Corporate Social Responsibility, Corporate Governance and CEO compensation incentives

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Preface

We would like to thank our supervisor Catherine Lions for all valuable guidance and support throughout this thesis. Furthermore, we would also like to thank our examiner Arne Fagerström for his valuable advices and feedback that improved the content in our thesis.

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Abstract

Title: Corporate Social Responsibility, Corporate Governance and CEO compensation incentives

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Society's awareness of the importance of environmental-, social- and economic issues has increased over the last decades. This increased interest has led to the development of the Corporate Social Responsibility concept (CSR) in which companies actively work simultaneously with environmental, social and economic issues that extend beyond what is legally required by these companies in order to achieve a more sustainable society. As the interest in CSR has increased, a debate whether CSR is value-creating or should be considered an agency cost has arisen. To approach this question previous researches have used the CEO compensation to examine if the engagement in CSR actually is an agency cost or a value creating activity and found that agency costs can be mitigated by tying incentives to performance. Based on these assumptions this study will examine the link between CSR and agency costs using the existence of a CSR related compensation incentives for CEOs related agency costs.

This study is characterized to be positivistic and within the field of positive accounting research as it has deductive approach in which hypotheses are formulated that this study intends to test which are based on what fundamental economic theories and previous research have found that may affect agency costs. The empirical data are manually collected from companies’ on NasdaqOMX Stockholm 2016 annual reports followed by an analysis of the data using univariate t-test and multiple regressions in order to relate these findings to previous research. This study finds no direct evidence that CEO compensation incentives related to CSR affect agency costs which means that we have not closed the ongoing debate whether CSR engagement is creating shareholder value or should be considered an agency cost. Nonetheless, the results show indications that agency costs are higher for companies that use CEO compensation incentives related to CSR which indicates that CSR is not beneficial to shareholders but should instead be regarded as an agency cost at the expense of shareholders. The result also indicates that a
positive accounting research is not particularly useful on a small stock market with reliable results because the findings cannot be generalized in a broader perspective.

**Keywords:** CSR, agency costs, corporate governance, incentives, CEO compensation, shareholder value, performance.
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1. Introduction

This chapter describes the background of the research topic and the reasons why this study is conducted. Additionally, it describes what previous research has found and highlights the controversial debate in this field of research about CSR's impact on companies and whether CSR should be used as an incentive for CEO's compensation. Furthermore, key concepts that are recurring in the study (CSR, agency costs, corporate governance, incentives, CEO compensation, shareholder value and performance) are introduced and finally, the purpose of this study is presented.

1.1 Background

Society's awareness of the importance of environmental-, social- and economic issues has increased over the last decades. As a result, society and the companies' stakeholders have become increasingly interested in companies' approaches to greater environmental, social and economic responsibility in their business models to ensure sustainable development (Soderstrom, Soderstrom and Stewart, 2017). This increased interest has led to the development of the Corporate Social Responsibility concept (CSR) in which companies actively work simultaneously with environmental, social and economic issues that extend beyond what is legally required by these companies in order to achieve a more sustainable society (Mcwilliam and Siegel 2001; Barnea and Rubin, 2010).

The development of the CSR concept has meant that the traditional shareholders' philosophy has been questioned and companies have become more aware of the importance of multiple stakeholders (Mitchell, Agle and Wood 1997; Diebecker and Sommer, 2017). Companies that engage in CSR focus not only on maximizing the short-term financial gain for the owners, but also on meeting the interests of other stakeholders with the intention to increase the long-term value of the company by satisfying multiple stakeholders. Stakeholders are those that in one way or another are affected by the actions of the company in question such as customers, suppliers, employees, lenders and society (Anthony, Govindarajan, Hartmann, Kraus and Nilsson, 2014).

Companies that choose to engage in CSR invest resources in terms of time and money that ultimately in theory should lead to increased long-term value. However, a large number of studies has investigated whether CSR investments actually result in increased long-term value with contradictory results (Hong, Li and Minor, 2016; Karim, Lee and
Suh, 2018; Krüger, 2015; Lin, Yang and Liou, 2009). Some studies find that CSR engagement increase the long-term value for companies (see Hong et al., 2016; Lin et al., 2009; Karim et al., 2018) while other studies argue that CSR investments should be seen as agency costs as these investments do not result in increased long-term value for the shareholders (see Prior, Surroca and Tribó, 2008; Margolis, Elfenbein and Walsh, 2009; Krüger, 2015).

A consequence of these contradictory findings is that researchers challenge the assumption whether CSR engagement actually is beneficial in the long run or if it should be considered an agency cost because these CSR investments are funded by the companies’ shareholders without increasing the companies’ long-term value (Hong et al., 2016).

### 1.2 Problematization

Previous research highlights the complexity of measuring business performance as there are different types of performance measures that are useful depending on the company's strategies and objectives (Orlitzky, Schmidt and Rynes, 2003). How the companies measure their performance can vary depending on what the company is interested in getting information about in order to achieve these objectives. To acquire more knowledge about what performance measures companies are using and why they use these measures previous research is based on positive accounting that seek to investigate whether some factors may explain and predict a certain company behaviour. Common types of performance measures within the CSR literature is financial-, social- and environmental performance where social and environmental performance measures have increased in recent years as companies’ have become more aware of the CSR concept (Orlitzky et al., 2003; Hong et al., 2016; Diebecker and Sommer, 2017).

In the last decade there has been an intense dispute about the role of corporate social responsibility (CSR) and more specifically whether CSR actually is beneficial for the company or not. Why CEOs choose to engage in CSR has been controversial as some argue that engagement in CSR is mainly motivated by private benefits for the CEO himself and on the other hand, the stakeholder view posits that CEOs engage in CSR to satisfy various stakeholders which is considered to be value creating for the company (Jiraporn and Chintrakarn, 2013). This has raised debates whether CSR truly is an agency
cost or something that benefits the shareholders, and if it is an agency cost, should the managers prioritize stakeholder concerns above shareholders concerns (Hong et al., 2016). To approach this question previous research have used the CEO compensation to examine if the engagement in CSR actually is an agency cost or a value creating activity (Karim et al., 2018). Previous researchers have found that agency costs can be mitigated by tying incentives to performance (Jensen and Murphy, 1990; Frydman and Saks, 2010). Based on these assumptions this study will examine the link between CSR and agency costs using the existence of a CSR related compensation incentives for CEOs related agency costs.

The debate whether CSR is an agency cost or a value creating activity also concerns whether CSR has a positive or negative impact on corporate financial performance. A meta-analysis including 251 studies that investigated the relationship between corporate social performance and financial performance, concluded that there is a positive relation between corporate social performance and financial performance, and therefore benefit companies both financially and socially from investments in social activities (Margolis et al., 2009). Despite these findings there is research that argues the opposite, where the most common arguments against any financial benefits are the emergence of agency costs when companies engage in CSR (Hong et al., 2016). Furthermore Hong et al. (2016) emphasizes that it has been argued over the years that companies’ CSR activities are not value creating for companies, but instead a self-interested behavior by executives and top management at the expense of companies’ shareholders. Previous studies have found that CSR activities may lead to agency costs due to managers who prioritize their own personal interests over shareholders’ interests. Prior et al. (2008) found evidence that managers and executives tend to use CSR activities as a hedging-strategy against criticism or even disciplinary actions from the shareholders. They explain that managers and executives could be using the positive outcomes from CSR activities to protect themselves from other initiatives that have been less appreciated by the shareholders. Borghesi, Houston and Naranjo (2014) found similar evidence of agency costs and argue that executives might invest in CSR to enhance their own personal reputation and not only because it’s in the best interest of the company. On the other hand, a number of previous studies have instead found a positive relationship between companies’ financial performance and their engagement in CSR activities, which indicates that CSR is not associated with agency costs (see Deng, Kang and Low, 2013; Hong et al., 2016).
A key assumption in the economic theory is that stronger corporate governance leads to better financial performance and increased value for shareholders as a result of reduced agency costs (Gompers, Ishii and Metrick, 2010; Hong et al., 2016; Pedro de Andrade, Bressan and Iquiapaza, 2017). Strong corporate governance is considered to exist when companies implement rules, procedures and incentives to ensure that the company's best interests also correspond to the shareholders’ interests (Hong et al., 2016). Furthermore they argue that shareholders will promote stronger corporate governance within companies as this will be financially beneficial for them.

Due to the debate whether CSR has a positive or negative impact on companies’ financial performance and the assumption that stronger corporate governance leads to reduced agency costs and increased shareholder value, the relation between CSR and corporate governance has gained increased attention. Previous studies emphasize the importance of strong corporate governance arguing that it is a crucial mechanism to reduce agency costs which is essential in order to achieve functional and sustainable CSR activities within companies (Jamali, Safieddine and Rabbath, 2008; Devinney, Schwalbach and Williams, 2013). However, the findings from previous studies are mixed and even contradictory where both positive and negative relationships are observed. Javed, Rashid and Hussain (2017) found a positive relationship between the corporate governance, CSR incentives and companies’ financial performance, indicating that strong corporate governance is financially beneficial for companies. Coombs and Gilley (2005) found on the other hand a negative relationship, indicating that the implementation of CSR incentives is an agency cost which reduces companies’ financial performance and argues that such incentives are not in the best interests of the shareholders and the company. Based on these inconclusive findings we consider that there are issues that need to be explored more deeply regarding whether CSR truly is an agency cost or a value creating activity within the company.

In addition to the researches that have demonstrated that the existence of strong corporate governance can reduce agency costs, it has been argued that CEO compensation has an impact on agency costs and can be designed to reduce these costs (Sigler and Sigler, 2015). A basic assumption in economic theory is that the top management of companies are hired to ensure that activities within the company are aligned with shareholders’ interests to maximize their wealth. However, agency theory suggests that humans have
their own self-interest to maximize their own wealth even if it’s not in best interest of the company and its shareholders (Jensen and Meckling, 1976). The tendency for managers not to act in accordance with the interests of the owners lead to agency costs for the companies which can be managed with incentives related to CEO compensation. The purpose of these incentives is to align the CEO self-interests with the interest of the shareholders which will result in reduced agency costs as the interests of CEO and shareholders are aligned (Sigler and Sigler, 2015). As far as we know there are no studies that investigate the relationship between the interests of the CEO and stakeholders, more specifically whether the CEO’s interests are aligned with the stakeholders and not only the shareholders.

The majority of the previous literature that has investigated the relationship between incentives, financial performance and agency costs has been focusing on incentives tied to financial performance (Core, Holthausen and Larcke, 1999; Smirnova and Zavertiaeva, 2017; Sheikh, Shah and Akbar, 2018) To the best of our knowledge Hong et al. (2016) is the only study that relates CEO compensation incentives based on CSR to the debate whether CSR has a positive or negative impact on corporate financial performance and agency costs. Hong et al. (2016) have examined the relationship between CEO incentives related to CSR and financial performance and assume that incentives related to CSR do reduce agency costs as a result of better financial performance. Hong et al. (2016) do not specifically measure the agency costs and how these are affected by incentives related to CSR and therefore their assumption whether CSR incentives actually reduced agency costs could be uncertain as they assume better financial performance automatically reduce agency costs. In this study we will measure specifically how agency costs are affected by the existence of CEO compensation incentives related to CSR.

Economic research focusing on investigating the relationship between incentives, financial performance and agency costs is based on positive accounting theory as this research intend to provide predictions and explanations for individual behavior and accounting practices (Zimmerman and Watts, 1990). This type of research tests the relationship between a certain number of variables with the intention of predicting and explaining why and how a specific variable is influenced by other variables with the purpose of applying these findings to a more general perspective (Zimmerman and Watts, 1990). As we intend to provide an explanation of how or if agency costs are affected by
the existence of CEO compensation incentives related to CSR this study is also considered to be within the category of positive accounting research.

Basically all previous studies within the positive accounting research who investigate the relationship between incentives, financial performance and agency costs use large well-established companies on large stock markets (e.g., SandP 500) thereby excluding small and medium-sized companies on the stock exchange (see Core et al., 1999; Singh and Davidson, 2003; Hong et al., 2016; Smirnova and Zavertiaeva, 2017). To the best of our knowledge no previous study have investigated the relationship between incentives, financial performance and agency costs on a small stock exchange that includes small-, medium-, and large sized companies and thus we have found a research gap we intend to fill in this study.

1.3 Research question

- Does the existence of CSR related compensation incentives for CEO affect agency costs for firms listed on a small stock market within the framework of positive accounting research?

1.4 Purpose

The main purpose of this study is to examine if the existence of CSR related compensation incentives for CEO affect agency costs for companies listed on NasdaqOMX Stockholm during 2016 and this purpose is reflected in hypothesis 1.

In addition to the main purpose, there is also two sub-purposes in this study. As compensation and remuneration policies is a tool to manage CEOs in order to align their interests with the interests of the companies, it is evident that corporate governance has a fundamental role in the study and thus a sub-purpose of this study is to investigate the extent to which corporate governance affects the companies’ agency costs. This sub-purpose is reflected in hypothesis 2, 3 and 4. Hypothesis 2 covers if and how the total CEO compensation affects companies’ agency costs. Hypothesis 3 and 4 covers if and how corporate governance strength affects companies’ agency costs.

As this study is based on positive accounting research and uses a small stock exchange that includes small-, medium-, and large sized companies in order to answer the
research question, another sub-purpose is to evaluate whether positive accounting research is useful on a small stock exchange that contains small, medium and large-sized companies with reliable results.

1.5 Delimitations
This study is the first study that intend to investigate whether CEO compensation incentives related to CSR affect agency costs for listed companies at NasdaqOMX Stockholm. As this issue has not previously been investigated on a Swedish stock exchange, this study is considered to be exploratory. Based on this, we choose to study CEOs for listed companies on NasdaqOMX Stockholm using data from only one year. We use the annual reports for 2016 as these are the most recent reports that are available for the companies at the same time this thesis is written.

2. Theoretical framework and hypotheses
In this chapter the theoretical framework of our key concepts and what previous research has been able to conclude regarding these concepts are presented. Based on this, the hypotheses that will be tested in this study are formulated.
2.1 Corporate Social Responsibility (CSR)

CSR is a complex concept where the definition may vary, but CSR generally refers to companies that engage in more voluntary activities regarding environment, employees, communities’ well-being than is required by the law (Mcwilliam and Siegel 2001; Barnea and Rubin, 2010). The interest and relevance of CSR have increased in the last decades since some managers have become more aware of multiple stakeholders’ importance and not only the shareholders (Mitchell, Agle and Wood 1997; Diebecker and Sommer, 2017). Therefore, it could be argued that voluntary CSR is at least as important as legal requirements for these managers. The stakeholder perspective assumes that companies who satisfy multiple stakeholders will reduce potential conflicts, strengthen relationships and ensure the focus on the going concern concept which will be value creating for the company (Freeman, Harrison, Wicks, Parmer and Cole, 2010). However, investing in CSR usually lead to a lower result in a short-term perspective regardless whether the company chooses to report it as a cost or investment.

Thus, not every manager agrees that satisfying several stakeholders will be in the best interest of the company and its shareholders as they argue that costs related to CSR activities are conflicting with profit maximization and are therefore considered as agency costs. This perspective refers to the more traditional shareholder philosophy as satisfying shareholders is important for these managers and is achieved by increasing the profits for the company (Mitchell et al., 1997; Diebecker and Sommer, 2017). Those who advocate the shareholder perspective argue that managers who engage in CSR do this to boost the company’s social and sustainable responsibilities at the expense of the shareholders without seeing any long-term benefits. They argue that these costs wouldn’t exist if the managers avoid engagement in CSR activities and would therefore increase the profit and value for the shareholders (Mcwilliam and Siegel 2001; Jiraporn and Chintrakarn, 2013). On the other hand, those who advocate the stakeholder perspective argue that engaging in CSR should be seen as a long-term investment as satisfying multiple stakeholders will reduce potential conflicts, strengthen relationships and ensure the focus on the going concern concept which will be value creating for the company (Freeman, Harrison, Wicks, Parmer and Cole, 2010).

The difference between these two perspectives of CSR has caused a controversial debate whether CSR engagement is creating or destroying shareholder value. Extensive literature
has examined this question without achieving unanimous results as positive, negative and insignificant relationships have been observed (Borghesi et al., 2014; Margolis et al., 2009; Krüger, 2015).

2.2 Agency theory applied to Chief Executive Officers (CEO)

Jensen and Meckling (1976) define agency theory with a relationship between a principal and an agent. The principal hires the agent in order to perform objectives on the behalf of the principal. Agency costs arise as a result of the agents’ self-interest behavior where they make decisions that maximize their own personal gain at the expense of the principal. Jensen and Meckling (1976) suggests that the principals can design suitable incentives to align the agents’ interests with the interests of the principal. The costs that occur through incentives are addressed as monitoring costs and usually take shape of higher compensation for the agent. In the present study there may be a principal-agent problem resulting in agency costs as the shareholders (principal) have hired the CEO (agent) to optimize the shareholder value. The following sections describe what previous researches have concluded regarding how corporate governance and compensation affect agency costs and the responsibilities of the board and CEO.

2.2.1 The responsibilities of CEO and board of directors

The board of directors is elected by the shareholders to monitor their interests as the shareholders usually do not have enough ownership themselves to effectively affect the firm's business decisions. Therefore the board of directors can be seen as a link between the firm’s top management and its shareholders who ultimately is responsible for supervising top management to work in line with the interests of shareholders (Volonté, 2015).

The board has two main responsibilities within a firm - to monitor and advise the management where the first responsibility (based on agency theory and the emergence of agency costs) highlights the importance of the board of directors’ function in order to prevent and decrease the principal-agent problem that often exists between managers and shareholders (Jensen and Meckling, 1976; Fama and Jensen, 1983). The second main responsibility concerns how the company is to be managed and its future plans (strategies, ethics, objectives). The board of directors is also responsible for appointing the CEO of
the firm, whose role is to implement the decisions of the board and to ensure that the day-
to-day activities function effectively and efficiently (Volonté, 2015).

Since the board have the responsibility to monitor and advise the managers, problems
might occur if the CEO is also a member of the board of directors. In such a case, the
CEO is responsible for the day-to-day activities and simultaneously responsible for
supervising these decisions. Because of this, previous research has found that corporate
governance is stronger if the CEO is not a member of the board and therefore, CEO
duality is used as a proxy to measure the strength of corporate governance (Volonté,
2015). Another common proxy for the strength of corporate governance is CEO
ownership since previous research found that CEOs are more likely to increase
shareholder value if they own a higher proportion of ownership of the company (Huang,

2.2.2 Corporate governance

The main objective of corporate governance is to assure that shareholder´s interests are
considered when management operates the business through monitoring mechanisms.
Due to imperfect goal congruence, where shareholders and management's incentives are
not aligned causing agency costs, corporate governance plays an important role in
managing and reducing these costs (Valencia, 2017).

Fundamentally, strong corporate governance is favorable for shareholders as it results in
increased shareholder value and reduced agency costs. Companies achieve strong
corporate governance by implementing such incentives that align management's self-
interests with the interests of the shareholders (Pedro de Andrade et al, 2017). We use
CEO duality and CEO ownership as proxies for corporate governance strength in order
to approach the behavior of the CEO.

2.2.3 CEO compensation incentives

Previous researches have found that agency costs can be mitigated by tying incentives to
performance (Jensen and Murphy, 1990; Frydman and Saks, 2010). Based on these
assumptions there has been extensive literature examining the relation between firm's
financial performance, agency costs, CEO compensation and incentives with
contradictory results (Core et al., 1999; Smirnova and Zavertiaeva, 2017; Sheikh, et al.,
2018). As the interest in CSR has increased in the last decade, research has also been
interested in studying the relationship between CEO compensation and other types of performance (social and environmental) and not solely financial performance with mixed results (Hong et al., 2016). However, prior studies have found a link between social and environmental performance and financial performance, more specifically that CSR activities enhance financial performance (McGuire, Sundgren and Schneeweis, 1988; Hillman and Keim, 2001; Jiao, 2010; Hong et al. 2016; Margolis et al., 2009).

Even though a positive correlation has been found in some of the previous research, researchers are not completely unanimous about the reasons why CEOs choose to engage in CSR, as this is not the company's and its shareholders’ main focus (which is to increase the value of the company). Some research argues that CEOs who engage in CSR may not do this to increase the shareholder value but instead for personal gain which leads to agency costs. Hemingway and Maclagan (2004) and Barnea and Rubin (2010) argues for example that CEOs may engage in CSR to increase their own reputation or conceal negative results or activities within the company. On the other hand, there are also previous studies which argues that CEOs engage in CSR to improve their relationship with stakeholders (Deng et al, 2013). They claim that preserving stakeholders’ interest will be beneficial to all parties, as the increased relationships with stakeholders will result in better financial performance. If this assumption is correct, CSR engagement will reduce rather than increase companies’ agency costs (Karim et al., 2018). The basic assumption within agency theory is that humans (CEO in this case) have their own self-interest to maximize their own wealth even if it’s not in the best interest of the company and its shareholders. These assumptions indicates that there is a need for mechanisms that mitigate the problems and costs that occur because of the CEO’s self-interest. Companies try to deal with this by designing CEO compensation in a way that favors incentive-based salary, with the aim of ensuring that the CEO maximizes both their own interests and the interests of the company at the same time which ultimately in theory will reduce agency costs (Sigler and Sigler, 2015).

Hong et al. (2016) found evidence that CEO compensation incentives based on CSR will reduce agency costs and create value for the shareholders. Their study is to the best of our knowledge the only study that includes CEO compensation incentives and does not only focus on the relation between CEO compensation and CSR performance. They investigate how different variables affect the existence of CEO compensation incentives related to
CSR. We will take this one step further by measuring how different types of CEO compensation incentives related to CSR affect the agency costs. Based on the assumptions discussed in this section the following hypothesis is formulated:

**Hypothesis 1:** There is a negative relationship between CEO compensation incentives related to CSR and agency costs.

### 2.2.4 Total CEO compensation

The basic assumption within agency theory is that human beings (CEO in this case) have their own self-interest to maximize their own wealth even if it’s not in the best interest of the company and its shareholders. Based on this assumption Karim et al., (2018) argue that the CEO’s financial benefits can be measured through the total level of CEO’s received compensation. Such assumption implies that a CEO who invests in CSR for its own self-interest (at the cost of the company’s shareholders) will have a higher total compensation compared to a CEO that invest in CSR to enhance stakeholder relationships. This indicates that CEO total compensation will be positively associated with company’s agency costs, more specifically that higher CEO compensation will result in higher agency costs for companies.

**Hypothesis 2:** There is a positive relationship between total CEO compensation and agency costs.

### 2.2.5 CEO duality

The board of directors usually involves insiders (executives involved in the day-to-day activities) and outsiders (non-executives who are not involved in the day-to-day activities) (Chen, Ezzamel and Cai, 2011). However, research has found evidence that a conflict of interest can occur if the executive directors on the board are put into a situation where they basically are supervising themselves (Volonté, 2015). If an executive director is responsible for the decisions in the day-to-day activities and simultaneously responsible for supervising these decisions it's likely that problems might occur. Furthermore he argues that executives directors that are supervising themselves could have a biased perspective meaning that their view will not be aligned with the perspective of a neutral outsider making the board of directors less independent.
It is argued that independent directors (outsiders) have more incentives to monitor the CEO compared to non-independent directors (insiders) as the CEO cannot exercise the same influence over these outsiders (Fama and Jensen, 1983; Core et al., 1999). Furthermore, they argue that the CEO has greater influence over insiders as the CEO has greater control and ability to influence their careers and their future within the company, which in turn leads to insiders being more loyal to the CEO. Therefore, we assume that more independent board of directors means that the CEO will have less influence over these outsiders, resulting in lower agency costs.

Previous studies have found that boards of directors establish social relations as they are working together (Harris and Helfat, 2007). Such social associations e.g. friendship and other close relationships with the CEO can compromise the independence of the board and result in a conflict of interests within the company (Volonté, 2015). Prior research has found that the lack of board independence can jeopardize the board's ability to make decisions in the best interest of shareholders. More specifically the CEO may for example receive too much compensation which is not in the best interest of the shareholders and is therefore an agency cost (Adams and Ferreira, 2007). Yermack (1996) also argues that there should be a separation between the CEO and the board as a chairman sitting on two chairs leads to greater agency problems and associated agency costs as the independence of the board decreases. Based on these theoretical assumptions and previous empirical studies the following hypothesis is formulated:

*Hypothesis 3: There is a positive relationship between CEO duality and agency costs.*

### 2.2.6 CEO ownership

Another commonly used mechanism to manage agency cost among companies is to give the managers ownership within the company. The purpose with this mechanism is to align the interests of the managers with the interests of the shareholders through payments with stock options. Prior research suggests that a higher degree of managerial ownership will reduce agency costs as the ownership will give them incentives to maximize the firm value and their own wealth simultaneously (Huang et al., 2009; Mishra and Kapil, 2016).

However, some previous research has found that a large proportion of CEO ownership can create an entrenchment effect where the manager start engaging in activities that do
not maximize firm value as the alternative cost for these non-maximizing activities is outweighed by the managers’ personal gain (Huang et al., 2009; Brown, Beekes and Verhoeven, 2010). The entrenchment effect can occur when the managerial ownership is high enough to provide them with excessive influence within the company. This phenomena usually leads to investments that primarily result in personal gains or actions by the managers which secure their position in the company even though this may not be in the best interest of the shareholders or in a value-creating perspective. This suggests that there are both positive and negative outcomes of managerial ownership and a trade-off between the entrenchment effect and the incentive alignment effect (Mishra and Kapil, 2016). Despite the possible entrenchment effect the majority of previous research has found that a higher degree of CEO ownership will mitigate agency problems (Morck, Shleifer, Vishny, 1988; Huang et al., 2009; Mishra and Kapil, 2016). Based on the assumptions discussed and prior findings the following hypothesis is generated:

**Hypothesis 4: There is a negative relationship between CEO ownership and agency costs.**

### 2.3 Research-model

The model summarizes the factors that may affect agency costs based on the theoretical framework presented in chapter 3. The blue boxes represent the two major concepts that are fundamental for this study. As the purpose of this study is to contribute to the debate whether CEO’s engagement in CSR is considered an agency cost or not these concepts have a fundamental role throughout this study. The factors are based on previous research regarding agency theory and corporate social responsibility and the assumption that these factors may have a certain impact on companies’ agency costs. The most essential factor tested for in this study is marked in purple and is constituted of CEO compensation incentives related to CSR. This purple marked factor is related to our main purpose of examine if the existence of CSR related compensation incentives for CEO affect agency costs for companies listed on NasdaqOMX Stockholm during 2016. The other factors tested for are marked in gray and are constituted of total CEO compensation, CEO ownership and CEO duality. These gray marked factors are related to our sub-purpose of corporate governance strength. The study also controls for a number of factors that previous research has found have an impact on agency costs. These are the control variables marked in yellow and are further discussed in section 3.5. The red marked box
consists of other factors that may affect companies’ agency costs. These factors are not tested for in this study.

**Model 1 - Our research model**

Blue – The blue color represents the two main concepts for this study.
Purple – The purple color represents the essential factor that is tested for related to our main purpose in this study.
Gray – The gray color represents the factors that are tested for related to our sub-purposes in this study.
Yellow – The yellow color represents the factors that we control for in this study.
Red – The red color represents the factors that are not included in this study.

*Model 1 – Own construction*

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**3. Method**

In this chapter the research philosophy is presented, which justifies the method used in this study to approach the research question. Furthermore, the data and the data collection process is presented followed by a section justifying the statistical tests used in this study.
3.1 Philosophy and scientific approach

Our philosophy and scientific approach is based on the positivistic tradition which means that we will have an objective view throughout this study thus renounce own interpretations as much as possible. The use of a positivist approach is motivated by the fact that this study intends to examine how companies manage remuneration policies and corporate governance in real life in order to understand and predict whether these factors affect the companies’ agency costs. However, since our study to some extent means interpreting annual reports, we also have an element of hermeneutics (Sohlberg and Sohlberg, 2013). The interpretation occurs when we have to assess whether there are incentives for CSR in the companies’ annual reports as there are not always explicit information regarding the determinants of CEO compensation in the remuneration policies. In these cases, an assessment must be made to determine whether there are incentives related to CSR in the CEO compensation or not. How this is addressed is further discussed in section 3.4 and 3.6.

A quantitative research method is used as we collect empirical data to approach the purpose and research question in this study. This study is characterized to be within the field of positive accounting research as we have deductive approach where we formulate hypotheses that we intend to test which are based on what fundamental economic theories and previous research have found may affect agency costs (Zimmerman and Watts, 1990; Bryman and Bell, 2013). Furthermore we intend to provide an explanation of how or if agency costs are affected by the existence of CEO compensation incentives related to CSR which also indicates that this study falls within the framework of positive accounting research. More specifically we investigate whether there exists a relationship between agency costs (dependent variable) and a number of different independent variables using a cross-sectional study that permit us to see how our proxies for agency costs are affected by these independent variables.

We do not intend to describe how companies’ corporate remuneration policies and corporate governance should be designed in theory to affect agency costs, which is done within a normative research that is not within the scope of this study. Instead this study is based on positive accounting theory as it try to explain and predict whether CEO compensation incentives related to CSR affects companies’ agency costs and ultimately
generalize these findings to a greater extent in order to explain why and how this phenomenon occurs. This research design is primarily designed for studies in the US, thus basically all previous studies considered positive accounting research are conducted in the US within this field of research (Singh and Davidson, 2003; Hong et al., 2016; Smirnova and Zavertiaeva, 2017). However, the reason why we use NasdaqOMX Stockholm and Swedish data is because we want to investigate if and how the existence CEO compensation incentives related to CSR affects agency costs in Swedish companies as there are fundamental differences between companies in the US and Sweden.

Previous study populations consists of data from only well-established large companies on large stock markets (e.g., S&P 500) while this study use data from small-, medium- and large sized companies on a small stock market (NasdaqOMX Stockholm). The consequence of this may be that it is not implausibly that the comparability of this study and previous studies within the field is affected as this type of positive accounting research has not previously been conducted on a smaller stock exchange. Although the application of positive accounting research implies difficulties in drawing conclusions that can be generalized in a broader perspective, it is still interesting to investigate how this research design works in a Swedish setting. A discussion of whether positive accounting research fits the Swedish stock market and if the results from this study can be compared to previous research will be addressed later in section 5.

3.2 Data and data collection

To test our hypothesis we conduct a cross-sectional study and use all publicly listed companies on NasdaqOMX Stockholm. We study annual reports from 2016 since these are the most recent annual reports that are available for the companies at the time this thesis is written. Our total population consists of 304 annual reports, but the final population consists of 221 annual reports. 29 annual reports were eliminated as they either showed missing information or were misleading. In some cases the companies had replaced their CEO during the year which usually had a significant impact on the total payment to the CEO making the data for those companies skewed. We choose to exclude all of the 54 financial companies since the data from these companies had a significant impact on the overall data (See appendix 1). Excluding the financial companies is in line with previous literature since the structure in these companies is different from the companies in the other industries (Karim et al, 2018; Singh and Davidson, 2003).
However, it is important to notice that there are limitations associated with the number of available observations when conducting a cross-sectional study on a smaller stock exchange. Even though this study includes all companies listed on NasdaqOMX Stockholm, there are only a total of 304 companies listed in 2016 of which 221 observations constitute the final population due to the fact that 83 companies have to be excluded due to the reasons mentioned above which make this studies population small compared to previous studies in the field. Singh and Davidson (2003) studies large listed companies during two years (1992 and 1994) on the US stock exchange and has a final sample of 1528 while Karim et al. (2018) final sample consists of 4344 observations from large companies over the period 1998-2012. Another limitation is that we only study companies for a specific year (2016). Companies usually invest in CSR in a long-term perspective which means that we may not be able to capture the effects of companies’ CSR engagement as we only study one specific year. Thus, a longitudinal study could be an alternative in order to capture the effects of companies’ CSR engagement for an extended period of time. However, as CSR is a concept with fast evolving definitions and measures we choose to study a specific year as these definitions and measures might be something different in a few years.

To gather our data we use different sources. Relevant financial and non-financial information are collected through the database Retriever and manually from the companies’ annual reports. Financial information (asset utilization ratio, ROA, annual sales and debt-to-equity) are collected using the database Retriever. Non-financial information and financial information we cannot receive from Retriever (compensation, market capitalization, industry, CSR incentives, CEO ownership, board size and CEO duality) are collected manually from the companies’ annual reports.

3.3 Dependent variables

Following previous studies we measure agency costs in two ways. The first measure is asset utilization (variable ASSETUTILIZATION) and is used as a proxy for agency costs as it measures how efficiently the management including the CEO utilizes the company’s assets. This is consistent with previous literature which argues that a high asset utilization ratio indicate low agency costs (Singh and Davidson, 2003; McKnight and Weir; 2009; Owusu and Weir, 2018). They suggest that a high ratio imply that the
management and the CEO utilize the assets efficiently in order to generate annual sales for the company. On the other hand, a low ratio indicates that the agency costs are high as the management and the CEO uses the company assets inefficiently through engagement in projects that do not generate enough sales compared to the investments.

We use this measure with caution because we are aware that it is not a perfect proxy for measuring agency costs. This measurement has been criticized due to the fact that differences in accounting methods regarding the reporting of total assets can affect this proxy (Ang, Cole and Lin, 2000). However, this criticism is unjustified against our data set as it only covers listed companies on NasdaqOMX Stockholm that comply with IFRS, which means that total assets should be reported in a comparable manner (Chapter 7 ÅRL). Furthermore McKnight and Weir (2009) argue that increasing annual sales might not directly increase shareholder value since the source of the increased annual sales may be short term and could decrease shareholder value in long term. Despite this criticism we follow previous literature and use asset utilization as proxy for agency costs since it is considered a useful measure (Singh and Davidson, 2003; McKnight and Weir; 2009; Owusu and Weir, 2018).

The second measure for agency costs is CEO compensation-to-annual sales (COMPENSATIONTOANNUALSALES) which indicate if the CEO receive excessive compensation and other benefits (automobiles, facilities, etc.) in relation to how much annual sales the company generates. A higher ratio indicate that the agency costs are high as a result of excessive payments and benefits which reduce the shareholder value. A low ratio indicate that the agency costs are low as the payments to the CEO are lower compared to the annual sales that are generated by the company. This second proxy for measuring agency costs has been modified to capture and isolate the expenses related to the CEO alone which slightly differs from previous studies (Singh and Davidson, 2003; McKnight and Weir; 2009; Owusu and Weir, 2018). Singh and Davidson (2003) used a similar method but instead of only using the CEO compensation they used all expenses for the management team as their study included all managers and not only the CEO. Since we focus solely on the CEO we modify their method by only including the costs that could be related to the CEO and relate it to the annual sales. Following previous studies we use the natural logarithm of total compensation and revenue to decrease the
spread of this dependent variable (Hong et al., 2016; Mahoney and Thorne, 2005; Owusu and Weir, 2018).

3.4 Independent variables
To obtain data if the CEO has incentives related to CSR we manually collect information from 2016 remuneration policies statements which usually can be found in the corporate governance section or in the notes regarding remuneration to employees and senior executives. These statements describe the conditions that the CEO’s compensation is based on. Information about how the CEO’s compensation is calculated are found in this section and used to determine whether incentives related to CSR exist or not (CSRINCENTIVES). In order to determine if the CEO’s compensation is linked to CSR incentives we use the same method as Hong et al., (2016) (see Table 1). CEO’s compensation that is determined based on non-financial targets and related to CSR activities is coded as 1 meaning that the CEO compensation has incentives related to CSR. If no such information can be interpreted it is coded as 0 meaning that the CEO compensation does not have incentives related to CSR. In order to determine if a non-financial incentive is related to CSR we use the same terms as Hong et al., (2016) (characteristics of CSR activities) and analyze if any non-financial targets in the company can be linked to any of these terms. Since the majority of the annual reports are in Swedish we have to translate them in order to determine if the non-financial incentives can be related to CSR.
Table 1 - CSR compensation terms

<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community</td>
</tr>
<tr>
<td>Compliance with ethical standards</td>
</tr>
<tr>
<td>Corporate social responsibility</td>
</tr>
<tr>
<td>Diversity</td>
</tr>
<tr>
<td>Employee well-being</td>
</tr>
<tr>
<td>Energy efficiency</td>
</tr>
<tr>
<td>Environmental compliance</td>
</tr>
<tr>
<td>Environmental goals</td>
</tr>
<tr>
<td>Environmental performance</td>
</tr>
<tr>
<td>Environmental projects</td>
</tr>
<tr>
<td>Greenhouse gas emissions reductions</td>
</tr>
<tr>
<td>Health</td>
</tr>
<tr>
<td>Product safety</td>
</tr>
<tr>
<td>Reduced injury rates</td>
</tr>
<tr>
<td>Safety</td>
</tr>
<tr>
<td>Sustainability</td>
</tr>
</tbody>
</table>

Table 2 – Own construction

To be able to access the behavior of the CEOs we used two proxies for the corporate governance strength. CEO duality (CEODUALITY) is operationalized as if the CEO is sitting on two chairs (both CEO and as a member of the board of directors) using a dummy variable. A CEO who is also a member of the board is not considered to be independent of the board based on our theoretical reasoning and is therefore coded as 1. If the CEO is not a member of the board he is considered independent and is thereby coded as 0. Following prior studies we operationalize our variable for CEO ownership (CEOOWNERSHIP) by calculating how much of the total number of outstanding shares the CEO possesses (Bhagat and Bolton, 2008; Bebchuk, Cremers, Peyer, 2011). To proxy for CEO compensation (LOGCEOTOTALPAY) we follow previous studies and calculate the total compensation as the sum of, salary, bonuses, equity based compensation and other benefits (Al-Shaer and Zaman, 2017; Core, Holthausen and Larcker, 1999; Karim, Lee, Suh, 2018). Since our population consists of companies listed on NasdaqOMX Stockholm the size of companies differs to a great extent which is reflected in the CEO compensation since the total CEO compensation is generally higher.
in large companies than in small companies. To handle the large spreads in CEO compensation we used the natural logarithm consistent with how previous literature handles large spreads in the data (Hong et al., 2016; Mahoney and Thorne, 2005; Owusu and Weir, 2018).

3.5 Control variables

A number of different control variables are included that we control for in this study. The size of the firms, the size of the boards, financial performance, leverage and the industry. Previous studies have found that the size of the firm has impact on the CEO compensation and is therefore included as a control variable (Hong et al., 2016; Berrone and Gomez-Mejia, 2009). To proxy for size (LOGSIZE) we use the market capitalization which is a well-established measure in the literature (Dang, Li and Yang, 2018). Following previous literature we use the natural logarithm to reduce the spread of data (Hong et al., 2016; Mahoney and Thorne, 2005; Owusu and Weir, 2018).

Singh and Davidson (2003) and Jackling and Johl (2009) suggests that the size of the board has impact on firm performance through the impact of agency costs. This indicates that the size of the board has an indirect effect on firm performance and a direct effect on agency costs. Based on the assumptions above we include board size as a control variable. Board size (BOARDSIZE) is operationalized as the total member of the board members with reference to prior literature that also used this measure (Yermack, 1996; Bhagat and Bolton, 2008; Jackling and Johl, 2009).

That financial performance has an impact on agency costs is well-established in previous literature and therefore used as a control variable (Jensen and Meckling, 1976; Margolis et al., 2009; Rozeff, 1982). We use ROA (ROA %) as the proxy for financial performance since it is a well-established proxy in previous literature (Hong et al., 2016; Deckop, Merriman and Gupta, 2006).

Following previous studies we control for leverage as prior literature has found that leverage has an impact on CSR and agency costs due to its disciplinary effect (Mahoney and Thorne, 2005; Hong et al., 2016; Jensen and Meckling, 1976). We calculate leverage (DEBTTOEQUITYRATIO) as the total liabilities divided by shareholders equity consistent with previous studies (Smirnova and Zavertiaeva, 2017).
Sigler and Sigler (2015) found that the incentives for the CEO compensation may be unique for each industry and therefore we use industry as a control variable (INDUSTRY). To divide the companies into industries we use NasdaqOMX Stockholm’s own industry classification and code them from 0-10 where each number represents a specific industry.

### 3.6 Information retrieval process

#### Model 2 - Information retrieval model

- **Yellow** – The yellow colored figures represent the information collected from Retriever.
- **Green** – The green colored figures represent the information manually collected from annual reports.
- **Red** – The red colored figures display that no information is collected from this source.

**Model 2 – Own construction**

The model displays the information retrieval process and what type of information is used in this study. As the data is collected through two sources the model displays what type of information is collected from each source and how this information is used in order to operationalize our variables so they can be used in our statistical tests that is further
addressed in section 3.7. The first column show the variables we collect information about. The second column displays all information that is collected through Retriever (yellow figures). The third column displays all information that is gathered manually from annual reports (green figures). The fourth column explains the operationalization of the variables used.

The variables asset utilization, ROA and debt-to-equity are all automatically calculated and collected through the database Retriever. Since Retriever calculates these variables automatically, it reduces the risk of miscalculation- and human errors.

The data needed in order to calculate the dependent variable CEO compensation-to-annual sales is collected from both Retriever and annual reports. Annual sales is automatically collected through Retriever while the CEO total compensation is manually collected through the companies’ annual reports. To find information about CEOs total compensation in these annual reports we use the notes related to the remuneration of senior executives. These notes present an overall table of total compensation to all senior executives including the CEO and also specifically that the total compensation consists of the sum of salary, bonuses, equity based compensation and other benefits. The salary can consist of a fixed and variable pay and as we intend to use the total compensation to the CEO we use the sum of both the fixed and variable compensation.

The variable for CEO compensation incentives related to CSR is manually collected through the companies’ annual reports. The information about the CEO remuneration policies is presented at various locations in the company's annual reports and therefore a standardized search method is used in order to locate this information. First we search for the companies’ remuneration policies in order to determine whether CSR incentives are used or not using the words “remuneration”, “remuneration policies” and “compensation” which in most cases causes us to find companies' remuneration policies for senior executives and the CEO. If searching for these words does not locate the companies’ remuneration policies we use the table of contents to locate the corporate governance section and the notes of remuneration to senior executives which are the most common location for information about the remuneration policies and the existence of CSR incentives.
These policies present the CEO compensation structure, namely if the CEO compensation consists of a combined fixed and variable pay and what the incentives for this variable pay are based on. The information regarding the incentives for the variable pay is usually general disclosed which means that a standardized method is needed to determine whether the non-financial- and qualitative incentives for variable pay are related to the companies’ CSR activities or not. This means that we need to make an assessment whether companies who use non-financial or qualitative incentives in the variable pay to the CEO are actively working with CSR activities or not. When the company specifically discloses that they are using non-financial or qualitative incentives, we use the CSR terms in table 1 to determine if the company is working with CSR activities or not. In order to assess whether these companies work with CSR activities we review and analyze the sections regarding business strategies and goals in the annual reports, as these sections highlight what is crucial in the companies’ business and how they plan to work to achieve these goals. If the content in these sections can be related to any of the CSR terms in table 1 we make the assessment that the company use CEO compensation incentives related to CSR. In some cases companies disclose that the variable pay is based on individual goals which makes it difficult to assess exactly what these individual goals consist of and are therefore not considered as non-financial or qualitative incentives that could be related to any of the CSR terms in table 1.

The information for the variable CEO ownership is manually collected from companies’ annual reports. To find information regarding companies outstanding shares we use the search word “outstanding shares” which redirects us to either the board of directors report or the note regarding equity and shares where this information is disclosed. The information about CEO shareholding is found in the corporate governance section where the shareholding of all senior executives including the CEO is disclosed. It is not only the CEOs personal ownership that is included, but also the ownership of relatives and ownership through other companies. This information is then used to calculate a percentage of how much of the company the CEO owns.

Information regarding the variables CEO duality and board size are manually collected from companies’ annual reports. Information about the board members is located in the corporate governance section which discloses the total number of directors that are on the
board and also whether the CEO is also a member of the board of directors or not. It is only the board members elected by the shareholders that are included in the board size variable. Employee representatives are excluded as they are not elected by the shareholders.

The proxy for size is market capitalization and is manually collected from companies’ annual reports. In order to find information about this we use the search word “market capitalization” which redirects us to the board of directors report where the market capitalization usually is disclosed in the annual report for the year 2016. In some cases when companies do not disclose any specific information about the market capitalization we manually calculate this by multiplying outstanding shares with the share price at 31 December 2016. To find information about the share price we use the search word “share price” which usually redirects us to the board of directors’ report where this information is disclosed.

3.7 Statistical tests
As the purpose of this study is to investigate whether the existence of CSR related compensation incentives for CEO affect agency costs we need to investigate this in two ways using two different statistical methods to analyze our data and variables. First we use an independent samples t-test to be able to compare the means of our dependent and independent variables for companies who use CEO compensation incentives related to CSR and for companies who do not use such incentives. This is done with the purpose of checking whether the mean values between these groups are significantly different or not, which will answer the question of whether these differences only are random or that it is most likely not due to random factors. To ensure that an independent t-test can be used on our population we check all assumptions (independence, normality, homogeneity of variance) that are required in order to use this statistical test while conducting the t-test in SPSS. This approach is common in previous research in the field, which supports the use of this method in this study (Singh and Davidson, 2003; Hong et al., 2016; Karim et al., 2018).

The univariate analysis (t-test) only allows use to see whether there are any significant differences in the mean values of our dependent and independent variables for companies who use CEO compensation incentives related to CSR or do not use such incentives, but
not whether there is a causal relationship between any of these variables which means that our analysis need to be extended through the usage of another statistical test. We need to be able to investigate whether there is a causal relationship between our dependent variables (proxies for agency costs) and our nine independent variables in order to conclude if and how agency costs are affected by our independent variables. Therefore we use multivariate regression to be able to see specifically how our proxies for agency costs are affected by these variables simultaneously similar to previous studies (Singh and Davidson, 2003; Hong et al., 2016; Karim et al., 2018). To check that our regressions are robust, we test that all the assumptions (normality, no multicollinearity and homoscedasticity) required for using multivariate regression are met.

In order to meet the requirement of normality the data must follow a normal distribution. A variable that is normally distributed often assumes values that are close to the mean and rarely have values that deviate significantly from the mean value. Because of this, the normal distribution resembles a curve reminiscent of a bell as approximately 67% of the observed values should be within 1 standard deviation above or below the mean value (Ghasemi and Zahediasl, 2012). The second requirement which needs to be met in order to conduct a regression is that there is no multicollinearity between the independent variables. Multicollinearity occurs when two or more independent variables are too highly correlated with each other which leads to difficulties as the regression model cannot accurately identify which independent variable actually has an effect on the dependent variable in the model (Farrar and Glauber, 1967). The third requirement is homoscedasticity which is an assumption that is achieved when the variance between the observations are independent of the x values (Cuevas, Febrero and Fraiman, 2003).

Histograms have been used to check that all variables follow the normal distribution curve. Pearson's correlation coefficient is used to check the correlation between our independent variables to ensure there is no multicollinearity affecting our regression models and is also complemented by VIF (Variance inflation factor) tests as we find high correlations between some independent variables. To ensure that the assumption of homoscedasticity is met, we use the natural logarithm of the widely distributed variables in our study (size, revenue and CEO compensation) which is consistent with previous studies (Hong et al., 2016; Mahoney and Thorne, 2005; Singh and Davidson, 2003; Owusu and Weir, 2018).
We are building the following two regression models (Model 1 and Model 2) in order to
test all four hypothesis (H1, H2, H3 and H4) in each of the two models. The use of two
separate regression models are motivated by the use of two proxies for agency costs
similar to previous studies (Singh and Davidson, 2003).

**Model 1:** \( \text{ASSETUTILIZATION} = \beta_0 + \beta_1 \text{CSRINCENTIVES} + \beta_2 \text{LOGCEOTOTALPAY} + \beta_3 \text{CEODUALITY} + \beta_4 \text{CEOOWNERSHIP} + \beta_5 \text{LOGSIZE} + \beta_6 \text{BOARDSIZE} + \beta_7 \text{ROA} + \beta_8 \text{DEBTTOEQUITY} + \beta_9 \text{INDUSTRY} \)

**Model 2:** \( \text{COMPENSATIONTOANNUALSALES} = \beta_0 + \beta_1 \text{CSRINCENTIVES} + \beta_2 \text{LOGCEOTOTALPAY} + \beta_3 \text{CEODUALITY} + \beta_4 \text{CEOOWNERSHIP} + \beta_5 \text{LOGSIZE} + \beta_6 \text{BOARDSIZE} + \beta_7 \text{ROA} + \beta_8 \text{DEBTTOEQUITY} + \beta_9 \text{INDUSTRY} \)
4. Empirical results

In this chapter the results are presented. Firstly, descriptive statistics are presented followed by the results from the t-test. Secondly, the Pearson correlation coefficients and VIF-values are presented which justifies the use of multivariate regressions. Finally, the results from these multivariate regressions are presented.

4.1 Descriptive statistics

Table 2 summarizes the descriptive statistics for the variables used in this study. The table presents the number of companies observed (N), the minimum value (MIN), the maximum value (MAX), the mean value (MEAN), the median value (MEDIAN), the standard deviation (STD.DEV) and the skewness value (SKEWNESS) of the variables used in this study. Table 3 presents the industry classification which is controlled for in this study. The table presents the different industry classifications coded as 1-10 and the number of observations for each industry (N).

### Table 2 - Descriptive statistics

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>N</th>
<th>MIN</th>
<th>MAX</th>
<th>MEAN</th>
<th>MEDIAN</th>
<th>STD.DEV</th>
<th>SKEWNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSETUTILIZATION</td>
<td>221</td>
<td>&lt;0,01</td>
<td>4,11</td>
<td>1,12</td>
<td>1,06</td>
<td>0,67</td>
<td>1,27</td>
</tr>
<tr>
<td>LOGCOMPENSATIONTO ANNUALSALES</td>
<td>221</td>
<td>0,61</td>
<td>0,96</td>
<td>0,72</td>
<td>0,72</td>
<td>0,05</td>
<td>1,12</td>
</tr>
<tr>
<td>CSRINCENTIVES</td>
<td>221</td>
<td>0</td>
<td>1</td>
<td>0,11</td>
<td>0</td>
<td>0,32</td>
<td>2,46</td>
</tr>
<tr>
<td>LOGCEOTOTALPAY</td>
<td>221</td>
<td>13,75</td>
<td>18,75</td>
<td>15,60</td>
<td>15,55</td>
<td>0,90</td>
<td>0,44</td>
</tr>
<tr>
<td>CEODUALITY</td>
<td>221</td>
<td>0</td>
<td>1</td>
<td>0,29</td>
<td>0</td>
<td>0,46</td>
<td>0,93</td>
</tr>
<tr>
<td>CEOOWNERSHIP %</td>
<td>221</td>
<td>0</td>
<td>43,19</td>
<td>2,49</td>
<td>0,21</td>
<td>6,42</td>
<td>3,69</td>
</tr>
<tr>
<td>SIZE</td>
<td>221</td>
<td>17,82</td>
<td>27,17</td>
<td>21,95</td>
<td>21,97</td>
<td>1,89</td>
<td>0,26</td>
</tr>
<tr>
<td>BOARDSIZE</td>
<td>221</td>
<td>3</td>
<td>14</td>
<td>6,81</td>
<td>7</td>
<td>1,76</td>
<td>0,91</td>
</tr>
<tr>
<td>ROA %</td>
<td>221</td>
<td>-205,7</td>
<td>41,1</td>
<td>4,21</td>
<td>7,40</td>
<td>21,14</td>
<td>-5,60</td>
</tr>
<tr>
<td>DEBTTOEQUITY</td>
<td>221</td>
<td>-12,23</td>
<td>16,14</td>
<td>1,35</td>
<td>1,07</td>
<td>1,90</td>
<td>2,17</td>
</tr>
</tbody>
</table>
The variable CSRINCENTIVES is a dummy-variable that is coded as 1 if the company has CEO compensation incentives related to CSR and coded as 0 if the company does not have such incentives. Thus, the maximum value observed is 1 and the minimum value observed is 0 since this dummy variable can only assume these two values. The mean of CEO compensation incentives related to CSR (CSRINCENTIVES) is 0.11 indicating that 11% of all 221 firms use CEO compensation incentives related to CSR.

The first proxy for agency costs is asset utilization ratio (ASSETUTILIZATION) which represents how efficiently the company utilizes its assets. A higher ratio indicates higher efficiency and lower agency costs and a lower ratio indicates lower efficiency and higher agency costs. The mean ratio of asset utilization is 1.12 indicating that the average company on NasdaqOMX Stockholm generates 1.12 SEK revenue per SEK of assets. The minimum asset utilization ratio observed is <0.01 which represents the company with the lowest efficiency and highest agency costs. The maximum asset utilization ratio observed is 4.11 which represents the company with the highest efficiency and the lowest agency costs. The large spread between the minimum and maximum asset utilization ratio may be explained by the population as we include all companies regardless of size on NasdaqOMX Stockholm except financials. The companies with the highest asset utilization ratios are generally retail companies in the consumer services industry and the lowest asset utilization ratios are generally companies in the health care industry. It should be noted that the standard deviation for this variable is 0.67 indicating a relatively wide spread of observation values.

### Table 3 - Industry classification

<table>
<thead>
<tr>
<th>Code</th>
<th>Industrials</th>
<th>Number of firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Oil and Gas</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Materials</td>
<td>13</td>
</tr>
<tr>
<td>3</td>
<td>Industrials</td>
<td>76</td>
</tr>
<tr>
<td>4</td>
<td>Consumer goods</td>
<td>26</td>
</tr>
<tr>
<td>5</td>
<td>Consumer services</td>
<td>31</td>
</tr>
<tr>
<td>6</td>
<td>Health Care</td>
<td>38</td>
</tr>
<tr>
<td>7</td>
<td>Telecom</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Utilities</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Financials</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>Technology</td>
<td>31</td>
</tr>
</tbody>
</table>

The variable CSRINCENTIVES is a dummy-variable that is coded as 1 if the company has CEO compensation incentives related to CSR and coded as 0 if the company does not have such incentives. Thus, the maximum value observed is 1 and the minimum value observed is 0 since this dummy variable can only assume these two values. The mean of CEO compensation incentives related to CSR (CSRINCENTIVES) is 0.11 indicating that 11% of all 221 firms use CEO compensation incentives related to CSR.
The second proxy for agency costs (LOGCOMPENSATIONTOANNUALSALES) is costs associated to the CEO in relation to how much annual sales the company generates. The costs of the CEO consists of the sum of salary, bonuses, equity based compensation and other benefits during one year (2016). This ratio presents how much the company pay its CEO in relation to how much annual sales the CEO generates for the company. A higher ratio indicates higher agency costs since the costs associated to the CEO is higher in relation to the annual sales the CEO generate for the company. A lower ratio indicates lower agency costs since the costs associated to the CEO is lower in relation to the annual sales the CEO generates for the company.

Important to notice is that this ratio is calculated with logarithmized values of compensation and annual sales as we are only interested in seeing differences in compensation to the CEOs in relation to the companies’ annual sales. We are not interested in any absolute values, since the costs to the CEOs are very small in relation to total annual sales for an entire year and these may vary widely depending on the size of the company and the company structure. By using logarithmic values, the spread is reduced and it is possible to see a pattern of how these move in relation to each other. This spread reduction is also visible as the standard deviation for this variable is 0.05 indicating that the spread of observation values is low. The minimum value of the second proxy is 0.61 which represent the company with the lowest agency costs as the costs associated to the CEO are lowest in relation to how much annual sales the company generate. The maximum value is 0.96 and represents the company with the highest agency costs as the costs associated to the CEO is highest in relation to how much annual sales the company generates. Finally the mean ratio for the second proxy for agency costs is 0.72.

The mean value of total compensation to the CEO (LOGCEOTOTALPAY) is 15.6 indicating that the average CEO on NasdaqOMX Stockholm during 2016 has a total compensation of 5,950,000 SEK. The minimum value observed is 13.75 which corresponds to 935,000 SEK and represents the CEO with the lowest total compensation received during 2016. The maximum value observed is 18.75 which corresponds to 138,823,000 SEK and represents the CEO with the highest total compensation received during 2016. As the natural logarithm is used for the total compensation to the CEOs the
spread of observation values is reduced, which is visible in the low standard deviation of 0.9.

The variable CEO duality (CEODUALITY) is a dummy-variable that is coded as 1 if the company’s CEO is also a member of the board of directors and coded as 0 if the CEO is not a member of the board of directors. Thus, the maximum value observed is 1 and the minimum value observed is 0 since this dummy variable can only assume these two values. The mean value of the variable CEO duality is 0.29 indicating that the CEO is also a member of the board in 29 % of the 221 companies studied on NasdaqOMX Stockholm during 2016.

The variable CEO ownership (CEOOWNERSHIP) presents a percentage of how much shares the CEO possesses in relation to all outstanding shares of the company. The average ownership the CEOs on NasdaqOMX Stockholm possess is 2.49 % of all outstanding shares. The minimum value observed is 0 % and represents the CEOs that do not own any shares of the company in question. The maximum value observed is 43.19 % and represents the CEO who possesses the highest amount of shares in relation to the outstanding shares of the company. Generally the CEOs in small companies possess a higher proportion of shares in relation to the outstanding shares and therefore the wide spread may be explained by the population that includes all small-, medium- and large sized companies on NasdaqOMX Stockholm. This wide spread in observation values is also visible in the high standard deviation of 6.42 for this variable.

The first control variable ROA (ROA %) presents the financial performance of all 221 companies on NasdaqOMX Stockholm during 2016 by relating how profitable the company is relative to its total assets. The average financial performance for companies listed on NasdaqOMX Stockholm is 4.21 % indicating that the average company generates 0.0421 SEK for each SEK of assets held by the company. This ratio displays therefore how efficiently the company’s CEO and management utilize their assets in order to generate net income for the company. The minimum value observed is -205.7 % and represents the company with the lowest financial performance. The maximum value observed is 41.1 % and represents the company with the highest financial performance. The large spread between the minimum and maximum ROA may be explained by the population as we include all companies regardless of size on NasdaqOMX Stockholm.
except financials. The financial performance of large sized companies is generally more stable and does not vary to such an extent as the financial performance of smaller companies. The wide spread of financial performance is also displayed by the large standard deviation of 21.14 % for this variable.

The second control variable Size (LOGSIZE) presents the size of the companies using the natural logarithm of the market capitalization. The average size value observed is 21.97 for the companies on NasdaqOMX Stockholm in 2016. The smallest company has a value of 17.82 and the largest has a value of 27.17. By using the natural logarithm the observation spread is reduced which is visible in the low standard deviation value of 1.89.

The third control variable Debt-to-equity-ratio (DEBTTOEQUITY) is a ratio that displays the proportion of debt the companies on NasdaqOMX Stockholm use in order to finance their assets in relation to the shareholder’s equity during 2016. The average company on NasdaqOMX Stockholm has a debt-to-equity-ratio of 1.35 meaning that these companies use 35 % more debt than shareholder’s equity when financing their assets. The minimum value observed is -12.23 which represents the company with the lowest ratio and is negative because this company has negative shareholder’s equity. The maximum value observed is 16.14 and represents the company with the highest ratio. The standard deviation of 1.9 for this variable is rather large in relation to the mean value of 1.35 indicating that the debt-to-equity-ratio is widely spread among the different companies on NasdaqOMX Stockholm.

The fourth control variable Board size (BOARDSIZE) presents the number of directors on the boards elected by the shareholders in the companies on NasdaqOMX Stockholm during 2016. The average number of directors on the boards is 6.8 for these companies. The minimum value observed is 3 and represents the company with the least number of elected directors on the board. The maximum value observed is 14 and represents the company with the highest number of elected directors on the board. The standard deviation for the variable board size is rather small (1.76) meaning that the spread of observation values is small.

Finally table 2 displays that there is a big difference between the mean and the median value for some of our variables (ROA, DEBTTOEQUITY and CEOOWNERSHIP)
indicating skewness. The skewness is likely explained by our population. By including all listed companies on NasdaqOMX Stockholm our population includes small-, medium- and large-sized companies with different characteristics and conditions. In line with previous studies, financial companies were excluded as they usually have a different business structure compared to other companies (Karim et al., 2018; Singh and Davidson, 2003). The purpose of excluding the financial companies is to reduce the skewness in the data. Although all financial companies are excluded, there are still indications of skewness in the data, which is probably due to the differences of characteristics and conditions as this study includes small-, medium and large-sized companies. Generally our data indicate that negative ROA, higher debt-to-equity ratio and higher CEO ownership are more common in smaller firms which significantly affects the mean value of the total population and results in skewness as the mean value is sensitive to large variances in the data.

4.2 Univariate test

In order to determine if there is any potential difference between the firms that use CEO compensation incentives related to CSR and the firms that do not use CEO compensation incentives related to CSR, these groups are compared in Table 4 using a T-test.

The results in Table 4 show no significant (P-value = 0.728) differences for the first proxy for agency costs, asset utilization, between the groups that use CEO compensation incentives and the companies that do not use such incentives. Companies that use CEO compensation incentives have a mean value of 1.17 while companies that do not use such incentives have a mean value of 1.12. Nor the result for the second proxy for agency costs, costs associated to the CEO in relation to annual sales (COMPENSATIONTOANNUALSALES), shows any significant differences (P-value = 0.479) between the two groups. Companies that use CEO compensation incentives related to CSR have a mean value of 0.72 while companies that do not use such incentives have a mean value of 0.73. Thus, the results show no evidence of significant differences of agency costs between companies that use CEO compensation incentives related to CSR and companies that do not use such CSR incentives. These findings do not support H1 (There is a negative relationship between CEO compensation incentives related to CSR and agency costs) meaning that companies who use CEO compensation incentives related
to CSR do not have lower agency costs since our proxies for agency costs are not significantly different between the two groups. Despite these findings H1 is not rejected until the multivariate regressions have been conducted in section 4.4.

The results display that the variable CEO total compensation (LOGCEOTOTALPAY) is significantly different between the two groups. Companies that use CEO compensation incentives related to CSR have a mean value of 15.93 while companies that do not use such CSR incentives have a mean value of 15.56 and this finding is significant on the 10% level (P-value = 0.053). These values are logarithmized and correspond to a mean annual compensation of approximately 8,250,000 SEK for CEOs who have CSR incentives related to their compensation while CEOs who do not have such CSR incentives in their compensation structure have a mean annual compensation of approximately 5,700,000 SEK. Thus, CEOs with compensation incentives related to CSR have on average 2,550,000 SEK more in total compensation per year compared to CEOs who do not have such CSR incentives.

Furthermore, the results display that the size of the boards (BOARDSIZE) is significantly different between the groups at the 5% level (P-value = 0.031). The mean value for the companies using CEO compensation incentives related to CSR is 7.52 while companies that do not use such incentives have a mean value of 6.71. This indicates that CSR incentives are more commonly used in firms with larger boards.

The T-test shows that there is no significant difference of the mean value for the variable ROA (ROA %) between the two groups. Companies that use CEO compensation incentives related to CSR have a mean value of 6.06 % while companies that do not use such CSR incentives have a mean value of 3.97 % however these findings are not significant (P-value = 0.643). This results display that there is no significant difference between the financial performance of companies that use CEO compensation incentives related to CSR and companies that do not use such incentives.

Additionally, the result from the T-test shows no significant (P-value = 0.309) differences between the mean values of the size of the companies (LOGSIZE). Companies that use CEO compensation incentives to CSR have a mean value of 22.40 and companies that do not use such CSR incentives have a mean value of 21.89. Thus, the result indicates that
there is no significant difference in size for the companies that use CEO compensation incentives related to CSR and the companies who do not use such incentives.

Furthermore, the result shows no significant (P-value = 0.606) differences between the companies debt-to-equity ratios (DEBTTOEQUITYATIO). Companies that use CEO compensation incentives related to CSR have a mean value of 1.16 while the companies that do not use such incentives have a mean value of 1.37. This indicate that there is no significant difference in the proportion of debt the companies use to finance their assets between companies that use CEO compensation incentives related to CSR and companies who do not use such CSR incentives.

Furthermore, the result from the T-test show no significant (P-value = 0.564) difference between the mean values for the variable CEO duality (CEODUALITY). The mean value for the companies that use CEO compensation incentives related to CSR is 0.24 while companies that do not use such CSR incentives have a mean value of 0.30. This indicates that there is no significant difference as to whether the CEO is also a member of the board in companies that use CEO compensation incentives related to CSR and companies that do not use such incentives.

Finally, the result from the T-test displays that the mean values for the variable CEO ownership (CEOOWNERSHIP %) for companies that use CEO compensation incentives related to CSR is 1.21 % while companies that do not use such CSR incentives have a mean value of 2.66 %. However, this finding is not significant even though this value is close to the 10 % level (P-value = 0.11). This result indicates that there is no significant difference in the amount of total outstanding shares the CEO possesses between companies that use CEO compensation incentives related to CSR and companies that do not use such incentives.

Table 4 - T-test

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>CSR Incentives Mean</th>
<th>No CSR Incentives Mean</th>
<th>T stat</th>
<th>P-value</th>
</tr>
</thead>
</table>

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4.3 Pearson correlation

Table 5 displays the Pearson correlation coefficients for the independent variables used in the multivariate regression analysis. The size of the companies (LOGSIZE) and the compensation that the CEOs receive (LOGCEOTOTALPAY) is highly correlated (0.765) and significant on the 1 % level. Furthermore a high correlation (0.609) between the size of the company (LOGSIZE) and the size of the board (BOARDSIZE) is observed and significant on the 1 % level which indicates that larger companies have larger boards. The CEO total pay (LOGCEOTOTALPAY) and the size of the board (BOARDSIZE) are also highly correlated (0.658) and significant on the 1 % level indicating that CEOs in companies with larger boards receive higher compensation compared to companies with smaller boards. This result is most likely related to the findings that indicate that larger companies generally have a higher CEO’s total compensation and that it is more common with larger boards in larger companies. It is important to note that we do not draw any major conclusions based on these results as the Pearson correlation is primarily used to test whether there exist multicollinearity that may affect the regressions.

Furthermore the correlations imply that firm size is a highly significant determinant for all variables (1 % and 5 % level) except for the variable measuring the existence of CEO compensation related to CSR incentives (CSRINCENTIVES). However, the correlations suggest that companies who use CSR incentives in their CEO compensation structure...
have a higher total compensation to the CEO and more commonly larger boards as this correlation is positive (0.130 and 0.145) and significant on the 10 % and 5 % level. This positive correlation between CEO compensation and CSR incentives implies that CEOs who receive compensation partly based on non-financial targets related to CSR have a higher total compensation compared to CEOs who do not have their compensation partly based on non-financial target related to CSR.

It’s important to notice that these correlations are calculated without controlling for industry which means that the possible industrial impact on these independent variables is not visible in table 5. In the next section, we expand our analysis from studying only correlations that are insufficient on their own to determine whether there is actually an actual relationship between our dependent and independent variables using multivariate regressions. To ensure that the highly correlated variables do not causes serious multicollinearity which may significantly impact the two regression models we extend the multicollinearity diagnostics by also calculating VIF (Variance Inflation Factor) values for all independent variables (see Table 6). The lowest VIF-value observed is 1.037 and the highest 3.217 which rejects the concerns of multicollinearity in this study (O´Brien, 2007).

Table 5 - Person correlation

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>ROA %</th>
<th>LOGSIZE</th>
<th>DEBTTOEQUITY</th>
<th>CSRINCENTIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA %</td>
<td>1</td>
<td>0.150**</td>
<td>0.014</td>
<td>0.031</td>
</tr>
<tr>
<td>LOGSIZE</td>
<td>0.150**</td>
<td>1</td>
<td>-0.161**</td>
<td>0.085</td>
</tr>
<tr>
<td>DEBTTOEQUITY</td>
<td>0.014</td>
<td>-0.161**</td>
<td>1</td>
<td>-0.035</td>
</tr>
</tbody>
</table>
CSRINCENTIVES | 0.031 | 0.085 | -0.035 | 1
LOGCEOTOTALPAY | 0.184*** | 0.765*** | -0.34 | 0.13*
CEOOWNERSHIP | 0.052 | -0.162** | -0.048 | -0.072
BOARDSIZE | 0.083 | 0.609*** | 0.037 | 0.145**
CEODUALITY | 0.092 | 0.247*** | 0.012 | -0.039

**VARIABLES** | **LOGCEOTOTALPAY** | **CEOOWNERSHIP** | **BOARDSIZE** | **CEODUALITY**
ROA % | 0.184*** | 0.052 | 0.083 | 0.092
LOGSIZE | 0.765*** | -0.162** | 0.609*** | 0.247***
DEBTTOEQUITY | -0.034 | -0.048 | 0.037 | 0.012
CSRINCENTIVES | 0.13* | -0.072 | 0.145** | -0.039
LOGCEOTOTALPAY | 1 | -0.341*** | 0.658*** | 0.191***
CEOOWNERSHIP | -0.341*** | 1 | -0.230*** | 0.259***
BOARDSIZE | 0.658*** | -0.230*** | 1 | 0.173***
CEODUALITY | 0.191*** | 0.259*** | 0.173*** | 1

* Significant on the 10% level $P \leq 0.1$. ** Significant on the 5% level $P \leq 0.05$. *** Significant on the 1% level $P \leq 0.01$.

Table 6 - VIF

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSRINCENTIVES</td>
<td>1.037</td>
</tr>
<tr>
<td>LOGCEOTOTALPAY</td>
<td>3.217</td>
</tr>
<tr>
<td>CEODUALITY</td>
<td>1.215</td>
</tr>
<tr>
<td>CEOOWNERSHIP</td>
<td>1.332</td>
</tr>
<tr>
<td>LOGSIZE</td>
<td>2.802</td>
</tr>
<tr>
<td>BOARDSIZE</td>
<td>1.933</td>
</tr>
<tr>
<td>ROA %</td>
<td>1.056</td>
</tr>
<tr>
<td>DEBTTOEQUITY</td>
<td>1.078</td>
</tr>
<tr>
<td>INDUSTRY</td>
<td>1.070</td>
</tr>
</tbody>
</table>

4.4 Multivariate tests

This section extends the univariate analysis (T-test) that only allows us to see if there is any difference in the mean values of our variables (see Table 4) between the companies that use CEO compensation incentives related to CSR and companies who do not use such CSR incentives in their CEO compensation structure. The univariate analysis is extended as it does not allow us to specifically measure how the agency costs are affected by the existence of CSR incentives, CEO total compensation and our proxies for corporate governance strength while controlling for size, financial performance, leverage and industry. In order to specifically see how agency costs are affected by these variables
simultaneously multivariate regressions are used similar to previous studies (Singh and Davidson, 2003; Hong et al., 2016).

Table 7 presents the results of the multivariate regressions. The first column to the far left (VARIABLES) present the independent variables that are used in the regressions in order to investigate whether any of these independent variables may explain the variation in the dependent variables. The second column (ASSETUTILIZATION) displays the dependent variable in the first regression. The third column (P-VALUE) presents the P-values for the first regression. The fourth column (CEOCOMPENSATIONTOANNUALSALES) presents the dependent variable in the second regression. Finally the fifth column (P-VALUE) presents the P-values for the second regression.

The result of each regression is read vertically in the table where the value outside the parentheses is the beta coefficient that shows the direction and strength of the linear relationship. The value within the parentheses is the t-statistic value associated to respective beta coefficient in the same cell. Three different significance levels are used (1 % = ***, 5 % = ** and 10 % = *) and the symbols after the t-statistic value show how significant the relationship is between these variables. The lowest accepted significance level for establishing a relationship is set to 10 %. The last two rows in the table (Adjusted R2 and Std. Error of the Estimate) present how much of the variation in the dependent variables (proxies for agency costs) that can be explained by the variation in the independent variables and the standard errors of the estimates for the two regressions models.

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>ASSETUTILIZATION</th>
<th>P-VALUE</th>
<th>CEOCOMPENSATIONTOANNUALSALES</th>
<th>P-VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSRINCENTIVES</td>
<td>0.028 (0.420)</td>
<td>0.675</td>
<td>-0.026 (-0.458)</td>
<td>0.648</td>
</tr>
</tbody>
</table>
4.4.1 Regression model 1 - Asset utilization

\[
\text{ASSETUTILIZATION} = 2.184 + 0.028 \text{CSRINCENTIVES} + 0.084 \text{LOGCEOTOTALPAY} \\
+ -0.059 \text{CEODUALITY} + 0.041 \text{CEOOWNERSHIP} + -0.274 \text{LOGSIZE} + \\
0.061 \text{BOARDSIZE} + -0.091 \text{ROA} + 0.132 \text{DEBTTOEQUITY} + -0.078 \text{INDUSTRY}
\]

The first regression equation suggests that there is no strong relationships between the first proxy for agency costs (ASSETUTILIZATION) and the independent variables as the beta values are relatively weak and have both positive and negative values. The only variable that is divergent in the regression equation is the size of the company (LOGSIZE) which has beta value of -0.274.

Table 7 second column (ASSETUTILIZATION) displays the results from our first multivariate regression using asset utilization as proxy for agency costs. To test whether our hypotheses should be rejected or not the dependent variable in this model is tested against all nine independent variables displayed in the table. It is important to be aware that agency costs decrease when asset utilization increases and that agency costs increase when asset utilization decreases.

**CEO compensation incentives:** The result from the regression displays that the beta coefficient for the variable CSRINCENTIVES is 0.028 and not a significant determinant for the agency cost proxy (P-value = 0.675). The beta coefficient is positive which is in line with the prediction of a negative relationship between CEO compensation incentives and agency costs since agency costs decrease when asset utilization increase. However,
as no significant relationship is observed we find no evidence that CEO compensation incentives affect agency costs and hypothesis 1 is therefore rejected in this regression model.

**Hypothesis 1:** There is a negative relationship between CEO compensation incentives related to CSR and agency costs.

**Total CEO compensation:** The result from the regression presents that the beta coefficient for the variable LOGEOTOTALPAY is 0,084 and not a significant determinant for the agency costs proxy (P-value = 0,478). The beta coefficient is positive which is not in line with the prediction of a positive relationship between total CEO compensation and agency costs since agency costs decrease when asset utilization increase. However, as no significant relationship is observed we find no evidence that the total CEO compensation affects agency costs and hypothesis 2 is therefore rejected in this regression model.

**Hypothesis 2:** There is a positive relationship between total CEO compensation and agency costs.

**CEO duality:** The result from the regression shows that the beta coefficient for the variable CEODUALITY is -0,059 and not significant determinant for the agency cost proxy (P-value = 0,413). The beta coefficient is negative which is in line with the prediction of a positive relationship between CEO duality and agency costs since agency costs increase when asset utilization decrease. However, as no significant relationship is observed we find no evidence whether the CEO is also a member of the board or not affects agency costs and hypothesis 3 is therefore rejected in this regression model.

**Hypothesis 3:** There is a positive relationship between CEO duality and agency costs.

**CEO ownership:** The regression result displays that the beta coefficient for the variable CEOOWNERSHIP is 0,041 and not a significant determinant for the agency cost proxy (P-value = 0,594). The beta coefficient is positive which is in line with the prediction of a negative relationship between CEO ownership and agency costs since agency costs decrease when asset utilization increases. However, as no significant relationship is
observed we find no evidence that the amount of total outstanding shares the CEO possesses affect agency costs and hypothesis 4 is therefore rejected in this regression model.

**Hypothesis 4: There is a negative relationship between CEO ownership and agency costs.**

**Control variables:** The result of the regression presents that beta coefficient for the control variable LOGSIZE is -0.274 and significant on the 5 % level (P-value = 0.013). This finding suggests that larger companies are more inefficient in their asset utilization compared to smaller companies indicating that agency costs are higher in large companies. Furthermore, the result from the regression displays that the beta coefficient for the control variable DEBTTOEQUITY is 0.132 and significant on the 10 % level (P-value = 0.055). This result suggests that companies with higher leverage use their assets more efficiently indicating that agency costs are lower for these companies. Finally, we find no significant relationship for the other control variables in this regression model (ROA, INDUSTRY and BOARDSIZE).

### 4.4.2 Regression model 2 – CEO compensation to annual sales

\[
\text{COMPENSATIONTOANNUALSALES} = 0.739 + -0.026 \text{CSRINCENTIVES} + 0.483 \text{LOGCEOTOTALPAY} + 0.059 \text{CEODUALITY} + -0.088 \text{CEOOWNERSHIP} + -0.748 \text{LOGSIZE} + -0.080 \text{BOARDSIZE} + 0.040 \text{ROA} + -0.085 \text{DEBTTOEQUITY} + 0.196 \text{INDUSTRY}
\]

The second regression equation suggests that there is a relative strong relationship between the second proxy for agency costs (COMPENSATIONTOANNUALSALES) and the variable for total CEO compensation (LOGCEOTOTALPAY) which has a beta value of 0.483. Furthermore a strong relationship between the size of the company (LOGSIZE) and the second proxy for agency costs can be interpreted from the regression equation as the beta value is -0.748. The other independent variables are relatively weak and have both positive and negative beta values.

Table 7 fourth column (CEOCOMPENSATIONTOANNUALSALES) displays the results from the second multivariate regression using the costs related to the CEO divided with the annual sales as proxy for agency costs. To test whether our hypotheses should
be rejected or not the dependent variable in this model is tested against all nine
independent variables displayed in the table. It is important to be aware that agency costs
decrease when CEO compensation to annual sales decreases and that agency cost increase
when CEO compensation to annual sales increases.

**CEO compensation incentives:** The result from the regression displays that the beta
coefficient for the variable CSRINCENTIVES is -0.026 and not a significant determinant
for the agency cost proxy (P-value = 0.648). The beta coefficient is negative which is in
line with the prediction of a negative relationship between CEO compensation incentives
and agency costs since agency costs decrease when asset CEO compensation to annual
sales decrease. However, as no significant relationship is observed we find no evidence
that CEO compensation incentives affect agency costs and hypothesis 1 is therefore
rejected in this regression model.

**Hypothesis 1:** There is a negative relationship between CEO compensation incentives
related to CSR and agency costs.

**Total CEO compensation:** The result from the regression presents that the beta
coefficient for the variable LOGCEOTOTALPAY is 0.483 and is significant on the 1 %
level (P-value = <0.001). The beta coefficient is positive and significant which is in line
with the prediction of a positive relationship between the total CEO compensation and
agency costs since agency costs increase when CEO compensation to annual sales
increase. This finding supports hypothesis 2 that a higher total CEO compensation
increase agency costs.

**Hypothesis 2:** There is a positive relationship between total CEO compensation and
agency costs.

**CEO Duality:** The result from the regression displays that the beta coefficient for the
variable CEODUALITY is 0.059 and not a significant determinant for the agency costs
proxy (P-value = 0.347). The beta coefficient is positive which is in line with the
prediction of a positive relationship between CEO duality and agency costs since agency
costs increase when CEO compensation to annual sales increase. However, as no
significant relationship is observed we find no evidence whether the CEO is also a
member of the board or not affects agency costs and hypothesis 3 is therefore rejected in this regression model.

**Hypothesis 3:** There is a positive relationship between CEO duality and agency costs.

**CEO ownership:** The result from the regression shows that the beta coefficient for the variable CEOOWNERSHIP is -0.088 and not a significant determinant for the agency costs proxy (P-value = 0.177). The beta coefficient is negative which is in line with the prediction of a negative relationship between CEO ownership and agency costs since agency costs decrease when CEO compensation to annual sales decrease. However, as no significant relationship is observed we find no evidence that the amount of total outstanding shares the CEO possesses affects agency costs and hypothesis 4 is therefore rejected in this regression model.

**Hypothesis 4:** There is a negative relationship between CEO ownership and agency costs.

**Control variables:** The result of the regression presents that the beta coefficient for the control variable LOGSIZE is -0.748 and significant on the 1 % level (P-value = <0.001). This finding suggests that smaller companies compensate their CEO more in relation to how much sales the CEO generates for the company compared to larger companies, indicating higher agency costs for smaller companies in this regression model. Furthermore, the result of the regression shows that the beta coefficient for the control variable INDUSTRY is 0.196 and significant on the 1 % level (P-value = 0.001). This result suggests that the type of industry is a significant determinant for agency costs in this regression model. Finally, we find no significant relationship for the other control variables in this regression model (ROA, DEBTTOEQUITY and BOARDSIZE).

5. Discussion

*In this chapter the empirical results are discussed and related to the theoretical framework. The discussion will be based on the research question within the scope of this study and is divided into two sections. The first section discuss whether the existence of CSR related compensation incentives for CEO and corporate governance affect agency costs. The second section discuss and evaluate how useful a positive accounting research is on a small stock-market.*
5.1 Does the existence of CSR related compensation incentives for CEO affect agency costs?

CSR is a growing concept that highlights activities regarding environment, employees and communities’ well-being that the company engages in that are not required by the law. The purpose of engaging in such non-required CSR activities is to create value for the company by satisfying multiple stakeholders (Mcwilliam and Siegel 2001; Barnea and Rubin, 2010; Freeman, Harrison, Wicks, Parmer and Cole, 2010). However, previous research has found contradictory results regarding whether CSR engagement is value creating (see Hong et al., 2016; Lin et al., 2009; Karim et al., 2018) or considered an agency cost (see Prior et al., 2008; Margolis et al., 2009; Krüger, 2015). Based on these inconclusive findings this study uses Agency Theory in order to investigate whether companies’ on NasdaqOMX Stockholm CSR engagement is value creating or should be considered an agency cost for the companies.

This study finds no significant relationships between the proxies for agency costs (asset utilization and CEO compensation to annual sales) and CEO compensation incentives related to CSR. As these findings are not significant we can’t conclude whether CSR engagement is value creating or considered an agency cost for companies’ on NasdaqOMX Stockholm. However, we find that the mean CEO compensation is significantly higher in firms that use CSR incentives related to CEO compensation and also a significant positive relationship between total CEO compensation and the second proxy for agency costs (CEO compensation to annual sales). According to Karim et al., (2018) such findings indicate that the CEOs invest in CSR primarily for their own gain at the expense of shareholders implying that the agency costs are higher for these companies. These indications are inconclusive with Hong et al. (2016) who found that companies who use CEO compensation incentives related to CSR increase the shareholder value and decrease agency cost.

Furthermore we find significant result supporting that companies who use CSR incentives related to CEO compensation have larger boards. Previous research have found that larger boards are less effective than smaller boards which results in higher agency costs (Yermack 1996; Singh and Davidson 2003; Owusu and Weir, 2018). Yermack (1996) argue that communication, decision-making and coordination problems increase as the size of the board increases. Based on these findings our result suggests that companies
who use CEO compensation incentives related to CSR have higher agency costs since Yermack (1996) has found that larger boards usually results in more problems with communication, decision-making and coordination resulting in ineffective boards and therefore higher agency costs.

Additionally the result also indicates that the CEO has less shares in companies that use CSR incentives as a determinant for CEO compensation consistent with Hong et al., (2016). Previous research has found that a lower level of CEO ownership can be associated with higher agency costs as a consequence of that CEO is more likely to overinvest in CSR as the CEO’s personal gain from these investments exceeds the negative effect on the shareholder value when their ownership is low (Barnea and Rubin, 2010). Based on these assumptions our results indicate that the CEO in companies who use CEO compensation incentives related to CSR is more likely to overinvest in such activities resulting in higher agency costs, even though this finding is not significant in this study (P = 0,11).

5.1.1 A posteriori-model

The research model in section 3.2 summarizes the factors that may affect agency costs based on the theoretical framework presented in chapter 3. The factors are as earlier mentioned based on previous research regarding agency theory and corporate social responsibility and the assumption that these factors may have a certain impact on companies’ agency costs. Below in section 5.1.1 we present a posteriori-model that summarizes the factors this study has been able to conclude affect the companies’ agency costs.

The factor tested for the main purpose of this study is CEO compensation incentives related to CSR. The factors tested for the sub-purposes is total CEO compensation, CEO ownership and CEO duality. Total CEO compensation is the only factor we find have an impact on companies agency cost in this study and is therefore marked as green in order to display this relationship. The factor related to the main purpose, CEO compensation incentives related to CSR, remains purple as we did not find that the existence of CSR related compensation incentives for CEO affect companies’ agency costs. The other factors related to our sub-purposes remains grey as no significant relationship can be found between CEO duality, CEO ownership and companies’ agency costs.
5.2 How useful is positive accounting research on a small stock market?

The majority of the studies in this field of positive accounting research use large well-established companies on large stock markets and thereby excluding small and medium-sized companies (see Core et al., 1999; Singh and Davidson, 2003; Hong et al., 2016; Smirnova and Zavertiaeva, 2017). As we intended to test if positive accounting research is applicable on a smaller stock exchange with reliable results or not we used NasdaqOMX Stockholm which contains small-, medium- and large sized companies with different characteristics and conditions.

Compared to previous research, we have a low frequency of companies using CSR incentives in this study. The mean value of companies who use CSR incentives in this study is 11% which is lower than previous findings from Hong et al., (2016) whose mean value of companies using CSR incentives was 38%. This disparity is likely explained by the difference in population characteristics as Hong et al., (2016) use the 500 largest listed companies in the United States (SandP 500 index). Their findings indicate that CSR incentives are more commonly used in larger firms and therefore it is
reasonable to assume that their mean value will be higher compared to our population that includes companies from both large, mid and small cap.

Additionally, our data presented in Table 2 indicate that positive accounting research is problematic to use as multiple variables are skewed. The skewness is likely explained by our population. By including all listed companies on NasdaqOMX Stockholm except financials our population includes small-, medium- and large-sized companies with different characteristics and conditions compared to previous studies within this field of positive accounting research who only use stock exchanges with large companies (see, Hong et al., 2016; Smirnova and Zavertiaeva, 2017). By using only large stock exchanges with large companies they manage to reduce the disparity between the companies as the company characteristics and conditions are more similar to each other on a large stock exchange with only large companies compared to our study who use small-, medium- and large-sized companies. As a result of this our data have a larger spread of observations than previous studies using positive accounting research (see Core et al., 1999; Singh and Davidson, 2003; Hong et al., 2016; Smirnova and Zavertiaeva, 2017).

The above mentioned problems with large spread of observations could also be an explanation why we have troubles finding significant results supporting our hypothesis in this study. For example Hong et al. (2016) found that CSR incentives related to CEO compensation increase the shareholder value and decrease the agency costs while Krüger (2015) argues that CSR should be seen as an agency cost at the expense of shareholders as companies CSR engagement damage shareholder value. However, as this study found no significant evidence regarding whether CSR engagement is creating shareholder value or should be considered an agency cost we can not contribute to this recent controversial debate. Based on what is discussed in this section, our conclusion after conducting this study is that positive accounting research is not applicable on a smaller stock market with reliable and generalizable results.
6. Conclusion

In this chapter we answer the research question and relate our findings and their meaning to previous findings within the field of research. The chapter is divided into two sections, one theoretical section and one practical section. Finally, we address the reliability, validity and limitations of this study and suggest what further research can explore.

In this study our main purpose was to investigate if the existence of CSR related compensation incentives for CEO affects agency costs. Furthermore this study also had two sub-purposes, firstly to investigate if and how corporate governance affects agency costs and secondly investigate how useful positive accounting research is on a small stock
market. More specifically we used positive accounting research to relate agency theory to CSR and corporate governance in order to answer our research question; “Does the existence of CSR related compensation incentives for CEO affect agency costs for firms listed on a small stock market within the framework of positive accounting research?”

Our results show no evidence that CEO compensation incentives related to CSR affect agency costs for companies listed on a small stock market within the framework of positive accounting research. Based on this we conclude that CEO compensation incentives related to CSR do not affect companies’ agency costs. This conclusion is inconsistent with previous findings from Hong et al (2016) who found that CEO compensation incentives related to CSR decrease companies’ agency costs. Additionally our results show evidence that the total CEO compensation affects companies’ agency costs. This finding is consistent with Karim et al (2018) and Core et al (1999) who found that CEOs in companies with higher agency problems have a higher total compensation and suggest that these companies have weaker corporate governance.

Finally we conclude that it is inappropriate to compare and generalize our results, since it could be misleading as this study has not been conducted on same premises as previous researches related to positive accounting in this field of research.

6.1 Theoretical contribution

We find no direct evidence that CEO compensation incentives related to CSR affect the selected proxies for agency costs which means that we can not close the ongoing debate whether CSR engagement is creating shareholder value (see Hong et al., 2016) or should be considered an agency cost (see Krüger, 2015). However, our findings related to the sub-purpose of investigating if and how corporate governance affects companies’ agency costs indicates that the agency costs are higher in companies that use CEO compensation incentives related to CSR. As we find that the total CEO compensation is higher in companies that use CSR incentives related to CSR and also a significant positive relationship between our second proxy for agency cost (compensation to annual sales) and the total CEO compensation there are indications that companies who use CEO compensation incentives related to CSR have higher agency costs. These findings are
interesting as we find no direct evidence that our variable CEO compensation incentives related to CSR affects our proxies for agency costs. Although we find indirect indications that agency costs are higher for companies that use CEO compensation incentives related to CSR which indicates that CSR is not beneficial to shareholders but should instead be regarded as an agency cost at the expense of shareholders. Nonetheless, these indirect findings are too diffuse in order for us to draw any clear conclusions. This is further discussed in the next paragraph.

It should be noted that it is important to be careful about generalizing the results of this study since this study has not been conducted on the same premises as previous research related to positive accounting within this field of research. Previous researches only explore large stock markets with solely large companies (see Core et al., 1999; Singh and Davidson, 2003; Hong et al., 2016; Smirnova and Zavertiaeva, 2017), while this study focuses on investigating a small stock market that contains small, medium and large companies with different characteristics and conditions. These differences in research approach may be a reason why the results and the data in this study vary from previous studies and therefore should not be compared directly to each other considering that it may be misleading. This indicates that positive accounting research is not particularly useful on a small stock market with reliable results as the findings can not be generalized in a broader perspective.

6.2 Practical contribution

This study indicates in line with previous research that a higher total compensation for CEOs causes higher agency costs for companies, suggesting that CEOs are overcompensated for the shareholder value they generate (Karim et al., 2018; Core et al., 1999). According to Core et al. (1999) overcompensation to CEOs is more likely to occur when the corporate governance within the companies are weaker due to ineffective corporate governance mechanisms that enables overcompensation for CEOs to a higher extent. The results of this study, as well as findings from Core et al. (1999), indicates that stronger corporate governance is beneficial in order to mitigate agency costs in form of overcompensation to CEOs. Thus, practitioners should review their corporate governance mechanisms to ensure that these mechanisms make it more difficult for CEOs to get excessive compensation in relation to the shareholder value that they manage to generate.
Furthermore our result show no evidence that the use of CEO compensation incentives related to CSR is neither creating shareholder value nor increasing the agency costs for the companies. Therefore, the debate whether CSR engagement is creating shareholder value or should be considered an agency cost is not closed. Thus we cannot express whether it is beneficial or disadvantageous for practitioners to use CEO compensation incentives related to CSR.

6.3 Reliability and validity
As mentioned earlier in section 3.1, this study contains an element of hermeneutics, which implies a certain degree of subjectivity linked to the assessment of whether companies use CEO compensation incentives related to CSR or not. As we had to assess whether the incentives within the companies are related to CSR or not an element of subjectivity is inevitable. This element of subjectivity is the only obvious threat to the reliability of this study, since the other variables are absolute numbers that are retrieved directly from annual reports or databases.

The validity of this study is supported by using variables and statistical tests previously used in this field of research. All variables except one are defined in a way that is approved by previous research. The dependent variable (see section 3.3) compensation to annual sales had to be modified in order to isolate expenses to the CEO as previous research were interested in all expenses for the management team and not solely the expenses for the CEO (Singh and Davidson, 2003). This modification may affect the validity in this study as this modified variable has not been used in previous studies. Since this study intended to investigate CEOs and not the entire management team it made more sense to isolate the expenses for the CEO and exclude the expenses for the other managers even though this modification, to the best of our knowledge, has not been done before within this field of research. However, to ensure that our data and variables are valid and could be used in the statistical tests in this study (t-test and multiple regressions) we checked that all assumptions were met for the t-test (independence, normality, homogeneity of variance) and the two multiple regressions (normality, no multicollinearity and homoscedasticity).
6.4 Limitations and suggestions for further research

It is important to note that our study has limitations regarding our empirical data collection. One limitation is that we only use companies on the NasdaqOMX Stockholm which means that we are dependent on what the companies disclose in their annual reports which may vary due to different regulations and accounting principles on stock exchanges (Ang et al., 2000). Additionally our population consists of 221 companies where only 25 (11%) of these companies use CEO compensation incentives related to CSR which may have affected our findings. Thus, further research can extend our research through investigating companies in different stock exchanges in other countries that have other regulations which may have an impact on the companies’ information disclosures and use a larger population in an effort to capture more companies using CSR incentives and thus get more reliable results. Another alternative in order to increase the number of available observations when studying a smaller stock exchange could be to conduct a longitudinal study where the listed companies on NasdaqOMX Stockholm is studied during a longer period of time.

Furthermore as our population consists of small, medium and large sized companies we notice that there were a few companies that recently entered the stock exchange who are still in the start-up phase or research phase resulting in biased data. As our statistical methods are sensitive to outliers causing skewness we were also forced to remove some of these companies as an attempt to reduce the spread in the data. As we found that positive accounting research is not particularly useful on a smaller stock exchange future research should consider using other research approaches in order to achieve more reliable results when studying a smaller stock exchange. A qualitative research with interviews regarding the design and purpose of CSR incentives for CEOs would be interesting in order to investigate this subject more deeply.

Finally, to the best of our knowledge this is one of few studies who investigate the relationship between CSR and agency costs using CEO compensation incentives related to CSR which means that there remains a lot unexplored in this area that future research can investigate.
6. Appendix

Appendix 1 - Descriptives with financial companies included

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<th>STD. DEV</th>
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7. References


