may be an issue. However, we have deemed these to be at an acceptable level. The values are barely over the values regarded as "high," and the VIF factors are low, as seen in the Appendix, Tables C.2 and D.2.

Table 5.2: Correlation matrix

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1. Compensation committee	1.0000							
2. Prop. incentive-based pay$_a$	0.2403'	1.0000						
3. CEO salary$_a$	0.4106'	0.5331'	1.0000					
4. Firm size$_a$	0.2452'	0.3090'	0.5742'	1.0000				
5. Owner Concentration	−0.2676'	−0.2131'	−0.1276***	0.0489	1.0000			
6. Debt ratio	−0.0681	−0.0788*	0.0695	0.0121	0.1177***	1.0000		
7. New CEO	0.0642	−0.0363	0.1161***	−0.0694	−0.0070	0.0226	1.0000	
8. Stock return$_a$	0.0503	0.1158***	−0.0097	0.1527'	−0.0565	−0.0613	0.0223	1.0000

$^{'}p < 0.001$, $^{***}p < 0.010$, $^{**}p < 0.050$, $^{*}p < 0.100$
$_a$ Logarithm

The highest correlation is found between firm size and total CEO salary. As men-

tioned, previous research has indicated a relationship between company size and proportion of incentive-based salary (Baumol, 1967). The proportion of incentive-based salary and total CEO salary has a high correlation as well, indicating that a relationship exists between these variables.

Autocorrelation - Observations should be independent and not affected by the previous observation. Please refer to Section 5.2.1 for definitions and discussion regarding the distribution of residuals and outliers. Figures are presented in the appendix, Section B.

All tests for outliers, high leverage points, or highly influential points display between 20-50 data points that exceeds the absolute value of 2 for the studentized residuals, (2k+2)/n for the high leverage points and 4/n for the highly influential points. To summarize, the outliers observed above the predetermined value will have an adverse effect the regression. This reduces the dependability of the regression output. However, none of the data points registered has any extreme values.

Using Wooldridge's test for autocorrelation in panel data, we find significant autocorrelation values for hypothesis 2. We are able to reject the null hypothesis of autocorrelation in hypothesis 1 at 5% significance level. According to Drukker (2003), the Wooldridge test has good size and power properties in reasonably sized samples. Drukker's sample sizes were based on four measurements combining 500 and 1000 observations and 5 and 10 years, where larger sample sizes had higher power. Our sample includes 545 observations across 9 years (unbalanced), and we believe that this should induce robust findings.

Table 5.3: Wooldridge's test for autocorrelation

Hypothesis	**F value**	**Confidence level**
Hypothesis 1	3.697	0.0584
Hypothesis 2	10.330	0.0019

Hypothesis 1 has a confidence level of 0.0584, and we are able to reject the null hypothesis of first-order autocorrelation at a 5% significance level. Autocorrelation may be present, but not at 5% significance level.
Hypothesis 2 has a confidence level of 0.0019, and are unable to reject the null hypothesis of first-order autocorrelation. Autocorrelation is likely to be present.

Clustering - Theory discussed in Section 5.2.1. We have concluded that auto-correlation is present in hypothesis 2, and heteroscedasticity is present in hypothesis 1. Therefore, we will use robust standard errors, as described in Section 5.2.1. Since Rogers method for calculating standard errors presents unreliable standard error estimates when clustering on too few years (Petersen, 2009), we are clustering on firms in our analyses in Section 6. It is possible to use Fama-Macbeth method to calculate accurate time clustered standard errors, but researchers will typically prefer to cluster on firm-level in panel data when the number of units is larger than the number of years (Petersen, 2009).

Table 5.4: Clustering: Ordinary least squares, cluster year, and cluster company

Hypothesis 1			
Variable	**(A) OLS**	**(B) Cluster year**	**(C) Cluster company**
Compensation committee	0.0340**	0.0340*	0.0340
SE	0.0151	0.0167	0.0271
Firm size	0.0264'	0.0264'	0.0264'
SE	0.0041	0.0046	0.0066
Owner concentration	−0.1316'	−0.1316**	−0.0136**
SE	0.0348	0.0430	0.0532
Stock return	0.0629	0.0629	0.0629
SE	0.0386	0.0505	0.0504
Industry indicator	Yes	Yes	Yes
Year	Yes	Yes	Yes
Hypothesis 2			
Variable	**(A) OLS**	**(B) Cluster year**	**(C) Cluster company**
Proportion of incentive-based pay	1.8073'	1.8073'	1.8074'
SE	0.1405	0.1477	0.2227
Compensation committee	0.2519'	0.2519'	0.2519**
SE	0.0491	0.0309	0.0960
Firm size	0.1531'	0.1531'	0.1531'
SE	0.0137	0.0141	0.0246
Owner concentration	−0.0814	−0.0814	−0.0814
SE	0.1131	0.0802	0.2285
Debt ratio	0.0474***	0.0474**	0.0474
SE	0.0167	0.0183	0.0299
New CEO	0.2735'	0.2735**	0.2735'
SE	0.0570	0.0779	0.0641
Industry indicator	Yes	Yes	Yes
Year	Yes	Yes	Yes

$^{'}p < 0.001$, $^{***}p < 0.010$, $^{**}p < 0.050$, $^{*}p < 0.100$

Dependent variable Hypothesis 1: Proportion of incentive-based salary

Dependent variable Hypothesis 2: Total CEO salary

Beta coefficients are constant, significance presented

SE = Standard error

5.3 Fixed and random effect

Non-observed factors affecting the observations in panel data are present in nearly all longitudinal studies (Brooks, 2008). These factors can either be unit specific, such as

firm, country, over time, or affect every observation in a given period (Wooldridge, 2010). These effects often force researchers to decide whether the endogenous factor(s) are to be treated as fixed, or random effect (Wooldridge, 2010, p. 285). The endogenous, non-observed factors can affect the units in a similar way throughout the observed periods, or no observable pattern is found. Fixed effects models are more robust than random effects models since they estimate and account for unobserved factors that impact the relationships (Wooldridge, 2010). The fixed effects model is presented as (Wooldridge, 2010):

$$y_{it} = X_{it1}\beta_1 + X_{it2}\beta_2 + \ldots + X_{itk}\beta_k + \varsigma_i + \mu_{it}, \qquad t = 1, 2, \ldots, T$$

When assuming that the endogenous factor does not correlate with the independent variables, random effects estimation is typically used instead of constant effects (Wooldridge, 2010). In random effects models, we no longer assume a correlation between the unit observations and non-observed factors (Wooldridge, 2010). Therefore, this method is well suited to models where one or more of the independent variables are constant, or nearly constant, using a model with constant independent variables.

To assess whether the fixed or random effects methods are most suited for our regression model, we have performed Hausman's test (Wooldridge, 2010). The null hypothesis is that there is no discernible difference between the two methods. The null hypothesis is rejected in both models. These results indicate that there is a constant effect of the non-observed variables, and a correlation is present between endogenous, non-observed variables and our independent variables. Therefore, we will report fixed effects in Section 6.4, ordinary least squares in Appendix, Section D, and omit the random effects results.

6 Results

6.1 Descriptive analysis - Hypothesis 1

Table 6.1: Summary statistics: Average and Median values of variables (2007-2015)

Key figures

Variable	Proportion of incentive-based pay	Owner concentration	Stock return	Total CEO salary	Incentive-based salary	Debt ratio	Firm size (BNOK)
Mean	20.02%	57.56%	16.40%	5 906 168	1 689 014	1.49	13.775
Std. deviation	20.31%	20.68%	81.36%	5 388 721	3 228 795	1.31	45.967
Median	15.62%	59.45%	03.89%	4 236 000	580 681	1.25	1.359
p75	30.78%	73.92%	32.88%	7 094 964	2 000 000	1.98	5.888
p25	00.11%	42.05%	-23.36%	2 447 000	2 515	0.67	0.435
Skewness	1.101	-0.224	3.484	2.692	4.931	2.826	5.208
Kurtosis	3.934	2.522	26.336	13.793	38.184	18.503	31.585

Mean values

Year	Proportion of incentive-based pay	Owner concentration	Stock return	Total CEO salary	Incentive-based salary	Debt ratio	Firm size (BNOK)
2007	31.49%	58.38%	10.97%	6 297 621	3 014 805	1.47	21.209
2008	20.38%	59.41%	-48.77%	5 282 902	1 589 666	1.78	11.010
2009	20.59%	58.67%	92.01%	6 228 701	1 496 224	1.52	13.880
2010	14.01%	58.29%	19.20%	4 808 205	1 015 846	1.29	13.843
2011	18.47%	57.96%	-13.05%	5 479 775	1 293 281	1.31	12.379
2012	17.90%	57.33%	25.55%	5 588 524	1 366 877	1.38	12.739
2013	22.64%	56.34%	44.46%	6 344 893	2 160 098	1.32	13.318
2014	21.11%	56.90%	06.89%	6 382 176	1 942 913	1.61	13.736
2015	16.86%	56.25%	06.01%	6 446 590	1 542 396	1.74	13.762
Total	20.02%	57.56%	16.40%	5 906 168	1 689 014	1.25	13.775

Median values

Year	Proportion of incentive-based pay	Owner concentration	Stock return	Total CEO salary	Incentive-based salary	Debt ratio	Firm size (BNOK)
2007	30.77%	61.35%	08.44%	3 483 000	1 000 000	1.19	3.502
2008	13.83%	64.26%	-50.98%	3 354 500	470 500	1.58	1.098
2009	16.89%	61.66%	59.55%	3 873 000	520 000	1.43	1.297
2010	07.66%	61.45%	07.46%	3 241 000	245 000	1.05	1.846
2011	14.88%	58.12%	-15.98%	4 386 400	595 960	1.23	1.223
2012	14.05%	59.45%	10.22%	4 380 579	513 768	1.19	1.343
2013	19.76%	52.39%	12.96%	4 500 773	859 573	1.17	1.725
2014	19.71%	57.46%	02.46%	4 934 000	876 800	1.38	1.725
2015	10.61%	53.23%	02.28%	5 032 852	438 849	1.28	0.984
Total	15.62%	59.45%	03.89%	4 236 000	580 680	1.25	1.359

Figures are not adjusted for inflation

Firm size measured by market capitalization

Table 6.1 presents a summary of the dependent and independent variables in our sample.

The average proportion of incentive-based salary across all years, sectors, and firms is 20.02% of total salary. There are some variances between years and industries, as seen in Table 6.1, and 6.2, with the average proportion of incentive-based salary ranging from

a minimum of 14.01% in 2010 to a maximum of 31.49% in 2007. Additionally, the share of incentive-based salary, i.e. bonus, stock options and stock grants, were significantly reduced in the years after 2007. These figures increased somewhat in the following years, before decreasing again in 2015. This may have been due to the financial crisis in 2007 and 2008, and the "oil crisis" starting at the end of 2014. The mean value of CEOs incentive-based salary in absolute values ranges from NOK 1 015 846 in 2010, to a maximum of NOK 3 014 805 in 2007. The mean of total incentive-based salary is NOK 1 689 014. The average value is higher than median values for all years, suggesting a positive skew. We did not find any steady increasing or decreasing tendency in the size of CEOs incentive-based salary. However, there is a significant disparity between years.

Table 6.2: Salary differences between sectors

	Total CEO salary			
Sector	**Mean**	**Median**	**Incentive-based**	**Observations**
Energy	8 071 333	6 731 408	23.28 %	106
Finance	10 003 954	5 650 000	25.44 %	21
Industry	4 244 073	2 810 000	13.58 %	123
IT	4 841 835	3 267 000	24.47 %	99
Supply	4 459 079	4 334 715	23.30 %	18
Consumer goods	4 325 204	3 192 000	18.92 %	57
Materials	11 725 126	11 820 000	20.82 %	28
Health	2 809 207	2 953 044	16.18 %	31
Consumable	6 105 600	5 591 385	16.18 %	28
Real estate	4 643 082	4 400 500	13.88 %	22
Telecom	12 983 131	12 569 000	32.22 %	9

Incentive-based pay is measured as a proportion of total salary

The low level of observations for each industry per year may make it difficult to generalize the results. The real estate sector reports the lowest average proportion of incentive-based salary. This sector is considered a safe investment with lower profitability and fluctuations.[14] The highest mean value is found in the telecom sector. However, the only company in this sector is Telenor, which is one of the largest firms on Oslo Stock Exchange, while the finance sector reports the second highest average value. Again, the mean values are greater than the median values for all years, suggesting a positively skewed distribution, which is confirmed by Table 6.1. This effect is common and has led to many researchers using median values instead of mean values when performing descriptive analyses since it reduces the impact of extreme observations in the descriptive analyses. We

[14]https://www.ssb.no/priser-og-prisindekser?de=Boligpriser+og+boligprisindekser++

have not been able to find any strong tendency of increasing or decreasing proportion of incentive-based salary. The bonuses of CEOs may be dependent on several non-observed factors, such as industry, norms, general economic environment, company policies, alternative employment options of executives, CEO personality, and the relationship between the CEO and chair of the board.

The total salary per year does not show any noticeable trend and has fluctuated among years. However, there was an apparent dip in the years after the financial crisis of 2007. The total salary for CEOs was back at 2007 levels in 2013, but a larger proportion of the wages were paid as fixed salaries, i.e. salary, benefits in kind and pension agreement.

Table 6.3: Average and median proportion of incentive-based CEO salaries in firms with and without compensation committees

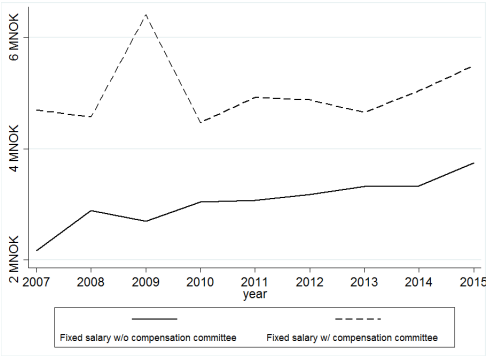
	Firms with compensation committees		**Firms without compensation committees**	
Year	Mean	Median	Mean	Median
2007	40.84 %	37.35 %	24.09 %	23.15 %
2008	31.19 %	19.26 %	10.43 %	00.44 %
2009	24.37 %	22.06 %	16.00 %	08.31 %
2010	16.20 %	12.64 %	11.59 %	00.29 %
2011	23.44 %	22.71 %	10.94 %	00.69 %
2012	22.10 %	22.69 %	10.69 %	00.48 %
2013	24.68 %	25.36 %	18.89 %	11.51 %
2014	24.87 %	24.51 %	14.16 %	02.24 %
2015	17.80 %	18.37 %	15.02 %	01.03 %
Total	23.78 %	22.10 %	14.58 %	06.47 %

Table 6.3 displays the mean and median proportion of incentive-based salary of firms with and without compensation committees. As seen in Figure 6.5b, there is an indication of increasing similarity in the share of incentive-based salary between companies with and without compensation committees implemented. A peak was reached in 2015 when firms without compensation committees had a higher average incentive-based pay in absolute values than firms with the committee. This is our last year of collected data, so we are unable to state whether this is a passing effect, or sustained in the following years. We find this interesting, due to the "oil crisis" beginning in November 2014, and extending throughout 2015. As seen in Table 6.3, implementation of compensation committees leads to larger variation in the proportion of incentive-based salaries.

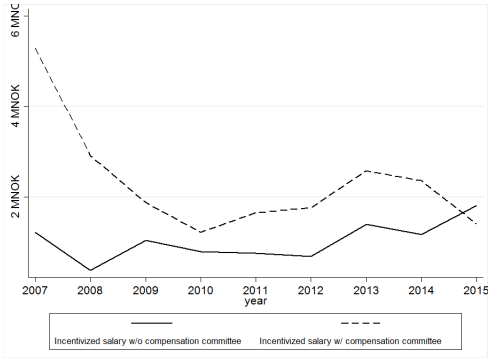
Perhaps compensation committees, while failing to keep total CEO salary in check, are able to reflect performance and punish CEOs for poor performances. However, if the incentive-based salary is replaced by fixed salary, the effect could essentially be meaningless. This could be a further confirmation of the "lucky dollars" theory in management power, wherein CEOs are rewarded for impacts on profitability beyond their control, but not "punished" for similar adverse effects, as predicted by Wallsten (2000). If the board expected the CEO to be willing to take risks in order to increase profitability while not having to worry about losing income, this could make sense (Wallsten, 2000). In addition, CEOs may not be able to directly impact the profitability to such a degree that they should be held accountable for failing results, e.g. when the price of one barrel of North Sea oil dropped from USD 110 per barrel to USD 64 within a few months.[15] A year later, a barrel was valued at USD 28.[16] Companies that have implemented a compensation committee tend to have both higher total incentive-based salary and larger proportion of incentive-based salary. However, this may be due to a larger average firm size. We have attempted to analyze this possibility empirically in Section 6.2.2.

Figure 6.1: Fixed and Incentive-based salaries between (2007-2015)

(a) Fixed salaries between 2007 and 2015



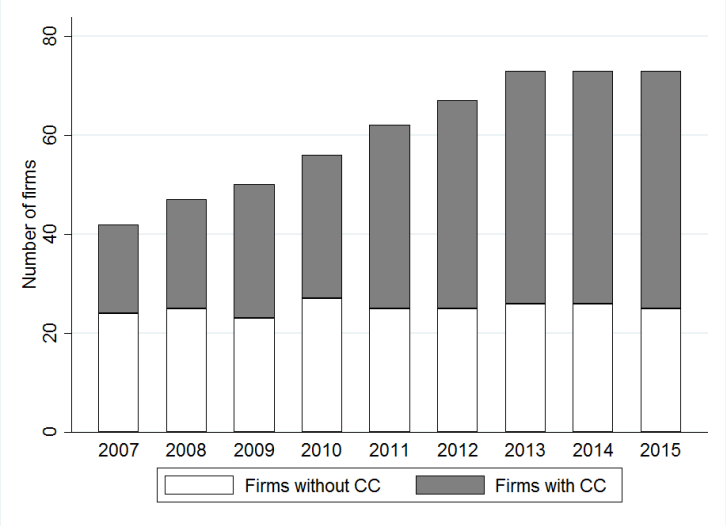
(b) Incentive-based salary between (2007-2015)



[15] http://www.dn.no/nyheter/okonomi/2014/12/20/0755/oljeprisfall-gir-enorme-milliardtap-for-norge

[16] http://www.vg.no/nyheter/innenriks/olje-og-energi/ny-bunnotering-laveste-oljepris-siden-2003/a/23598060/

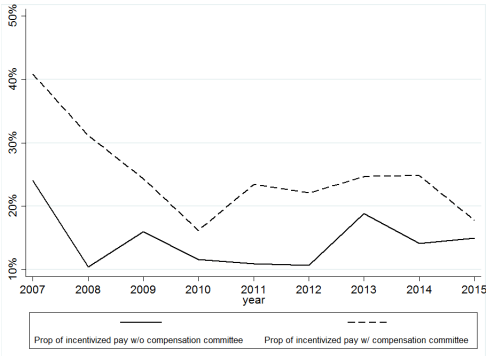
Figure 6.2: Use of compensation committees (2007-2015)



Similarly, there was a tendency of the proportion of incentive-based salaries becoming increasingly similar for firms with and without compensation committees, as seen in Figure 6.3a. There are many possible reasons for this development, some of which may be: 1) Increased information requirements in norsk anbefaling for eierstyring og selskapsledelse, and firms had to increase their diligence both in reporting the salary components and pay-for-performance sensitivity. 2) Firms have been affected by the present standards, and norms have "forced" firms without the committee to increase their bonuses for CEOs to conform to standards. 3) CEOs have required increased bonuses to be willing to change jobs, which has led more firms to increase the use of incentive schemes.

Figure 6.3: Incentive components by year (2007-2015)

(a) Proportion of incentive-based salary (2007-2015)



(b) Incentive-based salary (2007-2015)

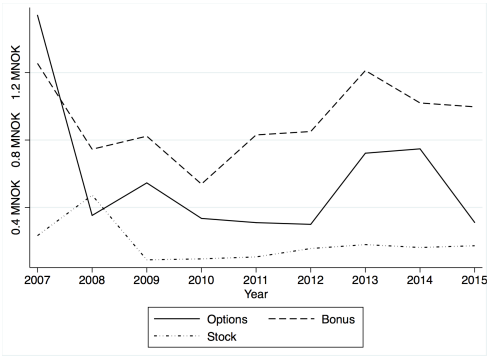


Figure 6.3b presents the relative use of different incentive-based salary components

between 2007 and 2015. The value and use of bonuses are much larger compared to option and stock grants, and the absolute value of option grants had severe reductions in 2008 and 2015, which may indicate that the reported values stem from exercised grants, rather than the future value of awarded grants. However, the high value of option grants in 2007 may be due to the previously mentioned change in 2007: The Norwegian government settled option grants in firms where they were a majority shareholder, and ruled out future use of option plans.

Agency theory has indicated that owners that hold a relatively large share of a firm are more willing to take on monitoring costs since they will reap the benefits of this themselves (Randøy & Strøm, 2014). Whenever one owner assumes the responsibility to increase returns, other owners will be able to "free ride." Any utility maximizing actor is not likely to take action or spend resources on monitoring, since the benefit may not outweigh the disadvantages, such as direct cost, stress, reduced reputation, and conflicts. In firms with one large and dominant owner, this forces the majority shareholder to take on an active role, since other shareholders will find the cost too high relative to rewards. Table 6.6 presents the proportion of incentive-based salaries in firms above and below median owner concentration. There seems to be a weak negative relationship between the share of incentive-based wages and owner concentration, indicating a lower proportion of incentive-based pay in firms with a few large owners. However, these results suggest significant variability and may be impacted by other factors.

Table 6.4: Proportion of incentive-based salary in firms above and below median owner concentration

	Above median owner concentration		**Below median owner concentration**	
Year	**With compensation committees**	**Without compensation committees**	**With compensation committees**	**Without compensation committees**
2007	28.78 %	20.18 %	47.88 %	31.91 %
2008	26.60 %	07.38 %	33.64 %	20.11 %
2009	21.03 %	12.94 %	26.22 %	24.68 %
2010	13.48 %	11.36 %	17.78 %	12.06 %
2011	20.14 %	10.77 %	25.84 %	11.23 %
2012	19.34 %	09.61 %	25.12 %	13.49 %
2013	25.08 %	15.27 %	24.41 %	25.73 %
2014	22.28 %	14.74 %	26.56 %	13.06 %
2015	20.25 %	12.29 %	16.38 %	19.88 %
Total	21.51 %	12.59 %	25.35 %	18.83 %

As mentioned, larger companies have generally had a higher proportion of incentive-

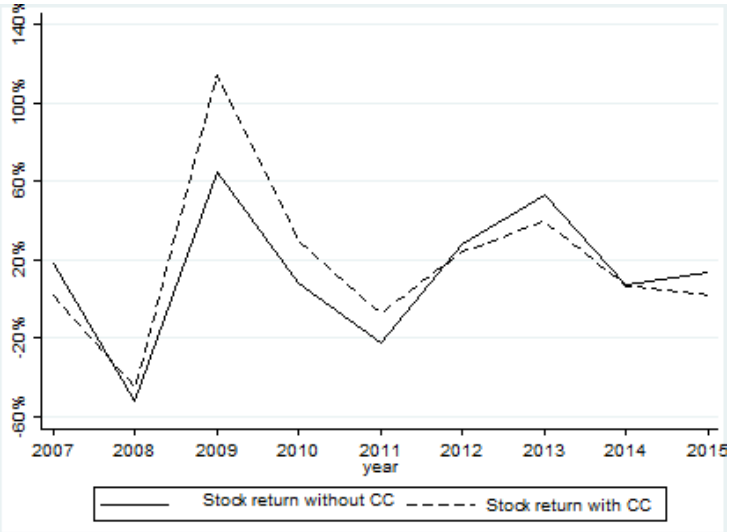
based salaries than smaller firms. This may be due to the increased size, which may lead to more stress and pressure from outside stakeholders for the CEO to maintain control of the company, and related stress and pressure on monitoring for the CEO. We expected that some of this effect might have been due to a more dispersed ownership in firms with larger market capitalization. This effect is not strong, however, and there is a nearly constant relationship between owner concentration and market capitalization. There are notable deviations from the mean, and the constant relationship may be due to the large state ownership in some of Norway's largest publicly listed firms. At any rate, there is no strong relationship between firm size and concentration of ownership.

Table 6.5: Stock returns in firms with and without compensation committees

	Firms with compensation committees		**Firms without compensation committees**	
Year	Mean	Median	Mean	Median
2007	01.53 %	07.79 %	18.44 %	11.58 %
2008	-45.31 %	-57.61 %	-51.96 %	-41.15 %
2009	114.28 %	75.87 %	64.92 %	47.09 %
2010	29.47 %	18.55 %	07.78 %	00.00 %
2011	-07.03 %	-12.41 %	-22.20 %	-19.04 %
2012	24.25 %	10.49 %	27.78 %	09.94 %
2013	39.54 %	07.53 %	53.36 %	23.07 %
2014	06.67 %	02.46 %	07.32 %	02.20 %
2015	02.15 %	03.18 %	13.59 %	01.39 %
Total	18.86 %	05.18 %	12.85 %	00.00 %

Table 6.5 and Figure 6.4 presents stock returns in companies with and without compensation committees. The stock returns have trended similarly in the two groups, except for some deviations at the positive and negative peaks. With a closer alignment between CEO and owners, which should lead to more motivated CEOs, we expected companies with a compensation committee to deliver higher returns. Table 6.5 indicates small deviations between the companies. There is also a relative increase in the use of compensation committees in companies from 2007 to 2015, signaling increased similarities between firms with regards to this. Based on agency theory, the assumption is that bonuses should reflect the actual performance of firms. Therefore, we believe a natural extension of this might be that an average of all bonuses paid could reflect the performance of all firms. There seems to be a linear relationship between the proportion of incentive-based salary on stock returns, indicating neither a positive or negative effect of CEOs incentive and stock returns in the same years.

Figure 6.4: Stock returns with and without compensation committees (2007-2015)



6.2 Empirical results - Hypothesis 1

As stated in section 3.1.4, Hypothesis 1 is: the presence of a compensation committee leads to a larger proportion of incentive-based salary for CEOs. This hypothesis is grounded in agency theory, where interests of the principal and the agent are meant to be aligned by implementing incentives. Since compensation committees specialize in executive remuneration, we believe these committees will apply and adapt prevailing theories when deciding upon CEO pay.

6.2.1 T-test of hypothesis 1

When dividing our sample by the median value of market capitalization, we found an apparent difference with regards to compensation committee establishment. In accordance with our belief, and previous literature, our sample shows an increase in the proportion of incentive-based salary as company size increases. Our regression models in Section 6.2.2, wherein market capitalization has a significant impact on the proportion of incentive-based salary, support this statement.

Table 6.6: Proportion of incentive-based salary in firms above and below median firm size

	Above median firm size		**Below median firm size**	
Year	**With compensation committees**	**Without compensation committees**	**With compensation committees**	**Without compensation committees**
2007	42.72 %	29.73 %	35.58 %	18.46 %
2008	38.20 %	07.59 %	22.08 %	11.54 %
2009	21.52 %	24.57 %	28.76 %	11.43 %
2010	16.59 %	21.45 %	15.54 %	05.79 %
2011	29.51 %	15.28 %	15.10 %	08.89 %
2012	27.27 %	13.16 %	14.91 %	09.31 %
2013	31.03 %	27.39 %	14.09 %	12.66 %
2014	31.03 %	24.99 %	17.59 %	08.43 %
2015	22.64 %	32.65 %	12.33 %	03.27 %
Total	28.30 %	22.79 %	17.31 %	09.73 %

Firms below median firm size have a lower proportion of incentive-based salary, regardless of compensation committee presence. Further, companies above the median are more likely to have a higher proportion of incentive-based salary, regardless of compensation committee presence. Firms below the median are also less likely to have implemented the committee, while the opposite is true above the median.

Table 6.7: Compensation committee observations in firms above and below median size

Compensation committee implemented	**Above median size**	**Below median size**
Yes	192 (69.57 %)	134 (48.55 %)
No	84 (30.43 %)	142 (51.45 %)

We performed a t-test of the relationship between compensation committees and the proportion of incentive-based salary. The t-test is carried out to assess whether differences in means between groups or observations are due to normal variation or could be due to genuine differences within the population (Brooks, 2008). The t-test presents significant differences in the average proportion of incentive-based salary between firms with and without a compensation committee established.

Table 6.8: T-test: Hypothesis 1

Group	**Obs**	**Mean**	**Std. Err.**	**Std. Dev.**
Observations with compensation committee	326	0.2378	0.0111	0.2008
Observations without compensation committee	226	0.1458	0.0129	0.1943
$Diff = mean(0) - mean(1)$			$t = -5.3641$	
$H0 : diff = 0$			$d.f = 550$	
$Ha : diff < 0$		$Ha : diff! = 0$	$Ha : diff > 0$	
$Pr(T < t) = 0.0000$		$Pr(\|T\| > \|t\|) = 0.0000$	$Pr(T > t) = 1.0000$	

Conclusion: There is a significant difference in the proportion of incentive-based pay in firms with and without compensation committees. The null hypothesis of no difference in means is rejected.

6.2.2 Tobit analysis

A large number of observations will often lead to small differences becoming significant when performing a t-test (Brooks, 2008). However, this difference may be due to endogenous factors. For example, larger firms are more likely to have larger and more competent boards. This might lead to more sub-committees being implemented, such as compensation committees (Main & Johnston, 1993). Large companies are also more likely to include more sophisticated and complex remuneration schemes. These two factors combined has led to uncertainty as to where the differences in salary originated.

Maximum likelihood models, such as Tobit, are concerned with maximizing the log-likelihood function (Brooks, 2008), not minimizing the residual sum of squares, as in ordinary least squares models. Therefore, "the normal adjusted R-squared values ceases to have any real meaning" (Brooks, 2008 p. 520). Instead, we have reported the squared correlation between the dependent variable and our model (Wooldridge, 2010, p. 680). The rho-value presents the contribution of the panel component in our Tobit analyses, any value larger than zero indicates that the Tobit model adapted for panel data samples is more suited to analyze the relationship than "normal," non-panel Tobit analyses. As seen in Table 6.9, all rho values are larger than zero, indicating that a panel effect is present in the relationship between our dependent and independent variables. We have reported partial effects, as the original variable coefficients reported from Tobit analyses represent the impact on a latent variable (Wooldridge, 2010). The partial effect signifies the "true" impact of the variables.

To produce more robust standard errors, we used a bootstrap method. Heteroscedasticity and non-normality present severe issues when present in Tobit analyses (Arabmazar & Schmidt, 1982; Wooldridge, 2010). The bootstrap method is likely to reduce the issue of heteroscedasticity and autocorrelation (Wooldridge, 2010). However, we encountered some problems when applying bootstrap to model b, due to collinearity issues because of the large number of dummy variables. Therefore, a significant ratio of calculations

within each session was not completed. This led us to report the normal standard errors in model b. We have verified against Tobit analyses with bootstrap, and there were only minor standard error deviations and no change of significance values.

Table 6.9: Panel data Tobit: Hypothesis 1.

Variable - Model a	**1a**	**2a**	**3a**	**4a**	**5a**
Compensation committee	0.0244		-0.0080	-0.0122	-0.0119
Partial effect	0.0131		-0.0044	-0.0068	-0.0066
Firm size		0.0510'	0.0517'	0.0508'	0.0492'
Partial effect		0.0282	0.0285	0.0283	0.0274
Owner concentration				-0.2073***	-0.2056***
Partial effect				-0.1154	-0.1145
Stock return					0.0267
Partial effect					0.0149
Constant	0.1263'	-0.9396'	-0.9490'	-0.8102'	-0.8146'
Obs	552	551	551	546	545
Prob > Chi	0.3690	0.0000	0.0000	0.0000	0.0000
Correlation	0.0577	0.0955	0.0911	0.1389	0.1415
Wald chi^2	0.81	32.48	29.87	44.61	41.69
Log-likelihood	31.729	55.006	55.051	57.911	57.314
rho	0.4762	0.4991	0.5058	0.4654	0.4635
Variable - Model b	**1b**	**2b**	**3b**	**4b**	**5b**
Compensation committee	0.0371		0.0049	0.0008	0.0016
Partial effect	0.0202		0.0028	0.0005	0.0009
Firm size		0.0554'	0.0550'	0.0538'	0.0513'
Partial effect		0.0313	0.0311	0.0307	0.0293
Owner concentration				-0.1676'	-0.1640***
Partial effect				-0.0955	-0.0935
Stock return					0.0450
Partial effect					0.0293
Constant	0.1961	-1.1953'	-1.1909'	-1.0470'	-1.0490'
Obs	552	551	551	546	545
Prob > Chi	0.0004	0.0000	0.0000	0.0000	0.0000
Correlation	0.1194	0.1822	0.1842	0.2127	0.2163
Wald chi^2	46.59	88.75	88.96	97.83	100.27
Log-likelihood	53.620	77.308	77.325	78.114	77.983
rho	0.4464	0.4685	0.4654	0.4390	0.4375
Year	Y	Y	Y	Y	Y
Sector	Y	Y	Y	Y	Y

$'p < 0.001$, $^{***}p < 0.010$, $^{**}p < 0.050$, $^{*}p < 0.100$
Dependent variable: Proportion of incentive-based salary

Table 1: Without indicators

Table 2: With indicators

Contrary to our hypothesis, the variable compensation committee has no significant impact on the proportion of incentive-based salary in the Tobit regression. This result is constant throughout both models. In model 1a, our model is not significant, reporting a Wald Chi of 0.81. The probability of this model being more precise than a model with no variables is 0.3690. A low value indicates a significant difference from models without any independent variables included. This is surprising, as we would expect the variable

compensation committee to have at least some impact on the dependent variable. Further, compensation committee presence has a non-significant, slightly negative influence in 3a, 4a, and 5a.

Firm size has a positive impact on the proportion of incentive-based salary, and a significant relationship throughout both models. Previous research has indicated that company size is one of the most significant variables in explaining the size of executive compensation. Firm size is significant in all regressions. Several researchers have found similar results, such as Jensen and Meckling (1976), Fama and Jensen (1983) and Randøy and Strøm (2014). As previously discussed, there seems to be a relationship between the presence of compensation committees and company size. Firm size controls for the effect of higher market capitalization as an explanation for a greater proportion of incentive-based salary, rather than compensation committee presence.

Owner concentration has a negative coefficient, indicating a negative impact on the proportion of incentive-based salary as predicted in section 6.1, and by Bøhren (2012). The results are significant in both models. Boards increase the proportion of incentive-based salary to compensate for the reduced control by less concentrated ownership, presumably to increase interest alignment. Since lower owner concentration enhances the need for monitoring, CEOs typically have a higher need for incentive alignment in their remuneration schemes. The proportion of incentive-based salary is not impacted by share performances, signaling that stock returns do not affect CEO pay.

The Tobit regression output does not report any adjusted R-squared. However, we have computed the correlation between our model and the dependent variable for all regression models, since this is similar to R-squared in normal, ordinary least squares (Wooldridge, 2010, p. 680). This value is at its highest in 5b, with all independent variables included.

When including year and sector indicators, both coefficients and partial effects have increased for the independent variables. The covariance between our model and the dependent variable has increased as well.

Conclusion: We are not able to reject the null hypothesis of no impact of compensation committees on the proportion of incentive-based salary.

6.2.3 Comparison of models

To summarize, the presence of a compensation committee has no significant positive impact on the proportion of incentive-based salary, as indicated by our Tobit model. To the contrary, the effect may be negative. The results suggest that the proportion of incentive-based salary is more likely to be impacted by firm size and owner concentration than compensation committee presence. This is further supported by the fact that larger companies are found to be more likely to have implemented a compensation committee.

Table 6.10: Tobit, ordinary least squares and fixed effect - Comparison

	Tobit		**OLS**		**Fixed effect**	
Variable	Without (a)	With (b)	Without (a)	With (b)	Without (a)	With (b)
Compensation Committee	-0.0199	0.0016	0.0345	0.0340	-0.0564**	-0.0385
Firm size	0.0492'	0.0513'	0.0246'	0.0265'	0.0574'	0.0540'
Owner Concentration	-0.2056***	-0.1640***	-0.1480***	-0.1317**	-0.1224	-0.1148
Stock return	0.0267	0.0450	0.0507	0.0629	0.0019	0.0186
Constant	-0.8146'	-1.0490'	-0.3603**	-0.3151*	-0.9517'	-0.9404'
Observations	545	545	545	545	545	545
Companies	76	76	76	76	76	76
Sig	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Adj. R-squared	0.1415	0.2163	0.1564	0.2018	0.0985	0.1368
Year	N	Y	N	Y	N	Y
Sector	N	Y	N	Y	N	N

$^{'}p < 0.001$, $^{***}p < 0.010$, $^{**}p < 0.050$, $^{*}p < 0.100$
Dependent variable: Proportion of incentive-based salary
With and without indicators

Overall, we believe that the Tobit model better represents the relationships between the dependent variables and our explanatory variables, due to the large number of zero observations of the dependent variable. As mentioned, the beta coefficients are significantly different in Tobit models compared to regular ordinary least squares, since regular regression models tend to overstate the constant and understates the individual coefficients.

6.3 Descriptive analysis - Hypothesis 2

Hypothesis 2a stated that more incentive-based pay leads to higher total salary, while hypothesis 2b stated that compensation Committee presence leads to higher total salary. As mentioned in Section 3.2.3, we anticipate that a significant impact from the proportion of incentive-based pay on CEO salaries will lend support for the management power theory, wherein CEOs are thought to extract rents and exploit shareholders for their

own gain. The neo-institutional theory assumes that boards act according to norms and "rules of thumb." We believe that a compensation committee should be able to affect CEO salaries by focusing specifically on the topic. Thus, the presence of a compensation committee should impact the size of CEO compensation.

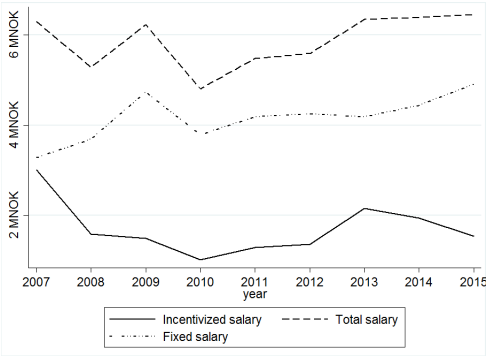
Table 6.11: Total CEO salaries in firms with and without compensation committees

	Firms with compensation committees		**Firms without compensation committees**	
Year	**Mean**	**Median**	**Mean**	**Median**
2007	9 983 121	5 700 000	3 379 932	2 340 229
2008	7 480 320	6 300 000	3 261 277	2 134 000
2009	8 280 185	5 923 420	3 731 244	2 024 830
2010	5 689 436	4 642 951	3 829 060	2 219 000
2011	6 571 719	4 983 686	3 820 019	2 108 195
2012	6 638 839	5 109 168	3 781 982	2 355 000
2013	7 229 000	5 060 625	4 712 696	2 948 500
2014	7 400 965	6 620 239	4 501 334	3 033 000
2015	6 902 859	5 576 000	5 552 301	3 099 000
Total	7 177 696	5 460 176	4 072 017	2 687 436

The average total salary for Norwegian CEOs in the years between 2007 and 2015 was NOK 5 906 168, with significant deviations between the minimum (NOK 182 555) and maximum (NOK 46M) figures. As seen in Table 6.15, firms with compensation committees tend to have higher salaries than firms without them. This effect is not surprising, considering the increased likelihood of larger companies having established the committee. Please refer to Table 6.7. There is no clear trend in these figures, except for a strong increase in salary in firms without compensation committees between 2012 and 2015.

Figure 6.5: Salary components (2007-2015)

(a) Fixed salaries (2007-2015)



(b) Total salaries (2007-2015)

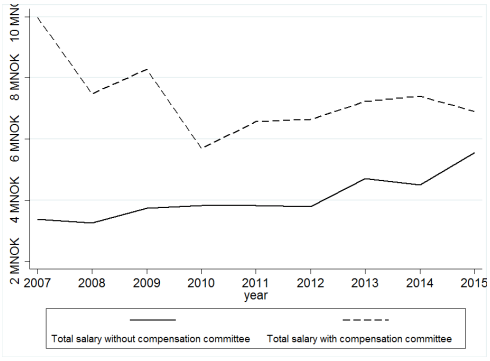


Table 6.1 presents the average incentive-based and fixed salary per year, while Figure 6.5 presents the absolute value of incentive-based salary, fixed salary and total salary per year visually. Clearly, the size of fixed salary was still larger than incentive-based pay for Norwegian CEOs per 2015. As seen in Table 6.1, the incentive-based salary decreased in the years between 2007 and 2010, and again in 2015. This coincided with periods of lower profitability in the Norwegian economy.

The significant increase in fixed salary compared to incentive-based salary is particularly interesting. This may be due to the replacement effect of fixed salary in turbulent economic periods, as theorized in management power. In reality, perhaps the risk is not transferred from the company to the CEO as predicted by agency theory.

Table 6.12: Total CEO salaries in firms above and below median size

	Firms above median size		**Firms below median size**	
Year	**Mean**	**Median**	**Mean**	**Median**
2007	8 481 136	5 551 000	2 958 126	2 295 000
2008	7 783 222	6 524 945	3 496 959	2 816 983
2009	9 038 195	6 031 000	3 527 265	2 496 628
2010	6 465 568	5 217 000	3 091 650	2 699 000
2011	7 563 384	5 178 000	3 585 584	2 665 000
2012	7 469 794	6 247 194	3 707 253	2 705 832
2013	8 411 805	5 951 375	3 776 911	2 993 000
2014	9 034 904	7 138 663	4 001 522	3 352 620
2015	8 320 088	7 151 136	4 671 697	3 270 241
Total	8 083 818	5 955 769	3 728 518	2 910 000

In Table 6.12, total salary is split by median firm size. There is a difference between total wages in the two brackets of firm size. In companies below median size, the average value of total salaries is approximately 50% of pay in firms above median size. This is in accordance with previous research showing that executive pay is impacted by firm size (Bebchuk & Fried, 2003; Jensen & Meckling, 1974; Randøy & Strøm, 2014).

Table 6.13: Total CEO salaries in firms above and below median owner concentration

	Firms above median owner concentration		**Firms below median owner concentration**	
Year	**Mean**	**Median**	**Mean**	**Median**
2007	5 860 426	3 037 000	6 800 394	4 398 500
2008	4 717 109	3 342 000	6 010 350	4 231 000
2009	4 689 679	3 548 000	7 960 101	4 928 711
2010	4 947 054	3 241 000	4 664 396	3 350 063
2011	5 477 244	3 610 500	5 482 387	4 519 969
2012	5 532 524	3 579 000	5 952 978	4 873 699
2013	6 392 306	4 488 500	6 299 976	4 573 831
2014	6 147 855	4 831 000	6 604 163	5 221 500
2015	7 015 908	5 368 000	5 962 669	4 605 877
Total	5 702 991	4 053 000	6 149 964	4 527 485

As mentioned in section 4.3.1, larger owner concentration tend to reduce the need for incentive alignment, as the majority owners' monitoring increases. Agency theory predicts that higher owner concentration should lead to lower CEO salary since owners are more willing to spend time on monitoring, and free riders are less of a problem (Grossman & Hart, 1980; Randøy & Strøm, 2014). Higher owner concentration will often lead to more active shareholders, which will have an effect on the proportion of incentive-based salary (Randøy & Strøm, 2014). Thus, higher owner concentration reduces CEO pay. There is an indication of lower total salary when the owner concentration increases. We have measured the relationship between owner concentration and firm size, and it seems to be nearly constant, meaning that larger firms do not tend to have more dispersed ownership. This may be due to the majority state ownership in large Norwegian firms, as discussed in section 6.1.

Table 6.14: Total CEO salaries in firms above and below median debt ratio

	Firms above median debt ratio		Firms below median debt ratio	
Year	**Mean**	**Median**	**Mean**	**Median**
2007	6 778 620	5 055 000	6 220 902	3 243 300
2008	6 151 493	4 646 502	4 066 874	2 917 433
2009	6 285 076	4 550 214	6 160 071	3 470 000
2010	5 073 261	3 650 000	4 569 655	3 153 201
2011	5 798 542	4 829 344	5 170 970	3 880 000
2012	4 831 345	4 373 014	6 222 916	4 770 000
2013	6 466 621	4 574 772	6 680 943	4 600 000
2014	5 957 070	4 976 000	6 910 338	4 892 000
2015	7 083 599	5 689 000	5 838 836	4 081 000
Total	6 058 642	4 638 229	5 859 661	3 949 000

In Table 6.14, total CEO salaries in firms above and below median debt ratio is presented. As stated in section 4.4, based on previous literature, we believe that increased debt ratio will act as a source of discipline for CEOs, forcing them to turn profits to handle the debt. This may reduce the need for exorbitant salaries, or create another incentive for the CEO to act in shareholders best interests, and not engage in "empire building" or needless spending.

Table 6.15: Total CEO salaries in firms with and without CEO replacement

	Firms with CEO replacement		Firms without CEO replacement		
Year	**Mean**	**Median**	**Mean**	**Median**	**Observations**
2007	-	-	6 297 621	3 483 000	-
2008	8 829 854	6 670 115	4 776 194	3 314 000	6
2009	9 313 631	6 340 000	5 476 280	3 470 000	10
2010	4 656 967	3 347 349	4 840 384	3 241 000	10
2011	4 611 249	2 934 000	5 624 529	4 495 485	9
2012	7 494 125	6 418 016	5 369 848	4 053 000	7
2013	5 678 236	4 333 462	6 486 968	4 600 000	13
2014	8 278 716	5 551 000	5 977 995	4 892 000	13
2015	8 200 886	6 390 000	6 072 724	4 084 000	13
Total	7 095 026	5 236 000	5 701 714	4 082 000	81

We have collected data for a change of CEO and included both the previous and new CEO's salaries per year. When a firm hires a new CEO, the previous CEO is often rewarded with "golden handshakes," high severance packages (Yermack, 2006). In all years, except for 2013, hiring a new CEO led to a higher total salary. However, we have recorded salaries for both the former and new CEO, and we cannot state with certainty that this implies a widespread tendency of golden handshakes in Norwegian firms. The mean value of total CEO salary in years when companies changed CEO is NOK 7 095

026, compared to NOK 5 701 714 in years without CEO change. The 81 observations of a CEO replacement only cover 14.67% of total observations. However, we believe that the variable explains a significant share of total CEO pay.

6.4 Empirical results - Hypothesis 2

6.4.1 Fixed effect regression

We have performed a fixed effect regression to control for the possibility of non-random effects, reporting two separate results - with and without yearly indicators included as binary variables. We cannot include sectors as binary variables, as the fixed effect model treats these as constants, removing the impact. To reduce the impact of autocorrelation and heteroscedasticity, we have applied robust standard errors.

Table 6.16: Fixed effect regression: Hypothesis 2

Variable - Model a	**1a**	**2a**	**3a**	**4a**	**5a**	**6a**	**7a**
Prop. of incentive-based	1.5550'		1.5800'	1.5046'	1.4700'	1.4652'	1.4910'
Compensation committee		0.0933	0.1658**	0.1467**	0.1560**	0.1442**	0.1216*
Firm size				0.0723*	0.0696*	0.0927**	0.0953***
Owner concentration					-0.6288	-0.5463	-0.5955
Debt ratio						0.0824'	0.0742'
New CEO							0.2326'
Constant	15.0314'	15.2396'	14.9293'	13.4089'	13.8344'	13.1808'	13.1403'
Observations	552	552	552	551	546	546	546
Companies	76	76	76	76	76	76	76
Sig	0.0000	0.2823	0.0000	0.0000	0.0000	0.0000	0.0000
R-squared	0.2842	0.1686	0.3520	0.4893	0.4338	0.4781	0.4906
rho	0.7123	0.7158	0.6916	0.6426	0.6577	0.6470	0.6605
Variable - Model b	**1b**	**2b**	**3b**	**4b**	**5b**	**6b**	**7b**
Prop. of incentive-based	1.6724'		1.6721'	1.6043'	1.5703'	1.564'	1.5778'
Compensation committee		-0.0534	-0.0031	-0.0109	-0.0044	-0.0096	-0.0259
Firm size				0.0684*	0.0670*	0.0865**	0.0889**
Owner concentration					-0.6187	-0.5526	-0.6033
Debt ratio						0.0702'	0.0624***
New CEO							0.2201'
Constant	15.2117'	15.4861'	15.2138'	13.7334'	14.1449'	13.5727'	13.5389'
Observations	552	552	552	551	546	546	546
Companies	76	76	76	76	76	76	76
Sig	0.0000	0.0021	0.0000	0.0000	0.0000	0.0000	0.0000
R-squared	0.3054	0.0015	0.3038	0.4596	0.4211	0.4640	0.4721
rho	0.7294	0.7452	0.7294	0.6834	0.6912	0.6808	0.6940
Year	Y	Y	Y	Y	Y	Y	Y

$^{'}p < 0.001$, $^{***}p < 0.010$, $^{**}p < 0.050$, $^{*}p < 0.100$
Dependent variable: Total CEO salary

Table 1: Without indicators

Table 2: With indicators

As seen in Table 6.16, the proportion of incentive-based salary has a significant impact throughout both models, indicating a positive relationship with the dependent variable. The introduction of control variables does not reduce the effect of the propor-

tion of incentive-based salary significantly. Rho-values are consistently high, indicating a substantial impact by non-observed factors.

In model a, compensation committee presence has a positive coefficient and a significant impact, except for in 2a. In model b, compensation committee presence has a negative, non-significant coefficient. These results indicate a negligible impact of compensation committee presence on total CEO salary when the yearly indicator is included in the regression.

Firm size is significant, with a positive coefficient in model a and b. The results suggest that firm size has a strong relationship with the dependent variable, and an increase in company size is likely to increase total salary. Contrary to our belief, owner concentration does not have a significant impact on the size of CEO pay.

Debt ratio is highly significant in model a and b, signaling a strong positive relationship between debt ratio and total CEO pay. Previous literature has indicated that a higher debt ratio will restrict free cash flow (Bøhren, 2012), and we believe a higher debt ratio should discipline CEOs and curb excessive spending. The independent variable new CEO is positive and significant in both models. The results suggest that some of the increase in salary may be due to high severance packages, golden handshakes or increase in pay when firms change CEO is picked up by our control variable.

The R-squared in model a ranges from 16.86% to 49.06%. In the full model, the variable compensation committee is significant, while the proportion of incentive-based salary, firm size, debt ratio and new CEO are highly significant. Owner concentration is non-significant in both models.

The R-squared value increases in model b, which indicates that the yearly indicator has some effect on the total salary. Model b explains between 0.02% to 47.21% of the variation in the dependent variable. The proportion of incentive-based salary is significant throughout all regressions in the fixed effect model.

Conclusion: Hypothesis 2a: Proportion of incentive-based pay has a significant impact on total CEO salary. The null Hypothesis of no significant impact is rejected.

We find an impact of compensation committee presence on total CEO salary in model a, which lends partial support to Hypothesis 2b. However, the impact is not significant

in model b.

Conclusion: Hypothesis 2b: We find no definite impact of compensation committee presence on total CEO salary. The null hypothesis of no significant relationship is not rejected.

6.4.2 Comparison of models

Table 6.17: Ordinary least squares and fixed effect - Comparison

	OLS		**Fixed effect**	
Variable	Without (a)	With (b)	Without (a)	With (b)
Prop. of incentive-based	1.6767'	1.8073'	1.4910'	1.5778'
Compensation committee	0.3013***	0.2518**	0.1216*	-0.0259
Firm size	0.1724'	0.1530'	0.0953***	0.0889**
Owner concentration	-0.1310	0.0814	-0.5955	-0.6033
Debt ratio	0.0560**	0.0474***	0.0742'	0.0624'
New CEO	0.2822'	0.2735'	0.2326'	0.2201'
Constant	11.1108'	10.9838'	13.1403'	13.5389'
Observations	546	546	546	546
Companies	76	76	76	76
Sig	0.0000	0.0000	0.0000	0.0000
Adj. R-squared	0.5425	0.6399	0.4906	0.4721
Year	N	Y	N	Y
Sector	N	Y	N	N

$^{'}p < 0.001$, $^{***}p < 0.010$, $^{**}p < 0.050$, $^{*}p < 0.100$
Dependent variable: CEO total salary
With and without indicators

To summarize, the proportion of incentive-based salary is significant in the fixed effect model, and in the ordinary least squares model in Appendix D. Based on management power theory, we suggested that incentive-based salary was a way for CEOs to extract rent from the companies, thereby increasing their total pay. The results lend support to our hypothesis that CEO total salary is dependent on the proportion of incentive-based salary. The significance of the impact is lower in the fixed effect model than in the ordinary least squares model.

Compensation committee presence is significant in the ordinary least squares model, while it is only significant in model a in the fixed effect regression. The impact of compensation committees in fixed effect model b is negative. However, it is not significant.

Firm size is significant both in the ordinary least squares model, and in the fixed

effect model. The variable owner concentration has a negative, non-significant impact in both models. The debt ratio is significant in the ordinary least squares model a and b. In both fixed effect models, debt ratio is significant. The variable change of CEO is significant in throughout both models.

6.5 Robustness

We performed robustness tests to assess the stability of relationships across different measures of both the independent and dependent variable. We have previously evaluated the consistency of our results by applying different regression models to the data, finding similar results across methods. In this section, we have presented the models using different measures of the same variables. We have included indicators in the robustness tests for both of our hypotheses.

6.5.1 Robustness - Hypothesis 1

Table 6.18: Tobit Hypothesis 1 - Robustness

	Original model		**Robustness 1**		**Robustness 2**	
Variable	Beta	Std. error	Beta	Std. error	Beta	Std. error
Compensation commitee	0.0016	0.0196	0.4781	1.2698	0.0008	0.0260
Partial effect	0.0009	0.0051	0.396	0.9212	0.0005	0.0148
Firm size	0.0513'	0.0087	1.8259'	0.3385	0.0534'	0.0084
Partial effect	0.0293	0.0051	1.3385	0.2280	0.0304	0.0049
Owner concentration	-0.1640***	0.0676	-5.5474***	2.7143	-0.1803***	0.0621
Partial effect	-0.0935	0.0380	-4.0666	1.8856	-0.1028	0.0357
Stock return	0.0450	0.0488	-0.2082	2.4057	0.0124	0.0404
Partial effect	0.0256	0.0277	-0.1526	1.7651	0.0071	0.0231
Constant	-1.0491'	-	-29.8771***	-	-1.0423'	-
Obs	546		545		544	
Companies	76		76		76	
$Prop > Chi$	0.0000		0.0000		0.0000	
Correlation	0.2163		0.2462		0.1833	
Wald chi^2	100.27		74.86		97.92	
Log-likelihood	77.983		-1460.682		64.428	
rho	0.4375		0.3813		0.4303	
Year	Y		Y		Y	
Sector	Y		Y		Y	

$^{'}p < 0.001$, $^{***}p < 0.010$, $^{**}p < 0.050$, $^{*}p < 0.100$

Robustness 1: Dependent variable - Absolute incentive-based salary (logarithm)

Robustness 2: Independent variable stock return (previous year)

Table 6.18 present the robustness tests for hypothesis 1. In robustness 1, we have changed the dependent variable from proportion of incentive-based salary to absolute value of incentive-based salary. There is no change in relationships between the independent variables and the dependent variable in robustness 1. The results are similar to the original Tobit model. The coefficients are different due to the change from percentage value to an absolute value of the dependent variable, which makes it difficult to interpret the impact of the change in the coefficients and standard deviations. However, the significance of the independent variables has not changed from the original model to robustness 1.

In robustness 2, we have used stock return in the previous year as an independent variable instead of the proportion of incentive-based salary. This was done to assess the impact of a profitable year on next year's salary. We would expect high stock returns in the previous year to evoke higher salaries for CEOs in the next year, and possible rent extraction. However, the results indicate no significant relationship between returns and higher variable pay, suggesting that higher returns not necessarily impact the bonuses of CEOs of Norwegian firms. The robustness test shows the same relationship between the independent and dependent variables, and the significance of coefficients are similar to the original model.

6.5.2 Robustness - Hypothesis 2

Table 6.19: Fixed effect hypothesis 2 - Robustness

	Original model		**Robustness 3**		**Robustness 4**	
Variable	Beta	Std. error	Beta	Std. error	Beta	Std. error
Prop. of incentive-based	1.5778'	0.1824	0.0304'	0.0045	1.6085'	0.1902
Compensation committee	-0.0259	0.0747	-0.0238	0.0747	-0.0055	0.0738
Firm size	0.0889**	0.0340	0.1206***	0.0423	0.1508**	0.0616
Owner concentration	-0.6033	0.3985	-0.7257*	0.4252	-0.4780	0.3806
Debt ratio	0.0624'	0.0188	0.0671***	0.0221	0.0512**	0.0203
New CEO	0.2201'	0.0549	0.2077'	0.0556	0.2348'	0.0527
Constant	13.5389'	0.7091	12.8658'	0.8503	12.0548'	1.3814
Companies	76		76		76	
Sig	0.0000		0.0000		0.0000	
Adj. R-squared	0.4721		0.4797		0.5670	
Year	Y		Y		Y	

$^{'}p < 0.001$, $^{***}p < 0.010$, $^{**}p < 0.050$, $^{*}p < 0.100$

Robustness 1: Independent variable proportion of variable salary changed to absolute variable salary (logarithm)

Robustness 2: Independent variable firm size changed to assets

Table 6.19 presents the robustness tests for hypothesis 2. In robustness 3 we have changed the independent variable proportion of variable salary to the absolute value of variable salary. The robustness test indicates no difference in the relationship between any variables and is similar to the original model, other than owner concentration, which is significant in robustness 3.

In robustness 4, we have used assets instead of market capitalization to control for firm size. Previous research has used assets as a measure of company size (Randøy & Nielsen, 2002). As assets signify the size of companies, we expected assets to return similar results as market capitalization. The results indicate small differences in the relationship between the independent and dependent variables, and the significance is similar to the original model.

7 Discussion and conclusion

In this thesis, we have explored whether compensation committee presence has an impact on CEO salaries. We have discussed CEO salary through the lenses of agency theory, management power theory, and neo-institutional theory. Rather than spending resources on monitoring agents, it may be more efficient to induce desirable behavior through incentive-alignment. Agency theory predicts that incentive-based pay would increase alignment between the CEO and owners (Fama & Jensen, 1983; Jensen & Meckling, 1976; Jensen & Murphy, 1993). We hypothesized that the presence of a committee that specializes in aligning the interest between the CEO and owners would increase the incentive-based proportion of salaries. Conyon (1997) found conflicting results regarding compensation committee impact on CEO pay, but overall his results indicated a negative relationship between compensation committee presence and salary growth. Our results suggest that there is no significant relationship between compensation committee presence and a higher percentage of incentive-based salary, similar to the findings of Main and Johnston (1993). Furthermore, firm size and owner concentration are more likely to impact the proportion of variable salary than compensation committee presence. We also found indications that larger firms were more inclined to have implemented the committee, indicating that firm size may be the primary determinant of compensation schemes in firms listed on Oslo Stock Exchange and Oslo Axess.

Behavioral agency theory predicts that several non-observed factors impact the motivation of agents. After assessing our results, we believe that our measure of incentive alignment may be too simplistic. The proportion of incentive-based salary does not capture the exact scheme of payments and incentives added to increase effort. Furthermore, as CEOs are often risk-averse, the effect of future rewards is often weak. CEOs will often prefer reliable income streams (Pepper & Gore, 2015). Therefore, our measures may not fully capture the complexities of CEO motivation. These subtle differences within compensation schemes may be the added value from remuneration committees.

According to management power theory, owners are unable to control and determine executive salary. Salary schemes can be a camouflage of rent extraction (Bebchuk & Fried, 2003). Furthermore, Bebchuk et al. (2002) remarked that CEOs are self-serving

and able to minimize risk while maximizing rents. We find a strong, positive relationship between the proportion of incentive-based salary and total CEO pay. This may indicate that bonuses and equity pay is, in reality, an added incentive to the CEO, and does not replace the fixed salary as predicted by agency theory. This may be because firm size impacts both the proportion of incentive-based pay and the total CEO salary (Jensen & Murphy, 1993), even after controlling for firm size. Previous research has indicated that firm size is the primary influence on the size of CEO compensation (Conyon & Peck, 1998; Jensen & Murphy, 1993; Randøy & Strøm, 2014; Sigler, 2011).

Neo-institutional theory predicts that firms act according to norms and "rules of thumb." Therefore, pay schemes are transferred with a small degree of adaptation between different settings, industries, and cultures (Main et al., 2005; Peetz, 2015). Conyon (1997) found that compensation committees had a negative impact on growth in CEO pay. Main and Johnston (1993) found an association between compensation committee presence and higher CEO remuneration. Their study had slightly different independent variables. Furthermore, it compared firms cross-sectionally, rather than longitudinal (Main & Johnston, 1993). Similarly, Conyon and Peck (1998) found a constant positive relationship between compensation committee presence and the size of CEO pay. We find partial support for compensation committee presence impacting total CEO pay. The lack of a consistent positive relationship between compensation committee presence and CEO salary size might indicate support for the Lake Wobegon effect, as theorized by Hayes and Schaefer (2009). Every CEO believes that their skills are above average, and their compensation should reflect this. This leads to a "pattern bargaining," wherein CEOs with lower salaries negotiate based on salaries of highly paid comparable executives. Furthermore, boards may believe that investors value highly paid CEOs, as high compensation is a sign of an excellent talent (Hayes & Schaefer, 2009). We believe that our inability to discern a substantial impact of compensation committee presence on CEO salaries might add support for neo-institutional theory; boards may be unwilling to change their routines, and will rather act according to norms and habits. Thus, salary schemes may result from inertia, and boards not wanting to act unconventionally, even when a designated sub-committee is implemented to align interests. Perhaps compensation committees are established symbolically, in line with Westphal and Zajac's (1993) research on long-term incentive plans.

7.1 Future research

We find an increasing similarity among firms with and without compensation committees during the surveyed time frame, which might indicate that more companies are adhering to the Norwegian Corporate Governance code from norsk utvalg for eierstyring og selskapsledelse. The increased similarity may suggest that Oslo Stock Exchange is becoming more strict regarding the "comply or explain" principles, or perhaps that shareholders value the presence of compensation committees, even though their impact is not discernible to us. The relative increase in implementation of compensation committees may also be a product of non-observed factors, such as plans regarding listings on foreign stock exchanges where this committee is mandatory, conformity, and "rules of thumb."

While we used a dummy variable to indicate the presence of compensation committees, we have no measure of whether the compensation committee is comprised of insiders or by independent board members. Bebchuk et. al (2002) predicted that independence would reduce management power and increase boards ability to create more valuable compensation schemes. However, some researchers have called this assumption into question (Murphy, 2012; Daily et al., 1998). Research performed by Newman and Moses (1999) supported claims that insider boards frequently used remuneration schemes that were biased in favor of executives, i.e. a lower relation between compensation and performance. They found no evidence of higher total salary in these firms. Future research might look further into the relationship between the composition of compensation committees in Norwegian firms and CEO salary. Another interesting line of research might be to assess whether employee representatives participate in compensation committees and whether this impacts the size and composition of CEO salaries.

Furthermore, we attempted to measure both the number of meetings and members of the committee per year for compensation committees, but were unable to obtain a sufficient number of observations to present valuable findings. It may be useful to assess the impact of number of meetings attended, to see whether it has an impact on the complexity and quality of the remuneration schemes, as predicted by Hermanson, Tompkins, Veliyath, and Ye (2012). Finally, our results may not be entirely generalizable, since our sample is non-random. There may be some standard features of firms left out, such as poor reporting habits, low profitability leading to bankruptcy, or delisting from Oslo Stock

Exchange. A complete sample of every firm listed within the same time frame might yield different results.

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Appendices

A Complete lists of firms

A.1 Sample

ISIN	Company name
NO0003021909	ABG Sundal Collier Holding ASA
NO0003108102	Acta Holding ASA
NO0003502809	Polaris Media ASA
NO0010234552	Aker ASA
NO0003097503	AKVA group
NO0010123060	Apptix ASA
NO0003572802	Arendals Fossekompani
NO0010073489	Austevoll Seafood ASA
NO0010607971	Awilco LNG ASA
FO0000000179	Bakkafrost
NO0003094104	Belships ASA
NO0010379779	Bergen Group ASA
NO0010014632	Biotec Pharmacon ASA
NO0003095312	Birdstep Technology ASA
NO0003111700	Borgestad ASA
NO0010360266	Bouvet ASA
NO0003087603	Byggma ASA
NO0003064107	Data Respons ASA
NO0010295603	DET Norske Oljeselskap ASA
NO0010019649	EVRY ASA
NO0003035305	Ekornes ASA
NO0010358484	Electromagnetic Geoservices ASA
NO0004822507	ATEA ASA
NO0003089005	Fred Olsen Energy ASA
NO0010262687	GC Rieber Shipping ASA
NO0004913609	Goodtech ASA
NO0010365521	Grieg Seafood
NO0004288200	Gyldendal ASA
NO0004306408	Hafslund ASA
NO0010257728	Havila Shipping ASA
NO0003067902	Hexagon Composites ASA
NO0010598683	Hofseth Biocare ASA
NO0003070609	IDEX ASA
NO0003072803	IM Skaugen ASA
NO0003055808	Intex Resources ASA
NO0010001120	Itera Consulting Group ASA
NO0003079709	Kitron ASA
NO0003033102	Kongsberg Automotive Holding ASA
NO0010605371	Kværner ASA

NO0003096208	Leroy Seafood Group ASA
NO0010219702	Link Mobility Group ASA
NO0010159685	Medi-Stim ASA
NO0010657604	Multiclient Geophysical
NO0004895103	Namsos Trafikkselskap
NO0010289200	NattoPharma
NO0003055501	Nordic Semiconductor ASA
NO0005052605	Norsk Hydro ASA
NO0010550056	North Energy ASA
NO0010331838	Norway Royal Salmon
NO0010196140	Norwegian Air Shuttle ASA
NO0010317811	Norwegian Property ASA
NO0010657448	Ocean Yield ASA
NO0005638858	Olav Thon Eiendomsselska
NO0010040611	Opera Software ASA
NO0003733805	Orkla ASA
NO0010564701	Panoro Energy
NO0010000045	Photocure ASA
KYG7153K1085	Polarcus Limited
CY0100470919	Prosafe SE
NO0003103103	Q-Free ASA
NO0010310956	Salmar ASA
NO0003028904	Schibsted ASA
NO0010612450	Selvaag Bolig ASA
NO0005418004	Skiens Aktiemolle ASA
NO0010268451	Songa Offshore ASA
NO0010429145	Spectrum ASA
NO0010096985	Statoil ASA
NO0010063308	Telenor ASA
NO0003194201	Tide ASA
NO0005668905	Tomra Systems ASA
NO0003049405	TTS Marine ASA/TTS Group asa
NO0005806802	Veidekke ASA
NO0010691298	Western Bulk ASA
NO0003471404	Wilhelmsens Wilhelmsen ASA
NO0010252356	Wilson ASA
NO0010208051	Yara International ASA

Table A.1: Sample (76 firms)

A.2 Out of sample

ISIN	**Company name**
NO0003078107	AF Gruppen ASA
NO0010307135	Aqua Bio Technology ASA
GB00B5LJSC86	Awilco Drilling Plc
NO0010283211	Badger Explorer ASA
NO0003106700	Bionor Pharma ASA

NO0010635816	Bonheur ASA
NO0010657505	Borregaard ASA
CY0100120910	Deep Sea Supply Plc
NO0010081235	Diagenic ASA
NO0010070063	DOF ASA
NO0010263023	Eidesvik Offshore ASA
NO0003215303	Farstad Shipping ASA
NO0010739683	Höegh LNG Holding ltd
NO0010284318	Interoil Exploration
NO0010205966	Navamedic
NO0004135633	Norske Skogindustrier ASA
NO0010379266	Norwegian Energy Company ASA (noreco)
NO0003399909	Odfjell ASA
NO0010199151	Petroleum Geo Services ASA
NO0010085574	Petrolia Drilling ASA
NO0010112675	Renewable Energy Corp.
NO0010572589	Saga Tankers
JE00B61ZHN74	Scottish Salmon Company Limited
CY0101162119	Seabird Exploration
NO0010455793	Sevan Drilling ASA
NO0010187032	Sevan Marine ASA
NO0010771223	Solstad Offshore ASA
NO0003390007	Solvang ASA
NO0010360175	Storm Real Estate ASA

Table A.2: Out of sample (29 firms)

B Testing of Ordinary least squares assumptions

B.1 Homoscedasticity

Figure B.1: Visual representation of heteroscedasticity in Hypothesis 1

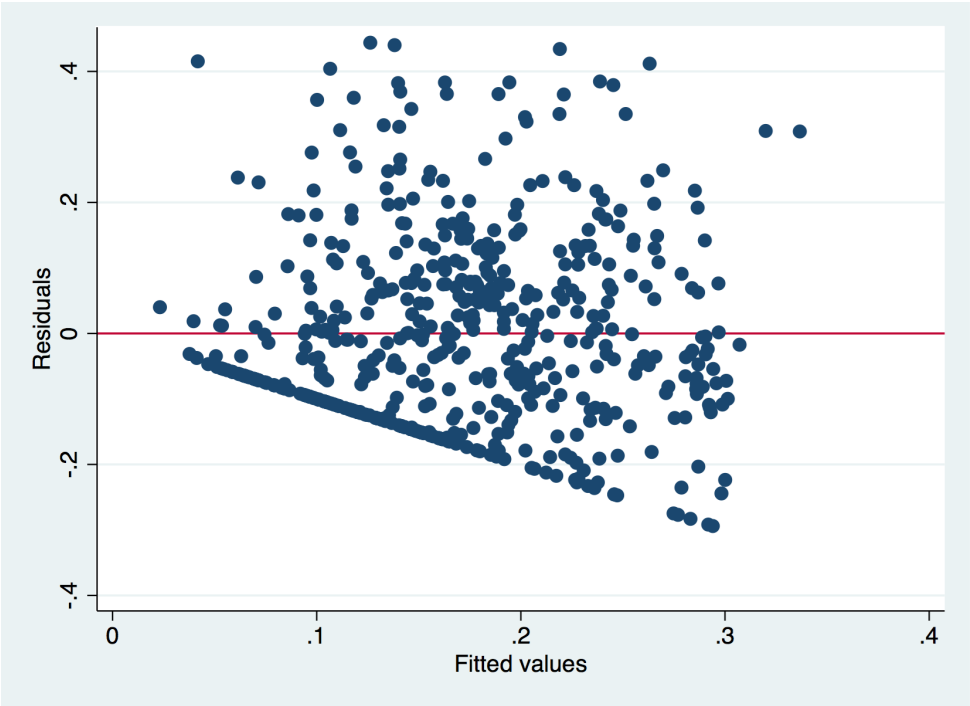
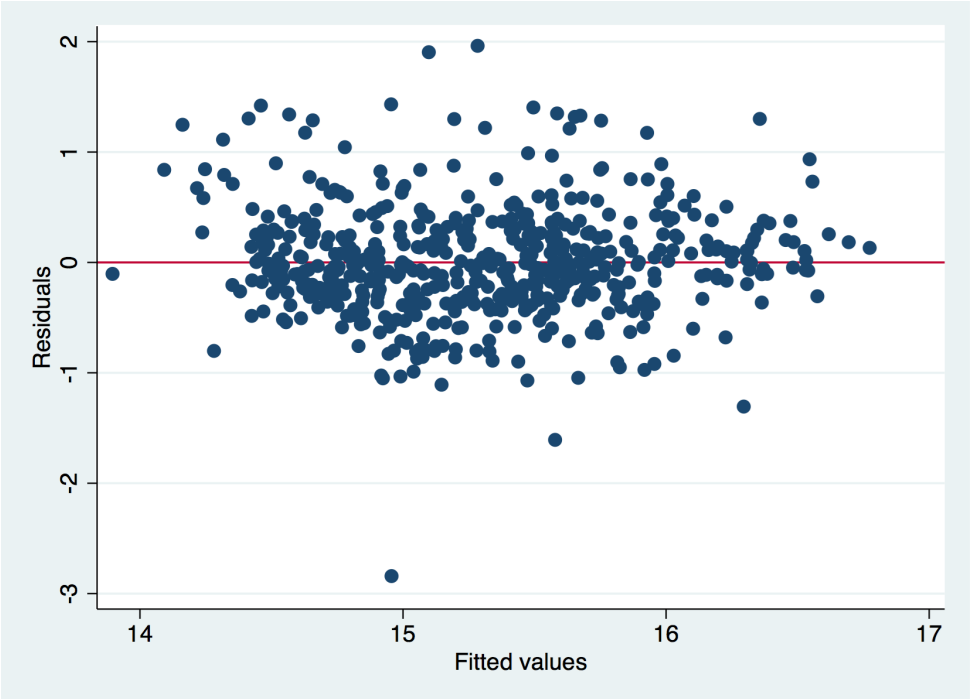


Figure B.2: Visual representation of heteroscedasticity in Hypothesis 2



B.2 Normality of error distribution

Figure B.3: QNorm in Hypothesis 1

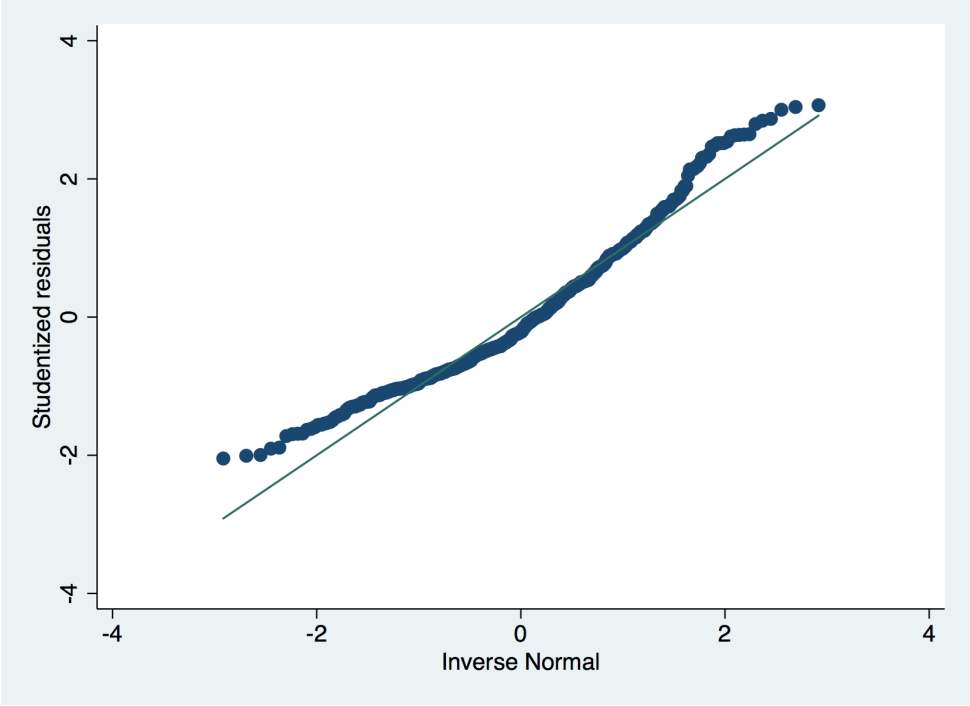


Figure B.4: QNorm in Hypothesis 2

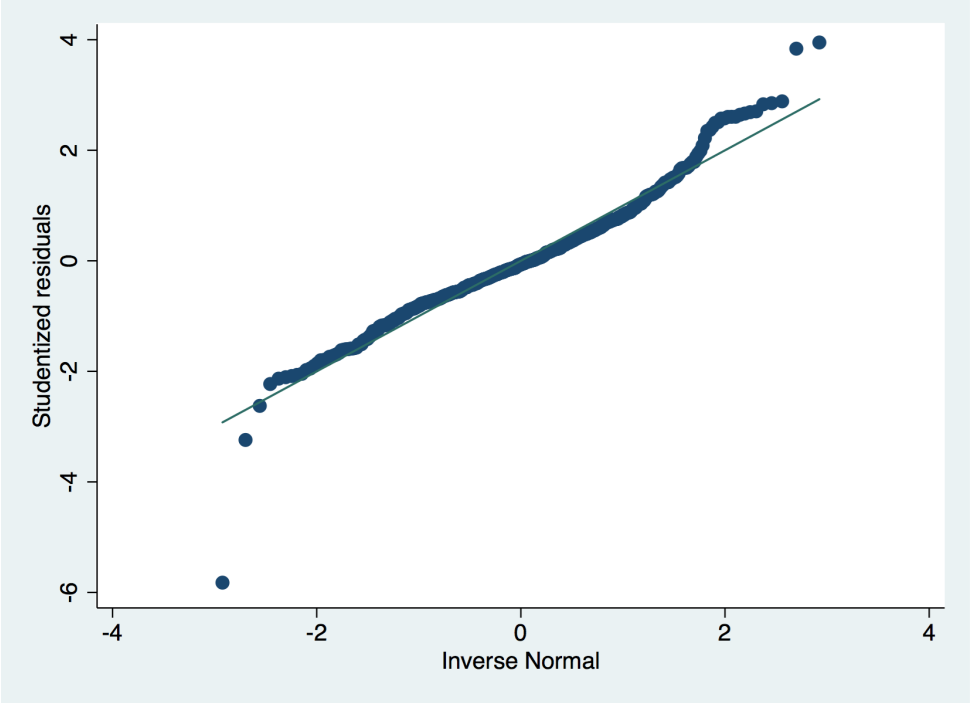
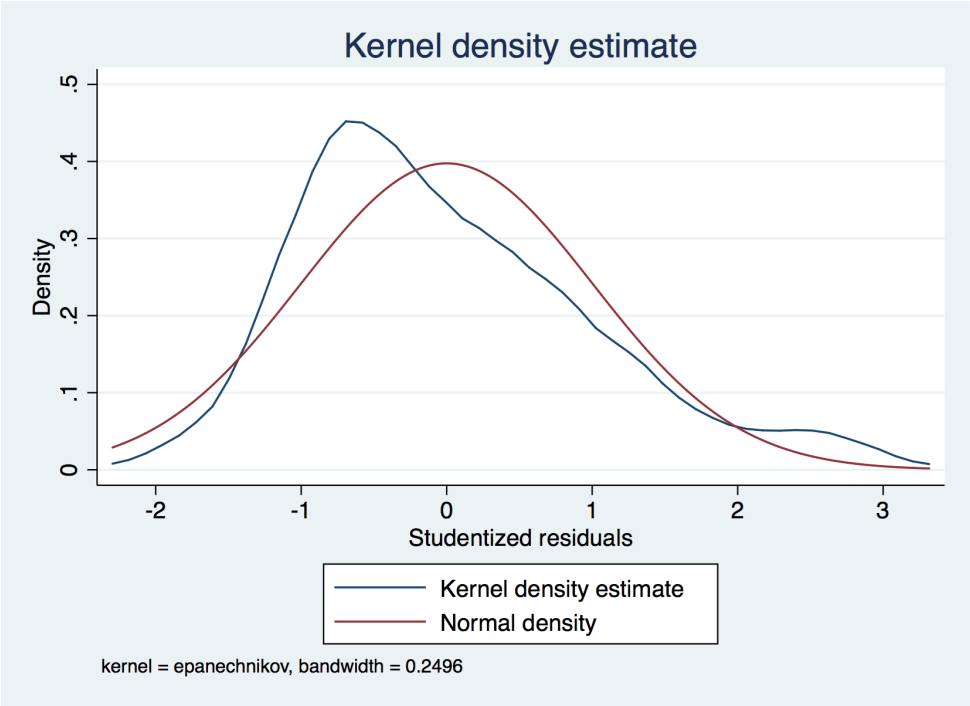


Figure B.5: Normality of error in Hypothesis 1



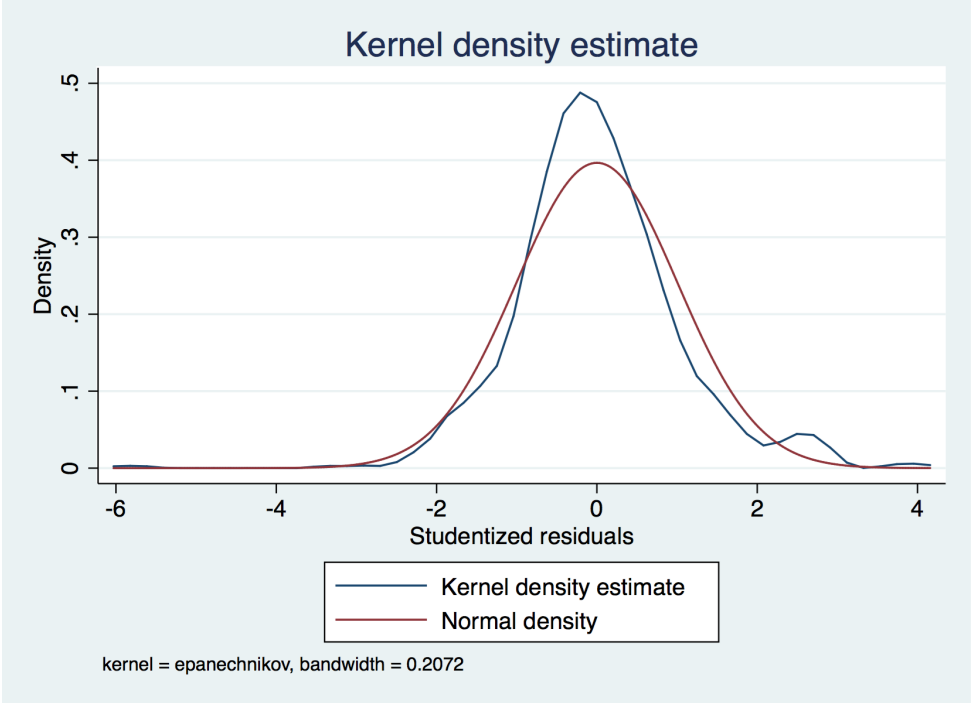


Figure B.6: Normality of error in Hypothesis 2

C Ordinary least squares and Fixed effect - Hypothesis 1

C.1 Ordinary least squares

We have performed stepwise ordinary least squares regressions with robust standard errors as discussed in section 5.2.2, compensating for the cluster effects. In addition, we have tested with and without yearly indicators. Some of the assumptions that ordinary least squares regressions are based on may not have been fulfilled. However, the model is still presented for completeness.

Table C.1: Ordinary least squares: Hypothesis 1.

Variable - Model a	**1a**	**2a**	**3a**	**4a**	**5a**
Compensation committee	0.0777***		0.0572**	0.0349*	0.0345
Firm size		0.0264'	0.0227'	0.0253'	0.0246'
Owner concentration				-0.1509***	-0.1480***
Stock return					0.0507
Constant	0.1235'	-0.3936'	-0.3482'	-0.3018'	-0.3603'
Observations	552	551	551	546	545
Companies	76	76	76	76	76
Sig	0.0012	0.0000	0.0000	0.0000	0.0000
Adj. R-squared	0.0560	0.0939	0.1218	0.1547	0.1564
Variable - Model b	**1b**	**2b**	**3b**	**4b**	**5b**
Compensation committee	0.0765***		0.0501*	0.0338	0.0340
Firm size		0.0301'	0.0263***	0.0277'	0.0265'
Owner concentration				-0.1369**	-0.1317**
Stock return					0.0629
Constant	0.2057'	-0.4937	-0.4407'	-0.3728'	-0.3151***
Observations	552	551	551	546	545
Companies	76	76	76	76	76
sig	0.000	0.0000	0.0000	0.0000	0.0000
Adj. R-squared	0.1140	0.1612	0.1774	0.1997	0.2018
Year	Y	Y	Y	Y	Y
Sector	Y	Y	Y	Y	Y

$'p < 0.001$, $^{***}p < 0.010$, $^{**}p < 0.050$, $^{*}p < 0.100$
Dependent variable: Proportion of variable salary

Table 1: Without indicators

Table 2: With indicators

None of the variables have a high variance inflation factor, and we do not believe that multicollinearity presents large issues in hypothesis 1. Please refer to section 5.2.1 for a discussion of further multicollinearity measures.

Table C.2: Variance inflation factors: Hypothesis 1

Variable	**Variance inflation factor (VIF)**
Compensation Committee	1.17
Firm Size	1.11
Owner Concentration	1.10
Stock return	1.03
Mean VIF	**1.10**

C.2 Fixed effect regression

We have performed a fixed effect regression to control for the possibility of non-random effects. We have reported two separate results for our fixed effects model. We have performed a fixed effect regression without yearly indicators, and one with these indicators included as binary variables.

Table C.3: Fixed effect: Hypothesis 1

Variable - Model a	**1a**	**2a**	**3a**	**4a**	**5a**
Compensation committee	-0.0459		-0.0583**	-0.0562**	-0.0564**
Firm size		0.0563’	0.0580’	0.0574’	0.0574’
Owner concentration				-0.1216*	-0.1224*
Stock return					0.0019
Constant	0.1964’	-1.0303’	-1.0318’	-0.9493’	-0.9517’
Observations	552	551	551	546	545
Companies	76	76	76	76	76
sig	0.1018	0.0000	0.0000	0.0000	0.0000
Adj. R-squared	0.0577	0.0955	0.0636	0.0976	0.0985
Variable - Model b	**1b**	**2b**	**3b**	**4b**	**5b**
Compensation committee	-0.0301		-0.0393	-0.0380	-0.0385
Firm size		0.0558’	0.0566’	0.0559’	0.0540’
Owner concentration				-0.1156	-0.1148
Stock return					0.0186
Constant	0.1628’	-1.0448’	-1.0363’	-0.9549’	-0.9404’
Observations	552	551	551	546	545
Companies	76	76	76	76	76
Prob	0.0012	0.0000	0.0000	0.0000	0.0000
Adj. R-squared	0.0038	0.1165	0.0927	0.1287	0.1309
Year	Y	Y	Y	Y	Y

$'p < 0.001$, $^{***}p < 0.010$, $^{**}p < 0.050$, $^{*}p < 0.100$

Dependent variable: Proportion of variable salary

Table 1: Without indicators

Table 2: With indicators

D Ordinary least squares - Hypothesis 2

As for hypothesis 1, we have performed a stepwise clustered regression analyses. The regression coefficients and robust standard errors have been reported in section 5.2.2. The coefficients and significance of the selected variables have been reported below. In addition, we have included yearly and sector indicators to assess the possibility of these affecting CEO salaries.

Table D.1: Ordinary least squares: Hypothesis 2

Variable - Model a	**1a**	**2a**	**3a**	**4a**	**5a**	**6a**	**7a**
Prop. of incentive-based	2.5116'		2.1722'	1.6867'	1.6296'	1.6594'	1.6768'
Compensation committee		0.6252'	0.4566'	0.3374***	0.3110***	0.3188***	0.3013***
Firm size				0.1644'	0.1698'	0.1681'	0.1724'
Owner concentration					-0.0997	-0.1293	-0.1310
Debt ratio						0.0573*	0.5560**
New CEO							0.2822'
Constant	14.8694'	14.9524'	14.6573'	11.3032'	11.2749'	11.2344'	11.1108'
Observations	552	552	552	551	546	546	546
Companies	76	76	76	76	76	76	76
Sig	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Adj. R-squared	0.2829	0.1670	0.3665	0.5164	0.5165	0.5255	0.5425
Variable - Model b	**1b**	**2b**	**3b**	**4b**	**5b**	**6b**	**7b**
Prop. of incentive-based	2.4235'		2.1768'	1.7980'	1.7893'	1.8050'	1.8074'
Compensation committee		0.5583'	0.3918***	0.2673***'	0.2658***	0.2752***	0.2519**
Firm size				0.1481'	0.1496'	0.1467'	0.1531'
Owner concentration					0.0699	0.0793	0.0814
Debt ratio						0.0497	0.0474
New CEO							0.2735'
Constant	15.5878'	15.7421'	15.2942'	11.7332'	11.6499'	11.6290'	11.4619'
Observations	552	552	552	551	546	546	546
Companies	76	76	76	76	76	76	76
Sig	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Adj. R-squared	0.4625	0.3239	0.5120	0.6043	0.6019	0.6075	0.6234
Year	Y	Y	Y	Y	Y	Y	Y
Sector	Y	Y	Y	Y	Y	Y	Y

$'p < 0.001$, $^{***}p < 0.010$, $^{**}p < 0.050$, $^{*}p < 0.100$
Dependent variable: Total CEO salary

Table 1: Without indicators

Table 2: With indicators

Table D.2: Variance inflation factors: Hypothesis 2

Variable	**Variance inflation factor (VIF)**
Prop. of incentive-based pay	1.19
Compensation committee	1.19
Firm size	1.20
Owner concentration	1.15
Debt ratio	1.02
New CEO	1.01
Mean VIF	**1.13**

E Selection bias

We did not expect to find significant differences between debt ratios of sample and firms out of sample. No significant difference was found. The reported p-value is 0.3282.

Table E.1: T-test debt ratio: Sample and firms left out of sample

Group	**Obs**	**Mean**	**Std. Err.**	**Std. Dev.**
Sample	552	1.4886	0.0556	1.3053
Out of sample	224	1.3821	0.4005	5.9939
$Diff = mean(0) - mean(1)$			$t = -0.3955$	
$H0 : diff = 0$			$d.f = 774$	
$Ha : diff < 0$		$Ha : diff! = 0$	$Ha : diff > 0$	
$Pr(T < t) = 0.3463$		$Pr(\|T\| > \|t\|) = 0.6926$	$Pr(T > t) = 0.6537$	

There is a significant difference between the ownership concentration of our main sample and firms left out of sample. The reported p-value is 0.0025. However, in actual percentage terms, the difference is 4.92% which we do not consider to impair our results significantly. The significance is related to the large sample sizes (212 and 538 observations).

Table E.2: T-test owner concentration: Sample and out of sample

Group	**Obs**	**Mean**	**Std. Err.**	**Std. Dev.**
Sample	547	0.5756	0.0088	0.2068
Out of sample	212	0.5234	0.0135	0.1964
$Diff = mean(0) - mean(1)$			$t = -3.1615$	
$H0 : diff = 0$			$d.f = 757$	
$Ha : diff < 0$		$Ha : diff! = 0$	$Ha : diff > 0$	
$Pr(T < t) = 0.0008$		$Pr(\|T\| > \|t\|) = 0.0016$	$Pr(T > t) = 0.9992$	

There is no significant difference between our sample and the firms left out of sample. The reported p-value is 0.5709.

We have operationalized firm size by market capitalization, as reported by Oslo Stock Exchange.

Table E.3: T-test stock return: Sample and out of sample

Group	**Obs**	**Mean**	**Std. Err.**	**Std. Dev.**
Sample	551	0.1640	0.0347	0.8136
Out of sample	215	0.1650	0.1387	2.0332
$Diff = mean(0) - mean(1)$			$t = 0.0104$	
$H0 : diff = 0$			$d.f = 764$	
$Ha : diff < 0$		$Ha : diff! = 0$	$Ha : diff > 0$	
$Pr(T < t) = 0.5041$		$Pr(\|T\| > \|t\|) = 0.9917$	$Pr(T > t) = 0.4959$	

Table E.4: T-test market capitalization: Sample and firms left out of sample

Group	**Obs**	**Mean**	**Std. Err.**	**Std. Dev.**
Sample	552	Bn. 13.78	1.96e+089	4.60e+10
Out of sample	223	Bn. 3.38	6.75e+08	1.01e+10
$Diff = mean(0) - mean(1)$			$t = -3.3432$	
$H0 : diff = 0$			$d.f = 773$	
$Ha : diff < 0$		$Ha : diff! = 0$	$Ha : diff > 0$	
$Pr(T < t) = 0.0004$		$Pr(\|T\| > \|t\|) = 0.0009$	$Pr(T > t) = 0.9996$	

F Reflection note

In this thesis, we have explored whether the presence of a compensation committee has an effect on the proportion of incentive-based salary. We have also tested which effect the presence of a compensation committee and proportion of incentivized based salary have on total CEO salary.

We have tested three hypothesis in our thesis. Hypothesis 1 builds on agency theory, which predicts that the interest between the CEO and owners will align when incentivized salary is presented. Implementing a compensation committee, with the sole purpose of specializing in remuneration and alignment of interest, should increase the proportion of incentivized salary. Hypothesis 2a is built on management power theory. Management power theory main contribution is that the board is unable to control the pay-setting process, and salary is considered a way of rent extraction for the CEO. An increase in the proportion of incentive-based salary should increase CEO total salary. Neo-institutional theory suggests that CEO compensation is a product of inertia, and boards not wanting to act unconventionally. Boards will go with the norm when designing remuneration schemes. With hypothesis 2b, when taking neo-institutional theory into consideration, we predicted that the presence of a compensation committee, with the sole purpose of monitoring and incentivizing the CEOs salary, would be able to differentiate from firms without a compensation committee. Therefore, the presence of a compensation committee would lead to higher total pay.

The dataset contains self-collected observations from annual reports, forvalt.no and the Titlon database. We collected information about 76 companies listed on the Oslo Stock Exchange and Oslo Axess from the year 2007 to 2015. The 76 companies are registered with a varying number of years included; the dataset is therefore classified as an unbalanced panel data. In total, we have 552 observations. We have used the following statistical methods to test our hypothesis: In model 1, we used t-test and regression, while we used regression in hypothesis 2. The results from hypothesis 1 indicate that there is no relation between the presence of a compensation committee and higher proportion of incentivized salary. In hypothesis 2a we find results that higher proportion of incentivized salary is positively related to higher salary. The results lend support to

management power theory as incentivized salary is used as a form of rent extraction for the CEOs. In hypothesis 2b we find partial result on the relationship between the presence of compensation committee and higher total salary. However, the null hypothesis of no relationship between compensation committee and higher total salary is not rejected in our full model.

Internationalization

As companies plan for future strategies, certain preparation is necessary to meet the requirements of forthcoming events. As an example, some Norwegian enterprises may want to expand into foreign stock exchanges. In the same way that Oslo Stock Exchange have certain requirements for companies before they can be listed, foreign stock exchanges will have their requirements. As an example, the New York Stock Exchange (NYSE) requires all listed companies to have an implemented compensation committee. There are also certain rules to independence among the members of the compensation committee. For a firm preparing for listing on the New York Stock Exchange, the requirement of an established compensation committee must be fulfilled.

Different from agency theory, the establishment of the compensation committee is bound to be a result of boards pursuing the alignment of interest between the principal and agent. An example for different motivation behind the establishment of a compensation committee can be the result of international standards, or legislated code of conduct regarding corporate governance.

As another example, firms listed on the Oslo Stock Exchange are required to report their financials according to the international financial reporting standard (IFRS). International standards and legislations that have an effect on IFRS will directly influence and shape the reporting of Norwegian listed companies. E.g., IFRS requires disclosure of executive compensation. The point being, exogenous and international requirements will have an impact on the corporate governance in Norwegian firms.

Innovation

Remuneration schemes might not come across as innovative, but a firm should be able to create innovative schemes that lead to a competitive advantage.

Neo-institutional theory predicts that remuneration schemes are based on norms and inertia. Therefore, the effect of incentive-based payments might be non-existent in the

firms that adopt remuneration schemes from industry norms, market expectations, etc. As mentioned in the thesis, remuneration schemes should be customized to fit the CEO. Agency theory predicts that by compensation the agent, the principal and agent will have to align interest. CEOs will, therefore, be motivated to make the best possible decisions for long run value maximization. In hypothesis 1 of our master thesis, we predicted that firms with an implemented compensation committee, with the sole purpose of handling the CEOs remuneration, would lead to aligned interest between the CEO and owner. Thus, creating an advantage. However, we found no results indicating a higher degree of the proportion of incentivized salary in the presence of a compensation committee.

According to human capital theory, the CEO's contribution to long-run value creation in organizations depends on the CEO unique expertise, existing network and network building capabilities, relationships, and other skills of the CEO. Agency theories prediction of the CEOs ability to increase stock returns and long-run value maximization to the shareholders are driven by monetary rewards are a too simplistic solution to the problem. The behavioral agency theory main contention is that motivation comes from other sources than monetary rewards. Non-monetary rewards are an important aspect to take into account when developing remuneration schemes.

By applying incentives, that consider both monetary and non-monetary rewards, and that are based upon individual preferences, will increase the chances for interest alignment. Therefore, by not following the norm, like neo-institutional theory predicts that boards do, companies can be able to create a competitive advantage through the remuneration of the CEO.

Responsibility

Norwegian companies are responsible for a substantial part of the growth in the Norwegian economy. It is therefore in the stakeholders best interest to have the corporate governance of Norwegian companies follow specific guidelines. In our research, we find an increase in the use of compensation committees in the Oslo Stock Exchange. The similarities indicate an increase in alignment with norsk anbefaling for eierstyring og ledelse Section 9. We also find many companies adhering the "comply or explain" principle when not having an established compensation committee. According to the research of KPMG on NUES, the recommendations have a good foothold in Norwegian companies, and the adherence of

the "Comply or explain" principle is overall good. However, there are still improvements to be made.

Adhering to the corporate governance guidelines and accounting standards gives transparency, and as mentioned, is in the stakeholders best interest. Earlier accounting frauds and scandals have had tremendous repercussions for stakeholders. As an example, when Enron went bankrupt in 2001, numerous employees and stakeholders lost their pension funds, savings, jobs, etc., and stock prices in the financial markets dropped drastically. Since repercussions from scandals and fraud are so dramatic, adherence to the Norwegian corporate governance guidelines and accounting rules is therefore in the stakeholders best interest. Norwegian listed companies are statutory to following norsk anbefaling for eierstyring og ledelse, and by Norwegian accounting law, must adhere to the "comply or explain" principle. The effect is transparency in the companies responsible for the majority of prosperity and growth in Norway.