MASTER THESIS

JOBS Act and the compensation disclosure provision

Does JOBS Act Title 1 provide executives to extract wealth from investors?

Author: Wouter Teunissen

Student number: 372868

Erasmus School of economics, Erasmus University Rotterdam, Rotterdam, the Netherlands
MSc Accounting, Auditing and Control, master specialization in Accounting and Auditing

I N F O

Supervisor: Dr. H.R.M. Erkens
Co-reader: Dr. P.Y.E. Leung

Academic year: 2015-2017

Date: July 2017

Key words:
JOBS Act;

Executive compensation disclosure provision;

Executive compensation;

Emerging Growth Companies;

Initial Public Offerings.

A B S T R A C T

In this research I discuss the relationship of the JOBS Act's disclosure provision regarding the compensation of executives and the pay levels of the executives. This will help investors in gaining information for EGC firms even though EGCs reduce their information disclosure. Using a logistic regression model I find that CEO compensation does determine the application of executive compensation disclosures for EGCs during their IPOs. However, no such relation can be documented for the average total compensation for the top three named executives. Moreover, based on the results the relative importance of non-incentive based compensation seem to influence the executive compensation disclosures for EGCs during their IPOs. Regarding the influence of the executive compensation and the compensation disclosure decisions for EGC drop-out firms limited amount of evidence has been found. Executives in EGC drop-out firms have lower compensation after the voluntary drop-out, however, based on the results the lower compensation is not caused by the compensation disclosure provision applied in the year previous to the drop-out of the EGC status.

PREFACE

This research concerns my thesis for the Master in Accounting, Auditing & Control at the Erasmus University Rotterdam. This thesis concerns the final work for the master in which I have been enrolled from September 2015 up until August 2017. The same moment I started the master's program I started working at Baker Tilly Berk Rotterdam. Combining the fulltime master's program with a fulltime job resulted in a very stressful period and caused me some delay in finishing my thesis. Although it was a busy period I think that it was also a period in which I was able to develop myself as researcher and as professional. I am happy to finally present this thesis as a crown on my Master's degree.

I would like to thank Dr. Erkens for his guidance and patience throughout the process of writing my thesis.

ABSTRACT

Does the level of executive compensation determine the application of executive compensation disclosure provisions for Emerging Growth Companies as provided by the Jumpstart Our Business Startups (JOBS) Act? One of the principal goals of the JOBS Act is to increase job creation and economic growth by improving access to the capital markets for EGCs. The JOBS Act provides EGCs with a phase-in period to fully comply with various disclosure and accounting requirements. The Act allows EGCs to reduce the scope of mandatory disclosure of financial statement and executive information. This research examines the influence of the executive compensation on the executive compensation disclosure provision that the JOBS Act provides from an investor protection perspective. Based on the results from this research it can be concluded that CEO compensation does determine the application of executive compensation disclosures for EGCs during their IPOs. However, no such relation can be documented for the average total compensation for the top three named executives. Moreover, based on the results the relative importance of non-incentive based compensation seem to influence the executive compensation disclosures for EGCs during their IPOs. Regarding the influence of the executive compensation and the compensation disclosure decisions for EGC drop-out firms limited amount of evidence has been found. Executives in EGC drop-out firms have lower compensation after the voluntary drop-out, however, based on the results it cannot be documented that the lower compensation is caused by the compensation disclosure provision applied in the year previous to the drop-out of the EGC status.

CONTENT

Chapter 1

INTRODUCTION

1.1 Introduction to the topic

In this thesis I will investigate the relation between executive compensation structure and the use of executive compensation disclosure provisions within Emerging Growth Companies' (EGCs) Initial Public Offerings (IPOs). The process of going public was regulated by the Securities Act of 1993. The act outlines the requirements for registration statements, which had to include a preliminary prospectus, information about the proposed offering, company background and information about the management. Furthermore, companies should provide information about the use of the proceeds and which auditors and underwriters are involved (SEC, 1993).

Since 2000, IPO volume has been below historical levels. An IPO Task Force was formed by the U.S. Treasury Department to study the market for IPOs and to determine the relationship between IPO volume and job growth. This Task Force concluded that the decline in the number of IPOs resulted in job loss and damage to the U.S. economy (Latham & Watkins, 2013). In response, on April 5, 2012 the Jumpstart Our Business Startups (JOBS) Act was signed into law. This law aims to increase U.S. job creation, to increase overall economic growth and to streamline the IPO process for EGCs (U.S. Securities and Exchange Commission, 2012). One of the principal goals of the JOBS Act is to increase job creation and economic growth by improving access to the capital markets for EGCs. The JOBS Act provides EGCs with a phase-in period to fully comply with various disclosure and accounting requirements (Westenberg, 2012). The Act allows EGCs to reduce the scope of mandatory disclosure of financial statement and executive information, to file draft IPO registration statements confidentially with the SEC, to delay application of new or revised accounting standards, and to delay compliance with the Sarbanes-Oxley Act's requirement for auditor attestation on internal controls (Dambra, Field, & Gustafson, 2015). Dambra, Field & Gustafson (2015) provide evidence on whether the JOBS Act has achieved the goal of increasing IPO activity. They have found that there have been 48% more EGC fillings (of eventual IPOs) and 7% fewer non-EGC fillings in the two years since the JOBS Act. The average revenues of 45% of the issuers have been below $50 million after the JOBS Act compared to 28% of the issuers prior to the JOBS Act.

When examining the effects of the JOBS act Guttentag (2013) discusses the effects from an investor protection perspective. He argues that the primary goal of the federal securities regulation in the U.S. is investor protection. Yet, the JOBS Act lowers the regulatory burden for companies. The justification for the JOBS Act was that the Act would make it less costly for firms to access public

securities markets. Guttentag argues that the "legislative record reveals no serious consideration given to investor protection concerns before the provisions were included in the JOBS Act". He concludes in his study that regarding the protection of investors from fraud, the "likelihood of fraud occurring can and should be considered in determining which firms are granted disclosure relief". Guttentag also analyses the protection of investors from tunnelling. Tunnelling can be explained as the various ways in which insiders can extract value from the firm at the expense of outside investors. Guttentag argues that there are other less direct reasons why some reduced disclosure provisions might be problematic for investors. First, he argues that the reduced compensation disclosure obligations might be problematic as compensation is a "potentially significant pathway for agents to tunnel resources from the firm". Second, Guttentag argues that "to the extent that there is generally less information available about a firm, there will be more attractive trading opportunities available to firm insiders". Based on these arguments I find it of interest to examine the effects of the reduced compensation disclosure provision into more detail. Guttentag does not provide a detailed analysis for his arguments, and, therefore I find it of interest to analyse his arguments in order to provide investors with more information regarding the compensation of executives when EGCs use the compensation disclosure provision in EGC firms.

Barth, Landsman and Taylor (2014) examine whether the JOBS Act increases information uncertainty in firms with IPOs. They find that underpricing is larger for IPO firms with EGC status using three different measures of underpricing. Furthermore, they find that total volatility post-IPO and idiosyncratic volatility are significantly higher for IPO firms with EGC status. This finding is consistent with IPO firms with EGC-status having greater information uncertainty at the time of their IPOs and that the greater information uncertainty pertains primarily to idiosyncratic risk. They also find that several individual provisions, among which presenting compensation information for fewer than five executives, incrementally explains the larger IPO underpricing and higher volatility for IPO firms with EGC status. This is consistent with the earlier mentioned finding of Guttentag (2013) that the reduced compensation disclosure obligations might be problematic for investors as compensation is a potentially significant pathway for agents to tunnel resources from the firm. Furthermore, to the extent that there is generally less information available about a firm, there will be more attractive trading opportunities available to firm insiders. Based on the findings of Barth, Landsman and Taylor (2014) investors seem to react to the reduced compensation disclosure provision. However, in their study they do not examine the compensation of the executives and the reduced compensation disclosure provision in combination with potential tunnelling motives of executives.

A common phenomenon for IPOs is underpricing. Equity follows a pattern of underpricing when IPO registrants' shares are offered to investors. This underpricing averages between 10 and 20

percent (Ritter & Welch, 2002). The asymmetric information theory of underpricing assumes that the key stakeholders in IPO registrations do not have the same information about the registrants' intrinsic value. Increasing voluntary disclosure can reduce IPO underpricing, which is consistent with the underpricing being a risk premium for uncertainty (Barth, Landsman, & Taylor, 2014). But why do EGCs reduce their disclosures as it may reduce the information asymmetry with investors resulting in lower underpricing of IPOs?

1.2 Thesis research question

The purpose of this thesis is to examine the role of compensation structure for Emerging Growth Companies. More specifically The following research question will be answered in this master thesis:

'*Does executive compensation determine the application of executive compensation disclosure provisions for Emerging Growth Companies?'*

The first hypothesis which will help answer the research question relates to the effects of executive compensation on the applied disclosure provisions for EGCs during their IPOs. Most of the research examining the control system effects of compensation schemes is based on the agency theory. The agency theory (Jensen & Meckling, 1976) predicts that the separation of ownership and control in modern corporations results in conflicts of interests where self-interested managers have incentives to extract private wealth at the expense of shareholders. If companies go public they attract funds from external investors to finance future growth. Absent market imperfections or externalities, firms have incentives to trade off the costs and benefits of voluntary disclosure, and to produce the efficient level of information for investors in the economy (Healy & Palepu, 2001). The findings of Pegano et al. (1998) show that companies time their IPOs to take advantage of industry-wide overvaluations, rather than to finance future growth. This can be interpreted as an indication for a principal-agent problem at IPOs. The JOBS Act increases the possibility of principal-agent problems as the JOBS Act allows EGCs to reduce the scope of mandatory disclosure of financial statements and executive information (Barth, Landsman, & Taylor, 2014). By not providing all the information regarding executive compensation the executives may be able to extract private wealth at the expense of shareholders without disclosing their intentions. Furthermore, the findings of Barth, Landsman & Taylor (2014) show that IPO firms with EGC status have greater information uncertainty during their IPOs. This greater information uncertainty pertains primarily to idiosyncratic information and the provision of executive information disclosure has a significant positive effect. The results of Westfall & Omer (2015) confirm the findings of Barth et al. (2014) as they find that investors perceive lower intrinsic values for EGC registrants that reduced their financial statements disclosures. Due to the

seemingly reaction of investors at IPOs for EGCs it is of interest to provide investors with information based on which they will be able to develop a more informed expectation on EGC IPOs. Examining whether EGCs with high compensation for executives apply the compensation disclosure provision of the JOBS Act will help to do so.

To test the hypothesis one two analyses have been performed. The first analysis regards the compensation of the top three named executives and the second analysis exclusively includes the CEO compensation. For both analyses a logistic regression model has been used. Overall the regression results for the top three named executives model show very small negative coefficients indicating that high compensation for executives prior to an IPO apply (components) of the reduced compensation disclosure provision of the JOBS Act. Although the coefficients show the expected directions the regression results for the top three named executives models are not significant. The CEO model also shows negative coefficients, but for the CEO model the coefficients are highly significant. Furthermore, the CEO models show that non-incentive based compensation is relatively more important in the compensation disclosure decision for EGCs. Based on these results it can be concluded that EGCs with relatively higher compensation for CEOs are more likely to apply the compensation disclosure provision of the JOBS Act during their IPOs.

A Study of Berdejo (2015) shows that the benefits of the JOBS Act may not be as significant as may have been expected. While the direct costs of conducting an IPO have not decreased for EGCs following the enactment of the JOBS Act, indirect costs may have actually increased. Furthermore, over forty percent of the issuers that went public as EGCs no longer qualify for such status by their second fiscal year. To increase the value of a firm, executives can reduce the information asymmetry with investors. This is more in line with the interests of investors and more likely to happen due to the shift of ownership to investors after going public. This can also be explained by a study of Eng and Mak (2003) in which they investigate the impact of ownership structure and board composition on voluntary disclosure. Their results show that disclosure is affected by the ownership structure and board composition. They find that lower managerial ownership is associated with increased disclosure. By voluntary dropping-out of the EGC status, the information asymmetry is decreased, which might increase the firm value and increasing the benefits for investors. However, for executives this means that the reduced disclosure provisions cannot be used anymore and, therefore, executives lose their informational advantage. As previously explained this research tends to review the JOBS Act from an investors protection perspective and therefore the second hypothesis included in this research aims at investigating whether EGCs receive a lower compensation after the company voluntary drops out of the EGC status. Furthermore, the influence of the applied compensation disclosure provision at a possible drop in compensation has been investigated. Again, when

performing separate analyses for the top three named executives and CEOs I find for both analyses highly significant results using a pooled OLS regression model. Overall the results show that executives in EGCs earn a lower compensation after the voluntary drop-out. However, based on the results it cannot be concluded that firms who apply the reduced compensation disclosure provision have a higher drop in compensation. These findings are in line with the findings of Robinson et al. (2011) who were not able to document that the level of disclosure defects associated with a reduction in excess CEO compensation in the subsequent year.

The remainder of this thesis is organized as follows. chapter 2 'Literature Review' discusses the JOBS Act and the provisions that it provides to EGCs. Furthermore, this chapter discusses prior literature regarding IPOs, voluntary disclosures, information asymmetry, executive compensation and the JOBS Act. In chapter 3 'Theoretical Framework' the theories behind this research are discussed and in combination with the discussed prior literature hypothesis have been developed. Chapter 4 'Data and Methodology' describes the research design, the data collection process, the descriptive statistics of the samples and the regression diagnostics of the models. In chapter 5 'Empirical results' the results of the developed models are provided and in chapter 6 'Conclusion' a conclusion is drawn.

Chapter 2

LITERATURE REVIEW

The JOBS Act is a relative new subject of research as it is effective as of 2012. However, it is part of a broader stream of research, the Initial Public Offerings. This chapter begins with an introduction of the enactment of the JOBS Act in paragraph 2.1. Secondly, in paragraph 2.2 I discuss the requirements to qualify as EGC, the provisions of the JOBS Act and prior literature regarding the impact and consequences of the JOBS Act. Hereafter, In paragraph 2.3 I discuss prior literature regarding underpricing of IPOs and the influence of voluntary disclosures in reducing the underpricing. Finally, in paragraph 2.4 I discuss pay practices of executives to obtain an understanding of the executive compensation process.

2.1 Introduction of the JOBS Act

When examining the IPO volume over time Lowrey (2003) finds that IPO volume fluctuates substantially. Lowry and Schwert (2002) showed in their study that IPO volume tends to be higher following periods of especially high initial returns. They suggest that this phenomenon is driven by information obtained during the registration period. More companies file their IPO after periods of higher initial returns resulting from more positive information. Lerner et al. (2003) find in their study that periods of low IPO volume represents times when access to the equity market is not favourable for private firms and, therefore, the private firms will choose for less favourable financing arrangements. Furthermore, they focus mainly on the biotechnology firms and find that during periods of low equity issuance the agreements signed between small biotechnology firms and major corporations are less successful and more likely to be renegotiated, compared to those agreements signed during periods of higher equity issuance. Pagano et al. (1998) studied the potential determinants of IPO volume and find that companies are more likely to have IPOs when the average market-to-book (MB) ratio of public firms in their industry is higher. Furthermore, they conclude that companies are more likely to go public following periods of high investments which suggests that the high MB ratio does not seem to reflect possible investment opportunities. They interpret their findings as an indication that “companies time their IPOs to take advantage of industry-wide overvaluations, rather than to finance future growth”. Lowrey (2003) finds in her study that a large proportion of the variation in IPO volume of time if affected by a company’s demand for capital and changes in the level of investor optimism. Adverse selection costs are marginally significant and appear to be of

secondary importance. Lowrey concludes that while investor sentiment appear to affect the timing of IPOs, evidence indicates that it is not the only relevant factor.

Since 2000, IPO volume has been below historical levels for which in response on April 5, 2012 the Jumpstart Our Business Startups (JOBS) Act was signed into law. This law aims to increase U.S. job creation, to increase overall economic growth and to streamline the IPO process for EGCs (U.S. Securities and Exchange Commission, 2012). Dambra, Field & Gustafson (2015) provide evidence on whether the JOBS Act has achieved the goal of increasing IPO activity. They have found that there have been 48% more EGC fillings (of eventual IPOs) and 7% fewer non-EGC fillings in the two years since the JOBS Act. The average revenues of 45% of the issuers have been below $50 million after the JOBS Act compared to 28% of the issuers prior to the JOBS Act.

The JOBS Act Title I creates a new category of issuers, the Emerging Growth Companies (EGCs). The Act allows EGCs to reduce the scope of mandatory disclosure of financial statement and executive information, to file draft IPO registration statements confidentially with the SEC, to delay application of new or revised accounting standards, and to delay compliance with the Sarbanes-Oxley Act's requirement for auditor attestation on internal controls (Barth, Landsman, & Taylor, 2014). Besides Title I of the JOBS Act there is another Title which lowers the regulatory burdens; Title III, The CROWDFUNDING ACT. This Act enables entrepreneurs and small business owners to sell limited amounts of equity in their companies to a large number of investors via social networks and various internet platforms (Stemler, 2013). Prior to this CROWDFUNDING Act, selling equity interest in companies was illegal in the U.S. The Act enables crowdfunding websites to avoid the classification of broker and exempts crowdfunding from registration requirements, which lowers the regulatory burden. Furthermore, the Act opens funding opportunities to small businesses (Stemler, 2013).

Guttentag (2013) discusses the effects of the JOBS Act from an investor protection perspective. He argues that the primary goal of the federal securities regulation in the U.S. is investor protection. Yet, the JOBS Act lowers the regulatory burden for companies. The justification for the JOBS Act was that the Act would make it less costly for firms to access public securities markets. More specifically, the Act provides "temporary regulatory relief to small companies, which encourages them to go public, yet ensures their eventual compliance with regulatory requirements as they grow large". Guttentag argues that the "legislative record reveals no serious consideration given to investor protection concerns before the provisions were included in the JOBS Act". He concludes in his study that regarding the protection of investors from fraud, the "likelihood of fraud occurring can and should be considered in determining which firms are granted disclosure relief". Guttentag also analyses the protection of investors from information asymmetries. Finance research suggests

that information asymmetries are more severe for smaller firm than larger firms. This can be explained by research analysts are being less likely to gather and spread information about smaller firms. Therefore, Guttentag concludes that it "does not make sense to reduce requirements based on smaller firm size, because smaller firms are already more likely to have higher levels of information asymmetries". The third topic which Guttentag discusses in his study is the protection of investors from tunnelling. Tunnelling can be explained as the various ways in which insiders can extract value from the firm at the expense of outside investors. Guttentag concludes that tunnelling harms are only moderately problematic, because the most important anti-tunnelling disclosures are not lessened for EGCs. These disclosure provisions concern the underwriter commissions and related party transactions. However, Guttentag argues that there are other less direct reasons why some reduced disclosure provisions might be problematic for investors. First, he argues that the reduced compensation disclosure obligations might be problematic as compensation is a "potentially significant pathway for agents to tunnel resources from the firm". Second, Guttentag argues that "to the extent that there is generally less information available about a firm, there will be more attractive trading opportunities available to firm insiders". Based on these arguments I find it of interest to examine the effects of the reduced compensation disclosure provision into more detail. Guttentag does not provide a detailed analysis for his arguments, and, therefore I find it of interest to analyse his arguments in order to provide investors with more information regarding the compensation of executives when EGCs use the compensation disclosure provision in EGC firms.

2.2 JOBS Act

The JOBS Act provides EGCs for a reduction in the disclosure and auditing requirements during the IPO process and benefits after the IPO. When an issuer qualifies as an EGC, it can choose to take advantage of any, all, or none of Title I's provisions for as long as it remains an EGC (Dambra, Field, & Gustafson, 2015). The JOBS Act defines an EGC as any issuer that had total annual gross revenues of less than $1 billion during its most recently completed fiscal year, other than an issuer that completed an IPO on or before December 8, 2011 (U.S. Securities and Exchange Commission, 2012). A company that is an EGC on the first day of its fiscal year will no longer qualify as an EGC upon the earliest of:

- the last day of its fiscal year following the fifth anniversary of the first sale of its common equity securities in a public offering;
- the last day of a fiscal year during which it had total annual gross revenues of $1 billion (adjusted for inflation every five years);

- the date on which it has, during the previous three-year period, issued more than $1 billion in non-convertible debt; or
- the date on which it is deemed to be a “large accelerated filer” (a company that has been public for at least twelve months, has filed one Form 10-K, and has a public float of at least $700 million).

As previously explained, the JOBS Act Title I lowers the regulatory burden of mainly smaller companies to increase U.S. jobs creation and economic growth, and to streamline the IPO process. The decrease in regulatory burden can be divided in several provisions which the EGC might use. These provisions can be classified into de-risking provisions and de-burdening provisions. Where de-risking provisions mainly relates to the pre-IPO communications the de-burdening provisions mainly relate to the disclosures pre- and post-IPO (Westenberg, 2012).

2.2.1 De-risking provisions

The de-risking provisions include testing-the-waters and confidential filing of the IPO draft registration statements. Before the JOBS Act, firms and underwriters were prohibited from communicating with potential investors prior to publicly disclosed registration statements. The de-risking provisions allow issuers to explore the interest of investors in a proposed offering (Dambra, Field, & Gustafson, 2015). Furthermore, the combination of confidential fillings and testing-the-waters reduces the cost of IPO withdrawal, which is relevant given that one in five IPO registrations was withdrawn between 1985 and 2000 (Dunbar & Foerster, 2008).

2.2.2 De-burdening provisions

The de-burdening provisions provide for a reduction in the disclosure, auditing and corporate governance requirements (Dambra, Field, & Gustafson, 2015). In the IPO registration statements EGCs are provided to reduce the disclosure of executive compensation and the number of years of audited financial statements. In particular, prior to the JOBS Act, IPO firms were required to disclose three years of compensation information for the Named Executive Officers, i.e., the CEO, CFO, and the three other highest paid executives, and to provide a compensation discussion and analysis. After the JOBS Act, IPO firms with EGC status are required to disclose compensation information only for two years and only for three named executives, including the CEO, and are not required to present a compensation discussion and analysis (Barth, Landsman, & Taylor, 2014). Also, EGCs are not required to disclose the relation between executive compensation and firm performance, payments upon termination or change of control, or the CEO's pay relative to other employees. EGCs need to provide only a ‘Summary Compensation Table’, an ‘Outstanding Equity Awards Table’, and a

'Director Compensation Table', with narrative disclosures to augment the tables in the IPO registration statement and subsequent annual reports (Dambra, Field, & Gustafson, 2015). EGCs might benefit from this disclosure provision as the reporting of executive payment plans may appear to be another burdensome disclosure requirement to the reporting corporation.. However, the compensation related disclosure provision reduces corporate transparency in an area of great public interest (Martin, 2012).

Regarding the disclosure of audited financial statements the EGCs need to provide two years of audited financial statements instead of three years. In addition, an EGC need not to present selected financial data in their IPO registration forms. Also, the management discussion and analysis (MD&A) of the position of the company need to cover only the fiscal periods of the provided financial statements (Westenberg, 2012).

Another provision for EGCs is that the JOBS Act allows firms with EGC status to delay application of some accounting standards and delay compliance with Section 404(b) of SOX. EGCs are not subject to any accounting standards that are adopted or revised on or after April 5, 2012. EGCs may elect to opt out of these provisions, however, this election is irrevocable (Barth, Landsman, & Taylor, 2014). Additionally, EGCs are exempt from any future mandatory audit firm rotation requirements and any rules requiring that auditors supplement their audit reports with additional information about the audit or financial reports with additional information about the audit or financial statements of the company that the PCAOB might adopt (Westenberg, 2012).

Finally, the JOBS Act exempts EGCs from requirements that companies seek stockholder approval of an advisory vote on their executive compensation arrangements, including golden parachute compensation. This is also known as an exemption from Say-on-Pay, Say-on-Frequency, and Say-on-Parachute requirements (Dambra, Field, & Gustafson, 2015).

When reviewing the principal provisions of the JOBS Act Parrino and Romeo (2012) find that the JOBS act should meet its objective of "providing emerging growth companies, at reduced costs, with an orderly transition from a private existence with relatively few security-law concerns to a public one with numerous obligations". Their goal was to examine the modified US securities regulation regime introduced for IPOs and SEC reporting by EGCs. In a study regarding the relative importance of the disclosure provisions Dambra, Field & Gustafson (2015) find evidence that the de-risking provisions, not the de-burdening provisions, drive a portion of the post-JOBS activity. Furthermore, they show that the confidential filling and testing-the-waters provisions are the most frequently adopted of all provisions. Chaplinsky et al. (2014) find no evidence in their study for a reduction in direct costs of issuance, accounting, legal, or underwriter fees for EGC IPOs. They find little evidence

that the JOBS Act in its first three years has reduced the measurable costs of going public. They conclude that “although there are benefits of the Act that issuers appear to value, they should be balanced against the higher costs of capital that can occur after its enactment”. Berdejo (2015) examines whether the scaled disclosure rules have increased the number of small issuers conducting an IPO of their equity securities and the extent to which these issuers have taken advantage of the various exemptions available to them. He finds that EGCs have increasingly taken advantage of the provisions during their IPOs. However, in contrary of the findings of Dambra, Field & Gustafson (2015), he finds no noticeable increase in the proportion of the IPOs conducted by issuers that qualify as EGCs. Furthermore, Berdejo finds that over forty percent of the issuers that went public as EGCs no longer qualify for such a status by their second fiscal year.

A study of Westfall and Omer (2015) examines the extent to which reduced financial statement disclosures affected the pricing of audit services, the initial offer prices, and investor. Because the JOBS Act permits a reduction in financial statement information mandated for non-EGC registrants, EGC registrants likely have greater information asymmetry than non-EGC registrants increasing the likelihood that EGCs could consider mispriced or underprized. They find for pricing of audit services that high quality auditors are unable to mitigate the information risk associated with reduced financial statement disclosures in EGC IPO registration statements. Furthermore, they find that investors perceive lower intrinsic values for EGC registrants that reduced their financial statement disclosures. Dharmpala & Khanna (2015) analyse the market reactions for EGCs that conducted IPOs. They find positive and statistically significant abnormal returns for EGCs compared to control firms. They interpreted their findings as that “the value to investors of the disclosure and compliance obligations relaxed under the JOBS Act is outweighed by the associated compliance costs”.

Barth, Landsman and Taylor (2014) examine whether the JOBS Act increases information uncertainty in firms with IPOs. They find that underpricing is larger for IPO firms with EGC status using three different measures of underpricing. Furthermore, they find that total volatility post-IPO and idiosyncratic volatility are significantly higher for IPO firms with EGC status. This finding is consistent with IPO firms with EGC-status having greater information uncertainty at the time of their IPOs and that the greater information uncertainty pertains primarily to idiosyncratic risk. They also find that several individual provisions, among which presenting compensation information for fewer than five executives, explains the larger IPO underpricing and higher volatility for IPO firms with EGC status. This is consistent with the earlier mentioned finding of Guttentag (2013) that the reduced compensation disclosure obligations might be problematic for investors as compensation is a potentially significant pathway for agents to tunnel resources from the firm. Furthermore, to the extent

that there is generally less information available about a firm, there will be more attractive trading opportunities available to firm insiders. Based on the findings of Barth, Landsman and Taylor (2014) investors seem to react to the reduced compensation disclosure provision. However, in their study they do not examine the compensation of the executives and the reduced compensation disclosure provision in combination with potential tunnelling motives of executives. Therefore, I find it of interest to examine the relationship between executive compensation and the different components of the reduced compensation disclosure provision.

2.3 Information asymmetry and voluntary disclosure

A common phenomenon for IPOs is underpricing. Equity follows a pattern of underpricing when IPO registrants' shares are offered to investors. This underpricing averages between 10 and 20 percent (Ritter & Welch, 2002). The asymmetric information theory of underpricing assumes that the key stakeholders in IPO registrations do not have the same information about the registrants' intrinsic value. Kennedy et al. (2006) assess in their study the relative importance of various theoretical explanations of IPO underpricing by focusing on models that assume that the IPO is the first stage of a multi-stage selling scenario. They find that in a two-period sell-out strategy firms are worse off due to IPO underpricing, but insiders appear to maximize their wealth. Specifically, the extent to which insiders care about underpricing depends on how many shares they sell at the IPO. The more shares insiders sell, the greater their incentives to provide information to minimize their loss resulting from underpricing.

Increasing voluntary disclosure can reduce IPO underpricing, which is consistent with the underpricing being a risk premium for uncertainty (Barth, Landsman, & Taylor, 2014). For example, Beatty (1989) and Willenborg (1999) show that higher quality auditors can reduce underpricing by increasing the quality of the financial statements in the IPO prospectus. In a study by Schrand and Verrecchia (2005) they find that IPO firms with more frequent disclosures prior to the IPO have smaller underpricing. Leone, Rock, and Willenborg (2007) find in their study that IPO firms disclosing more information about the use of proceeds have smaller underpricing.

Jog & McConomy (2003) examine the impact of voluntary disclosure of management earnings forecasts by issuers of IPOs. They focused on the relative importance of this voluntary disclosure mechanism on both the IPO underpricing and post-issue return performance and find that management earnings forecasts provide important and incremental information. Bukh et al. (2005) examined whether information on intellectual capital is disclosed in prospectuses. They find that the extent of managerial ownership prior to the IPO and industry type affects the amount of voluntary intellectual capital disclosure, while company size and age do not affect disclosure. In a study by Eng

and Mak (2003) they investigate the impact of ownership structure and board composition on voluntary disclosure. In their study ownership structure is characterized by managerial ownership, blockholder ownership and government ownership, and board composition is measured by the percentage of independent directors. Furthermore, voluntary disclosure is proxied by "an aggregated disclosure score of non-mandatory strategic, non-financial and financial information". Their results show that disclosure is affected by the ownership structure and board composition. They find that lower managerial ownership and significant government ownership are associated with increased disclosure. Furthermore, they find that firms with lower debt and, contrary to the findings of Buk et al. (2005), larger firms had greater disclosure. But why do EGCs reduce their disclosures as it may reduce the information asymmetry with investors resulting in lower underpricing of IPOs?

2.3 Executive compensation

In this thesis I will investigate the relation between executive compensation structure and the use of executive compensation disclosure provisions under the JOBS Act. A key part in my research is, therefore, the understanding of the compensation structure and a description of pay practices. I will focus on executive compensation rather than director compensation, because prior to an IPO, private firms are not required to have a board of directors (Westenberg, 2012).

The compensation of executives generally consists of five components: a base salary, an annual bonus, stock grants, stock option grants and long term-incentive plans. In addition, CEOs often receive contributions to defined-benefit pension plans and severance payments (Frydman & Jenter, 2010). Top executives increasingly negotiate formal employment contracts, which typically last five years and specify minimum base salaries and target bonus payments (Murphy, 1999). Frydman and Jenter (2010) show in their study that both the level and the composition of CEO pay have changed dramatically over time. Prior to the 1970s they observe low levels of pay, little dispersion across top managers, and only moderate levels of equity compensation. From the 1970s till 1990s they show that all compensation components have grown dramatically and differences in pay across executives and firms widen. The increase is mainly caused due to an increase of the compensation in stock options, which became the single largest component of pay in the 1990s. In the period till 2008 the average pay declined and restricted stock grants have replaced restricted option grants as largest pay component. In appendix A I illustrate the relative importance of the various pay components for executives in the S&P 500, MidCap firms and SmallCap firms in the period from 2008 till 2015, which is in line with the observations made by Frydman and Jenter. Murphy (1999) finds several stylized facts regarding executive compensation. First of all, pay levels vary by industry. Second, the level of compensation has increased substantially over time. Third, the increase in pay is largely

attributable to increases in the grant-date value of stock option grants. Furthermore, Murphy (1999) shows that the increase in option compensation and the increase in total compensation holds across size groups when looking at the S&P 500 industrials with above-median sales, S&P 500 industrials with below-median sales, S&P 400 Mid-Cap Industrials and S&P 600 Small-Cap Industrials.

2.3.1 Non-incentive based compensation

The different components of executive compensation can be classified into non-incentive based compensation and incentive based compensation. The non-incentive based compensation components concern the base salary compensation, severance payments and other miscellaneous compensation. The distinction to incentive based compensation can be made based on the relation of the compensation to the performance of the executives. Non-incentive compensation is not performance related where incentive compensation do is related (Sanders, 2001).

The largest component of non-incentive components for executives is the base salary. Base salaries are usually determined through competitive "benchmarking", based primarily on general industry salary surveys and supplemented by detailed analyses of selected industry or market peers (Murphy, 1999). The surveys are mostly adjusted for company size, typically measured using company revenues, which can be done through size groupings or through log-linear regressions. Theory suggests that CEOs will attempt to circumvent board control in an effort to maximize salary and Boyd (1994) finds evidence in support of this theory. Certo et al. (2003) examine in their study the investors perspective at base salary. They find that investors might perceive that CEOs compensated exclusively with cash will not take adequate risks because they have little to gain.

2.3.2 Incentive based compensation

The incentive based compensation components concern performance related compensation. More specifically, these components concern the bonus plan compensation, stock compensation, stock option compensation and long-term incentive plans (Sanders, 2001). Incentive-based compensation schemes are used by organisations to align the interests of employees with owners (Baker, Jensen, & Murphy, 1988). Chong & Eggleton (2007) examined the effects of information asymmetry and organisational commitment on the relation between the extent of reliance on incentive-based compensation schemes and managerial performance. They find evidence of higher managerial performance for managers with low organisational commitment and a high reliance on incentive based compensation schemes in high information asymmetry situations.

2.3.2.1 Bonus plans

Executive bonus plans can be categorized in terms of three basic components: performance measures, performance standards and the structure of the pay-performance relation. Under a typical bonus plan, no bonus is paid until a threshold performance is achieved and a minimum bonus is paid at the threshold performance. Target bonuses are paid for achieving the performance standard, and there is typically a "cap" on bonuses paid. The range between the threshold and cap is labelled the "incentive zone", indicating the range of performance realization where incremental improvement in performance corresponds to incremental improvement in bonuses (Murphy, 1999). In a survey conducted by Towers Perrin (1997) to study the annual incentive plan design, they find that less than half of the companies use a single performance measure in their incentive plan and they conclude that most companies use two or more measures. Furthermore, they find that almost all companies rely on some measure of accounting profits. This includes revenues, net income, pre-tax income, operating profits (EBIT), or economic value added. Accounting measures have two fundamental problems. First, accounting profits are backward-looking and short-run, and managers focused only on accounting profits may avoid actions that reduce current profitability but increase future profitability, such as R&D (Dechow & Sloan, 1991). Second, accounting profits can be adjusted, either by earnings management or through discretionary adjustments in accruals (Healy P. , 1985).

2.3.2.2 Restricted stock grants

The restricted stock grants are restricted in the sense that shares are forfeited under certain conditions. The forfeiture possibility allows favourable tax treatment and accounting treatment (Murphy, 1999). At Appendix A I show that in the period from 2008 till 2015 the stock compensation has grown to the largest component of the executive compensation. Kole (1997) shows that restricted stock plans are more common in chemicals, machinery, and producer firms than in metals, food and consumer firms, and are more common in R&D-intensive firms than in non-R&D firms. Moreover, the average vesting period for restricted stock grants is longer in chemicals, machinery and producer firms than in metals, food and consumer firms.

Ofek and Yermack (2000) investigate the impact of stock-based compensation on managerial ownership. They find that equity compensation succeeds in increasing incentives of lower-ownership managers, but higher-ownership managers negate much of its impact by selling previously owned shares. Furthermore, Pukthuanthong and Roll (2007) investigate whether the form of managerial compensation affects a firm's long-term operating performance and find that new public companies perform better when managers receive a balanced combination of stock option grants and equity ownership. This is in support of a theory that if investors believe that stock options provide effort-

enhancing incentives they should respond more favourably to IPOs when stock grants and option grants are an important part of employee compensation.

2.3.2.3 Restricted option grants

Stock options are contracts which give the recipient the right to buy a share of stock at a pre-specified exercise price for a pre-specified term and typically become vested over time (Murphy, 1999). Executive options are non-tradeable and are typically forfeited if the executive leaves the firm before vesting. The parameters of an option contract suggest a multitude of design possibilities: exercise prices could be indexed to the industry or market, options could be forfeited unless a performance trigger is reached and option terms could match the expected executive horizons. In practice, however, there is little cross-sectional variation in granting practices and most options expire in ten years and are granted with exercise prices equal to the fair market value on date of grant (Murphy, 1999). Yermack (1995) analyses the determinants of options grants and concludes that cross-sectional patterns in grants are not well-explained by agency or financial contracting theory. Kole (1997) analyses the vesting schedule of option grants and finds that both the minimum and average wait times are longer in R&D-intensive firms. Lowrey and Murphy (2007) find that in about one-third of US IPOs between 1996 and 2000, executives receives stock options with an exercise price equal to the IPO offer price rather than a market-determined price. And among these firms 58% of top executives realize a net benefit from underpricing: the gain from the options exceeds the loss from the dilution of the pre-IPO shareholdings. Certo et. al (2003) examined investors' reaction to the differing incentive properties of stock options and equity ownership in the context of firms undertaking IPOs and found that stock options and equity ownership interacted to influence the premiums that investors applied to IPO firms.

Stock option grants have several incentive problems. First, since options reward only stock-price appreciation and not total shareholder returns, which include dividends, executives holding options have incentives to avoid dividends and to favour share repurchases (Lambert, Lanen, & Larcher, 1989). Second, since the value of options increase with stock price volatility, executives with options have incentives to engage in riskier events (Hirshleifer & Suh, 1992).

2.3.2.4 Long-term incentive plans

Long-term incentive plans (LTIPs) are bonus plans based on rolling-average three- or five-year cumulative performance. LTIPs have two primary objectives. The first objective is to align the interest of executives and shareholders in order to minimise both agency risk and the associated

agency costs. Secondly, to recruit, retain and motivate senior executives to maximise their effort and give high performance (Pepper, 2015).

In this chapter I discussed previous literature and studies regarding the JOBS Act and it's disclosure provisions. From this discussion it can be noted that the JOBS Act reduces the investors protection, however, it also reduces the regulatory burdens for companies and therefore stimulating the economic growth and job creation in the U.S. Based on the discussed findings of Barth, Landsman and Taylor (2014) and Guttentag (2013) I find it of interest to examine the relationship between executive compensation and the different components of the compensation disclosure provision. This is of interest for investors as it will provide investors with more information regarding potential tunnelling motives for executives in EGC firms when certain reduced disclosure provisions are used.

Chapter 3

THEORETICAL FRAMEWORK

In this chapter I discuss and explain the theory that I use to support my research. I combine the prior literature discussion of chapter 2 'Literature Review' with theories used by other researchers and economists to formulate hypothesis. These hypothesis help me answer my research question.

Most of the research examining the control system effects of compensation schemes is based on the agency theory. The agency theory (Jensen & Meckling, 1976) predicts that the separation of ownership and control in modern corporations results in conflicts of interests where self-interested managers have incentives to extract private wealth at the expense of shareholders. This behaviour arises when the agent and the principal have different risk preferences and conflicting goals. This is because agents, who possess more private information to make decisions in their self-interests. Therefore, it is argued that when information asymmetry is high, the dysfunctional behaviours are more likely to occur than when information asymmetry is low (Chong & Eggleton, 2007).

If companies go public they attract funds from external investors to finance future growth. Absent market imperfections or externalities, firms have incentives to trade off the costs and benefits of voluntary disclosure, and to produce the efficient level of information for investors in the economy (Healy & Palepu, 2001). As previously discussed the findings of Pegano et al. (1998) show that companies time their IPOs to take advantage of industry-wide overvaluations, rather than to finance future growth. This can be interpreted as an indication for a principal-agent problem at IPOs. The JOBS Act increases the possibility of principal-agent problems as the JOBS Act allows EGCs to reduce the scope of mandatory disclosure of financial statements and executive information (Barth, Landsman, & Taylor, 2014). EGCs are not required to present a compensation discussion and analysis and are not required to disclose the relation between executive compensation and firm performance, payments upon termination or change of control, or the CEO's pay relative to other employees (Dambra, Field, & Gustafson, 2015). By not providing all the information regarding executive compensation the executives may be able to extract private wealth at the expense of shareholders without disclosing their intentions. Furthermore, the findings of Barth, Landsman & Taylor (2014) show that IPO firms with EGC status have greater information uncertainty during their IPOs. This greater information uncertainty pertains primarily to idiosyncratic information and the provision of executive information disclosure has a significant positive effect. The results of Westfall & Omer (2015) confirm the findings of Barth et al. (2014) as they find that investors perceive lower intrinsic values for EGC registrants that reduced their financial statements disclosures. These findings of

Westfall & Omer (2015) and Barth et al. (2014) are also in line with the previously discussed arguments of Guttentag (2013). He argues that reduced compensation disclosure obligations might be problematic for investors as compensation is a potentially significant pathway for agents to tunnel resources from the firm. The extent that there is generally less information available about a firm, there will be more attractive trading opportunities available to firm insiders.

Robinson et al. (2011) investigated the economic forces that influence noncompliance with mandatory compensation disclosures and the effect of a subsequent focused enforcement action. They utilized SEC evaluations of compensation disclosures mandated by rules adopted in 2006 to examine whether noncompliance is associated with excess CEO compensation, proprietary costs, or previous media attention. Furthermore, they test whether subsequent CEO compensation declines after the SEC publicly identifies noncompliance. They find that disclosure defects are positively associated with excess CEO compensation and media criticism of CEO compensation during the previous year. However, they do not find evidence supporting the contention that compensation disclosure defect are associated with proprietary costs. They also are not able to document that the level of disclosure defects identified by the SEC associated with a reduction in excess CEO compensation in the subsequent year.

As previously explained I find it of interest to examine the relationship between executive compensation and the different components of the reduced compensation disclosure provision. Based on the above discussion and particularly the finding of Robinson et al. (2011) that disclosure defects are positively associated with excess CEO compensation I expect EGCs with high compensation for executives use the compensation disclosure provision of the JOBS Act. This can be formulated into the following hypothesis:

H1: *Emerging Growth Companies with high compensation for executives prior to an Initial Public Offering apply the compensation disclosure provision.*

The hypothesis above is stated in alternative form. The corresponding null hypothesis is: EGCs with high total compensation for executives prior to an IPO do not use the compensation disclosure provision.

The above discussed theoretical concept can also be used to formulate a second hypothesis, in which I focus on EGC drop-outs. A Study of Berdejo (2015) shows that the benefits of the JOBS Act may not be as significant as may have been expected. While the direct costs of conducting an IPO have not decreased for EGCs following the enactment of the JOBS Act, indirect costs may have actually increased. Furthermore, over forty percent of the issuers that went public as EGCs no longer qualify for such status by their second fiscal year.

By separating the ownership and control when going public, executives will have the possibility to extract wealth at the expense of investors or shareholders at an IPO. This is consistent with the previously discussed findings of Lowrey and Murphy (2007) that top executives realize a net benefit from underpricing as the gain from the options exceeds the loss from the dilution of pre-IPO shareholdings. Executives do not want to disclose their intentions when they have the incentive of extracting wealth of investors and, therefore, do not want to disclose compensation related information. When making use of the disclosure provisions of the JOBS Act during the IPO stage, information asymmetry is created between executives and investors. However, to increase the value of a firm, executives can reduce the information asymmetry with investors. This is more in line with the interests of investors and more likely to happen due to the shift of ownership to investors after going public. This can also be explained by a study of Eng and Mak (2003) in which they investigate the impact of ownership structure and board composition on voluntary disclosure. Their results show that disclosure is affected by the ownership structure and board composition. They find that lower managerial ownership is associated with increased disclosure. To increase the value of a firm, executives can reduce the information asymmetry with investors with more extensive disclosures. This can be explained with the signalling-based models of the asymmetric information theories of underpricing (Kennedy, Sivakumar, & Vetzal, 2006). These models are two staged-models and have the basic underlying intuition that high-quality firms are willing to bear the cost of the signal in order to distinguish themselves from low-quality firms. These models assume that firm type is revealed exogenously after the IPO. By issuing a costly signal, firms can expect to have subsequent actions such as seasoned equity offerings or dividend increases received more favourably by the market. The costs of the first stage are therefore recovered at the second stage, for which the insiders maximize the expected value of the two-stage sale.

By voluntary dropping-out of the EGC status, the information asymmetry is decreased, which might increase the firm value and increasing the benefits for investors. However, for executives this means that the reduced disclosure provisions cannot be used anymore and, therefore, executives lose their informational advantage. As previously explained I find it of interest to examine potential tunnelling motives for executives in EGC firms when certain disclosure provisions are applied. Again, based on findings of Robinson et al. (2011) I expect the compensation of executives to be higher before the drop-out of the EGC status. Furthermore, where Robinson et al. (2011) were not able to document that the level of disclosure defects identified by the SEC associated with a reduction in excess CEO compensation in the subsequent year I do expect to find a reduction in executive compensation after the drop-out. Based on these arguments I formulated the following hypothesis:

H2: *Executives in Emerging Growth Companies receive a lower compensation after the company voluntary drops out of the Emerging Growth Company status.*

Again, the hypothesis above is stated in alternative form. The corresponding null hypothesis is: Executives in Emerging Growth Companies do not receive a lower compensation after the company drops out of the Emerging Growth Company status.

The formulated hypothesis will help me understand the relation between executive compensation structure and the use of executive compensation disclosure provisions for EGCs and, therefore, help me answer my research question.

Chapter 4

DATA AND METHODOLOGY

In this chapter I describe the research design used in this research to determine the impact of executive compensation on the compensation disclosure provision. Firstly, in paragraph 4.1 I describe the methodology to provide a better understanding of my research approach. As I have two different hypothesis in my research I created different models to test the relevant hypothesis. For each model I describe the dependent, independent and control variables used. Hereafter, in paragraph 4.2 I describe the data gathering process as a large part of the data is hand collected. Finally, in paragraph 4.3 I provide the descriptive statistics of sample and models and provide regression model diagnostics.

4.1 Methodology

4.1.1 Methodology for hypothesis 1

To assess whether EGCs with high compensation for executives prior to an IPO use the compensation disclosure provision I use a logistic regression model. This model is described after the discussion of the different variables used in the model.

4.1.1.1 Dependent variables

The dependent variable in the hypothesis 1 model relates to the compensation disclosure provisions. I will create a dummy variable based on whether the company utilizes one or more components of the compensation disclosure provision. As previously explained IPO firms were required to disclose three years of compensation data for the Named Executive Officers, i.e., the CEO, CFO, and the three other highest paid executives, and to provide a compensation discussion and analysis. After the JOBS Act, IPO firms with EGC status are required to disclose compensation data only for two years and only for three named executives, including the CEO, and are not required to present a compensation discussion and analysis (Barth, Landsman, & Taylor, 2014). Furthermore, EGCs need to provide only a 'Summary Compensation Table', an 'Outstanding Equity Awards Table', and a 'Director Compensation Table', with narrative disclosures to augment the tables in the IPO registration statement and subsequent annual reports (Dambra, Field, & Gustafson, 2015). I will therefore create a dummy variable 'CompProvision' indicating 1 if the EGC discloses only two years of compensation data, and/or discloses compensation data for only three named executives, and/or does not provide a compensation discussion and analysis, and/or discloses only three compensation tables. I am aware

of the consequences of the created dummy variable 'CompProvision' as it may incorporate a lot of sample items due to the general description of the variable. For example, Berdejo (2015) shows that over seventy percent of the EGCs in his sample choose to provide scaled executive disclosure by presenting two (rather than five) tables of information. Therefore, I will create a second dependent variable 'CompensationProvision' which will indicate 1 if the EGC discloses only two years of compensation data, and discloses compensation data for only three named executives, and does not provide a compensation discussion and analysis, and discloses only three compensation tables. Companies that meet this condition applied the JOBS Act's compensation related disclosure provision maximally and, therefore, the analysis with the 'CompensationProvision' variable as dependent will serve as the main model to test hypothesis 1. Moreover, I will perform secondary analyses on the individual components of the compensation disclosure provision in relation to the executive compensation to assess whether a relation exists between specific components of the compensation disclosure provision of the JOBS Act and the compensation of executives.

4.1.1.2 Independent variables

The first independent variable I include in the model relates to the compensation of the executives which helps me to investigate the relation between the application of the compensation disclosure provision and level of executive compensation. For this independent variable I use the average total compensation of the top three executives as the compensation data for at least three executives will be available for all the firms included in the sample based on the minimum disclosure requirements for EGCs. The JOBS Act allows EGCs to reduce the compensation information disclosure to only three named executives, including the CEO. As the compensation for CEOs is disclosed for all IPOs, where the titles of the top three named executives may differ in the disclosure, I will examine the relationship between the compensation disclosure provision and CEO compensation in a separate analysis. Again, for the compensation variable for the CEO analysis I use the total compensation.

The above discussed theoretical concept can be expanded with an analysis of compensation components which are of more interest for executives if they aim at realizing a personal benefit from the IPO. To maximize the extraction of private wealth for executives it can be argued the executives should own shares and options during the IPO stage or shortly after, and sell those shares or exercise the options when the share value of the firm is higher. Therefore, the incentive based compensation might be important in the disclosure decision for EGCs. However, also for the non-incentive based compensation it can be argued to be of importance. As previously explained the non-incentive based compensation is usually determined through competitive benchmarking, however, when the executives in private firms do have tunnelling motives I expect that this benchmark process has not

been (adequately) performed. I therefore also expect the non-incentive based compensation components to be important. I examine the relative importance of the incentive based compensation compared to non-incentive based compensation by the ratio of incentive based compensation to non-incentive based compensation.

4.1.1.3 Control variables

To investigate the possible explanatory power of the independent variables I include control variables for firm size-, performance-, leverage-, and ownership effects. Following Depoers (2000) the proxy for the firm size control variable will be the sales as several studies find that firm size has a large effect on executive compensation. For example, Tosi et al (2000) find that firm size explains more than 40% of the variance in CEO pay. Furthermore, executive compensation levels are to be expected to increase as the firm size increases (Core & Guay, 1999; Murphy, 1999). In prior studies firm size is also determined to be positively related to voluntary disclosures (Eng & Mak, 2003). Moreover, Depoers (2000) states that given that the process of providing voluntary disclosure is a costly affair, larger firms can best afford such cases.

The performance control variable is measured by Return on Assets (ROA). I include this variable serving as performance related control variable, frequently referred to as profitability variable. The ROA is widely used in prior studies regarding compensation and voluntary disclosure. Moreover, as previously discussed executive compensation and bonus plans are linked to performance measures (Murphy, 1999). When examining the influence of performance on voluntary disclosure Gray et al. (1995) argue that well-run firms have distinguish themselves from less profitable firms in order to raise capital on the best available terms. One way to do this is through voluntary disclosure. Although Gray et al. (1995) do not find a significant effect of profitability on voluntary disclosure in their sample I do include this variable as it might influence the disclosure decisions of the smaller firms when going public. As previously argued smaller firms going public might need to distinguish themselves to reduce the underpricing during IPOs.

In prior studies it is argued that agency costs of outside capital depend on the forms of claims held by outsiders and management investment policies (Jensen & Meckling, 1976). Furthermore, Depoers (2000) argues that the firm's investment, dividend and financing decisions are linked via its cash flows and, therefore, debtholders achieve indirect control of the firm. The higher the proportion of debt in the firm's capital the greater the potential is of transferring wealth from debtholders to shareholders. Again, although the limited amount of evidence regarding the significance of the leverage on voluntary disclosure I do include this control variable as this reasoning might be

applicable for my research on voluntary not disclosing information in combination with potential tunnelling motives of executives.

The last control variables relates to possible ownership effects. As the previously discussed findings of Eng and Mak (2003) show that lower managerial ownership are associated with an increase in disclosure I expect the ownership control variable to be positively related to the dependent variable. The proxy for this control variable is the total percentage of shares owned by executives.

4.1.1.4 Empirical model 1

To investigate whether the application of the compensation disclosure provision can be explained by the level of the compensation for executives I use a logistic regression model. This model allows me to use a dummy variable indicating 0 or 1 for the dependent variable. As discussed above I will perform several regression analysis. For a detailed overview of all the equations of the regressions performed refer to appendix B. In general the model to test hypothesis 1 is as follows:

$$CompensationProvision = \alpha_1 + \beta_1 * \text{AvgTotalComp} + \beta_2 * \text{IncentiveRatio} + \beta_3 * \text{Control Variables} + \varepsilon$$

Table 1 – 'Definitions of variables for model 1 and the expected direction for those variables'

Variables	Predicted direction	Explanation / proxy
Dependent variables		
CompProvision		Dummy variable indicating 1 if the EGC discloses only two years of compensation data, and/or discloses compensation data for only three named executives, and/or does not provide a compensation discussion and analysis, and/or discloses only three compensation tables
CompensationProvision		Dummy variable indicating 1 if the EGC discloses only two years of compensation data, and discloses compensation data for only three named executives, and does not provide a compensation discussion and analysis
CDA		Dummy variable indicating 1 if the EGC does not disclose a compensation discussion and analysis
NEO		Dummy variable indicating 1 if the EGC discloses compensation data for only three named executives
Tables		Dummy variable indicating 1 if the EGC discloses only three compensation tables
Years		Dummy variable indicating 1 if the EGC discloses compensation data for only two years
Independent variables		
AvgTotalComp	+	Average total compensation for the top three executives
IncentiveRatio	?	Ratio of incentive based compensation to non-incentive based compensation based on the averages for the top three executives
TotalCEO	+	Total compensation for the CEO
CEOIncentiveRatio	?	Ratio of incentive based compensation to non-incentive based compensation for the CEO
Control variables		
Log(Size)		Net Revenue of the company
Log(ROA)		Net income divided by the average total assets
Log(Leverage)		Total debt divided by total assets
Ownership		Total percentage of shares held by executives

4.1.2 Methodology for hypothesis 2

To assess whether executives of EGCs receive less compensation after the company voluntary drops out of the EGC status I use a pooled regression model. This model is described after discussing the different variables. By using this model I am able to control for firm size-, performance-, leverage-,

and ownership effects and investigate the same firms over time. Furthermore, this model allows me to add a treatment variable (independent variable) indicating the voluntary drop out. The mentioned control variables are included as they might influence the voluntary disclosure decisions as well as the compensation levels of executives which I explained at the discussion of empirical model 1 for hypothesis 1.

4.1.2.1 Dependent variables

To investigate whether the executive compensation is lower after the voluntary drop-out I use the average compensation for the top three executives for the dependent variable ('AvgTotalComp' variable). This allows me to examine the effect on the compensation via the independent variable indicating the voluntary drop-out. As previously explained at the discussion of empirical model 1 the available data for the CEO compensation for every observation allows me to perform a second analysis in which the compensation of the CEO will be used as dependent variable ('TotalCEO' variable). To determine whether the voluntary drop out of the EGC status also influences the relative importance of the incentive based compensation to non-incentive based compensation I will perform two additional analyses for which this ratio will serve as dependent variable ('IncentiveRatio' and CEOIncentiveRatio' variables).

4.1.2.2 Independent variables

For the independent variable I will create a dummy variable regarding the voluntary drop-out of the firms. As I want to investigate whether the executive compensation is lower after the voluntary drop-out of the EGC status I will create the dummy variable 'VoluntaryDropOut' indicating 1 for the years after the EGC voluntary dropped out of the EGC-status. This allows me to compare the compensation of the executives before and after the drop-out. As previously explained an EGC will lose its status when certain firm size limits were exceeded. I will, therefore, mark an EGC who voluntary dropped out of the EGC status when the consequences of being an EGC paragraph is missing in the filings, the gross revenues do not exceed $1 billion, and the EGC has not filed its 10-K form as large accelerated filer. Considering the theory as formulated in chapter 3 'Theoretical Framework' in developing hypothesis 2 I expect a negative correlation between the compensation of the executives and the 'VoluntaryDropOut' variable.

The second independent variable that I is a dummy variable indicating whether the EGC applied the compensation disclosure provision before they drop out of the EGC status. I will create a dummy variable 'ProvisionPreDrop', which indicates 1 if the EGC applied the compensation disclosure provision in the last year in which the company filed its 10-K form as an EGC using the same criteria

as for the 'CompensationProvision' dummy variable as discussed in model 1. This variable is included as it will indicate whether a possible decrease in compensation levels after the voluntary drop-out can be explained by the compensation disclosure provisions of the JOBS Act. For the 'ProvisionPreDrop' variable I expect it to be negatively related to the dependent variable because I expect that firms who use the compensation disclosure provision have a higher drop in compensation after they drop out of the EGC status compared to firms who do not use the disclosure provision.

As discussed above I will perform several regression analyses. For a detailed overview of all the equations of the regressions performed refer to appendix E. In general the pooled OLS regression model to test hypothesis 2 is as follows:

$$AvgTotalComp = \alpha + \beta_1 * VoluntaryDropOut + \beta_2 * ProvisionPreDrop + \beta_3 * \text{Control Variables} + \varepsilon$$

Table 2 – 'Definitions of variables for model 3 and the expected direction for those variables'

Variables	Predicted direction	Explanation / proxy
Dependent variables		
AvgTotComp		Total average compensation for the top three executives
IncentiveRatio		Ratio of incentive based compensation to non-incentive based compensation based on the averages for the top three executives
TotalCEO		Total compensation for the CEO
CEOIncentiveRatio		Ratio of incentive based compensation to non-incentive based compensation for the CEO
Independent variables		
DropOut	-	Dummy variable indicating 1 for the period after the drop-out
ProvisionPreDrop	-	Dummy variable indicating 1 if the EGC uses the compensation disclosure provision in the last year the company filed its 10-K form with EGC status based on the following criteria: the EGC discloses only two years of compensation data, and discloses compensation data for only three named executives, and does not provide a compensation discussion and analysis, and provides only three compensation tables.
Control variables		
Log(Size)		Net Revenue of the company
Log(ROA)		Net income divided by the average total assets
Log(Leverage)		Natural log of total debt divided by total assets
Ownership		Total percentage of shares held by executives

4.2 Data

I focus on executive compensation structure and accounting disclosure provisions for EGC firms, which are smaller firms compared to firms who issued their IPO before the JOBS Act was signed into law. No database is available containing the necessary key data for my research and, therefore, the data has to be hand-collected. The data regarding executive compensation and the JOBS Act disclosure provisions used by EGCs is gathered in two stages. The first stage is the data gathering from initial 'S-1 filings' for firms between January 2012 and March 2016 (moment when the data

gathering process was started). These filings are gathered from the Wharton Research Data Services SEC Analytics suite and collected though the EDGAR database, which also provides the CIK (Central Index Key) and GVKEY (Global Company Key) company identifier codes. The SEC Analytics suite contains filing data for every filing since 1994 (Wharton University of Pennsylvania, 1993-2016). The initial 'S-1 filings' and amended S-1 filings (S-1A's) concern IPO prospectuses of companies planning on going public and to register their securities with the U.S. SEC (SEC, 1993). These statements contain basic business and financial information on an issuer. When firms are issuing their IPO as EGC they still need to include a 'Summary Compensation Table' and an 'Outstanding Equity Awards Table'. These tables contain the necessary data regarding the compensation structure and actual executive compensation details. Furthermore, I focus on how many executive officers are named in the compensation disclosure and which named executive officers titles are provided. I also focus on the disclosure of an official compensation, discussion and analysis section. In a 'S-1 filing', firms will also include a paragraph of the consequences of being an EGC. From this paragraph it can be determined which disclosure provisions are being used. In a 'S-1 filing', EGCs also need to provide at least two years of audited financial statements instead of three years. From these financial statements the annual gross revenues can be gathered.

The 'S-1 filings' information concerns the years prior to the IPO. The financial information of the IPO year 0 and the following years is found in the '10-K filings', which is the second stage of the data gathering process. The '10-K filing' is an annual report required by the SEC which gives a comprehensive summary of a company's financial performance (SEC, 1993). In this second stage I focus on the same executive compensation data as mentioned for the first stage. Furthermore, I focus again on the consequences of being an EGC paragraph to collect which disclosure provisions the EGC applied. When this paragraph is missing and no mentioning of being an EGC is found, the company can be labelled as 'EGC drop-out firm'. After the hand collection of the data and filtering the filings with errors, filtering filings of non EGC firms, or for which no report or data was available data 2481 firm year observations for 1154 unique companies remains available.

For collecting data regarding the control variables I used the COMPUSTAT North America database which consists of annual and quarterly report data of listed American and Canadian companies since 1950 (Wharton University of Pennsylvania, 1993-2016). Based on the available CIK I gathered data regarding the net income, total assets, total equity, total debt, total revenue and SIC industry codes. After collecting this data for the period of 2010 up until 2016 from the COMPUSTAT database I merged the data with the earlier hand collected data based on created identifiers which include the CIK and fiscal year of the observation. After dropping the observations which have not

Table 3 – 'Distribution of total sample in years relative to the IPO'

Year relative to IPO	Number of observations	Percentage of total	Cumulative percentage
Year T-2	145	12,91	12.91
Year T-1	490	44.63	56.54
Year T0	265	23.60	80.14
Year T+1	157	13.98	94.12
Year T+2	62	5.52	99.64
Year T+3	4	0.36	100
Total	*1.123*	*100*	

all required data available a remainder of 1.123 observations for 560 unique companies is available. The distribution of the observations in years relative to the IPO shows that for year T-2 145 observations are available, for year T-1 490 observations, for year T 265 observations, for year T+1 157 observations, for year T+2 62 observations and for year T+3 4 observations. For an overview of the sample distribution refer to table 3.

4.3 Descriptive statistics

In this research I test two hypothesis with each hypothesis having its own model to test the hypothesis. Each model has its own sample out of the total dataset based on the available data to test the related hypothesis. In order to understand the data I provide descriptive statistics and regression diagnostics for each sample.

4.3.1 Descriptive statistics for model 1

By testing hypothesis 1 I investigate the compensation of executives before the IPO in relation to the disclosure provisions. It is interesting to see which disclosure provisions the companies adopted the most and whether companies actually use (components of) the compensation disclosure provision that the JOBS Act provide. Table 4 shows the adopted provisions for year T-2 and year T-1 relative to the IPO for the observations in the sample. This table indicates that the provision regarding the reduced disclosure of number of year of compensation data is the most applied disclosure provision in the sample with approximately 95.8% of the EGCs. Second and third most applied provisions of the JOBS Act concerns, respectively, the explicit mentioning of exemption for internal control attestation (91.0%), and the explicit mentioning of the exemption of Dodd-Frank Act requirements (88.8%). The second observation which can be made from Table 4 relates to my previous assumption regarding the 'CompProvision' variable in which I expected the 'CompProvision' to incorporate a lot of observations due to its general description. Approximately 95.8% of the observations would satisfy the set requirements which might influence the results of the regression as the data is most probably non normally distributed. This can also be explained by the descriptive statistics as presented in Table 5 in which I provide the characteristics of the variables included in model 1. The high skewness and

Table 4 – 'Utilization of the JOBS Act's de-burdening provision during IPO's (In percentages)'

Year relative to IPO	1	1a	1b	2	3	4	4a	4b	4c	4d	5	6
Year T-2	38.6	66.2	84.1	29.0	26.9	86.2	53.8	61.4	82.0	94.5	87.6	85.5
Year T-1	43.7	70.2	80.4	31.8	32.7	92.0	51.4	70.6	88.2	97.0	94.3	92.0
Total (average of year T-2 and T-1)	*41.2*	*68.2*	*82.3*	*30.4*	*29.8*	*89.1*	*52.6*	*66.0*	*85.1*	*95.8*	*91.0*	*88.8*

This table shows the percentages per de-burdening provision of the JOBS Act used by the EGC companies for the relative year to the IPO. The percentages are based on the number of observation in relation to the available observation for the category. Full details of the provisions as described above: (1) Explicit mentioning of reduced number of provided financial statements, (1a) Reduced number of financial statements provided (less than 3 years) (1b) Reduced number of selected financial data provided (2) Explicit mentioning of delayed application of new accounting standards (3) Explicit mentioning of exemption to comply with new PCAOB rules (4) Explicit mentioning of reduced disclosure regarding compensation of executives (4a) No Compensation Discussion and Analysis provided (4b) Reduced disclosure of compensation for number of NEO's (Disclosure for only three NEO's (4c) Reduced disclosure of compensation related tables (only three tables provided) (4d) Reduced disclosure of compensation for number of years (Disclosure for only two years) (5) Explicit mentioning of exemption for internal control attestation (6) Explicit mentioning of exemption of Dodd-Frank Act requirements.

Table 5 – 'Descriptive statistics of the variables in model 1 (Year T-2 and year T-1)'

Variable	Mean	Median	S.D.	Min	Max	Kurtosis	Skewness
Dependent variables							
CompensationProvision	0.331	0	0.471	0	1	1.518	0.719
CompProvision	0.975	1	0.157	0	1	37.713	-6.060
CDA	0.519	1	0.500	0	1	1.006	-0.079
NEO	0.685	1	0.465	0	1	1.635	-0.797
Tables	0.868	1	0.339	0	1	5.712	-2.171
Years	0.964	1	0.187	0	1	25.646	-4.965
Independent variables							
AvgTotalComp	905,050	475,654	1,484,904	0	14,223,385	25,759	4.335
IncentiveRatio	2.885	0,653	9.304	0	100	72.151	7.674
TotalCEO	1,186,704	513,462	2,378,982	0	19,809,199	32.762	5.054
CEOIncentiveRatio	4.175	0.516	23.644	0	508.067	332.378	16.483
Control variables							
Size	80,035	13,389	170,376	0	991,286	15.71	3.489
ROA	-5.809	-0.198	87.053	-2,164	5.535	596.907	-24.106
Leverage	0.460	0.024	1.701	0	25	101.763	8.932
Ownership	44.61	45.1	29.63	0	100	1.944	0.185

This table shows the descriptive statistics of the variables used in model 1. From this table the mean, median, standard deviation, minimum values, maximum values, Kurtosis values and skewness values can be observed for each variable.

Kurtosis values for the 'CompProvision', respectively 37.713 and -6.060 indicate that the data is non normally distributed and negatively skewed. The 'Years' dependent variable shows the same results with a kurtosis value of 25.646 and skewness value of -4.965. For both dependent variables I drop further analysis using these variables as dependent variable due to the probable biased results of models using these variables. Another observation that can be made from table 5 is the average total compensation for the executives and CEO's which is in line with the averages as presented in Appendix A for the small cap firms. The averages are slightly lower but this is to be expected as the JOBS Act is aimed at smaller firms going public.

Regarding the independent variables and control variables table 5 shows that all the variables show high Kurtosis and skewness values. Because the data of the variables differ substantially over

the different firms in the sample I will take the natural logarithm of certain variables and winsorize the data for the variables which show outliers in the max and min values compared to the means and medians. This will correct the data for possible non normality issues and make the data more easily interpretable. After dropping two observations for outliers and winsorize the 'AvgTotalComp', 'IncentiveRatio', 'TotalCEO', 'CEOIncentiveRatio', and 'ROA' variables the possible non normality issues decreased for those variables. Furthermore, the natural logarithm of the 'IncentiveRatio', 'CEOIncentiveRatio', 'Size', and 'Leverage' variables are taken. Appendix C, panel A shows the adjusted descriptive statistics which do not indicate any further non-normality issues.

As the model used in this thesis will presume a linear model I will perform procedures to check the model for multicollinearity issues. Multicollinearity is the strong correlation between two or more independent variables. When multicollinearity issues exist in the model the regression model estimates become unstable and standard errors can become inflated resulting in less precise estimates. To test whether multicollinearity issues exist I use the Variance Inflation Factor (VIF). In general VIF values greater than ten indicate possible multicollinearity issues. In appendix C, panel B I show the VIF values for the main model used in testing hypothesis 1. The values in the table show no indications of multicollinearity issues based on which can be concluded that no multicollinearity issues exists within the model.

4.3.2 Descriptive statistics for model 2

By testing hypothesis 2 I investigate whether executives in EGC firms receive lower compensation after the voluntary drop out of the EGC status. As the total dataset also includes observations for year T-2, which cannot be a drop-out observation or an observation for year T-1 relative to the drop out, I drop the year T-2 relative to the IPO observations. This results in 978 unique observation for the sample of model 2. The distribution of the sample for model 2 is presented in table 6. From this table it can be observed that 18.9% of the companies which went public under the JOBS Act as IPO immediately dropped out of the EGC status. This might indicate that those companies preferred the de-risking provision of the JOBS Act during their IPO, but do not want to use any further de-burdening provisions that the JOBS Act provides and to reduce the information asymmetry with investors to increase the value of the firm. Furthermore, table 6 shows that by the end of their second fiscal year 37.1% of the EGCs that went public as EGC do not qualify for such a status. This is in line with the earlier discussed findings of Berdejo (2015) as he finds that over forty percent of the issuers that went public as EGC dropped out of the EGC by the end of their second fiscal year. Berdejo explains that this observation limits the expected ongoing benefits of the JOBS Act at the going public decision stage.

Table 6 – 'Distribution of sample for model 2 in years relative to the IPO'

Year relative to IPO	Number of observations not marked as drop out (Percentage of total row)	Number of observations marked as voluntary drop out (Percentage of total row)	Number of observations marked as forced drop out (Percentage of total row)
Year T-1	490 (100%)	0 (0%)	0 (0%)
Year T0	215 (81.1%)	49 (18.5%)	1 (0.4%)
Year T+1	112 (71.3%)	36 (22.9%)	9 (5.8%)
Year T+2	39 (62.9%)	15 (24.2%)	8 (12.9%)
Year T+3	1 (25%)	0 (0%)	3 (75%)
Total	*857 (89.8%)*	*100 (10.2%)*	*21 (2.2%)*

This table shows the number of observations and percentages relative to the year of the IPO for EGC companies, voluntary drop-out companies, and forced drop-out companies. The percentages are based on the number of observation in relation to the available observation for the category.

Table 7 – 'Descriptive statistics of the variables for model 2'

Variable	Mean	Median	S.D.	Min	Max	Kurtosis	Skewness
Dependent variables							
AvgTotalComp	1,072,676	513,872	1,920,841	0	3.03e+07	65.561	6.007
IncentiveRatio	30,970	0.780	968,424	0	3.03e+07	976.001	31.225
TotalCEO	1,506,038	543,227	3,274,251	0	3.03e+07	36.673	5.249
CEOIncentiveRatio	31,000	0.528	968,424	0	3.03e+07	976.0	31.225
Independent variables							
VoluntaryDropOut	0.102	0	0.303	0	1	7.894	2.626
ProvisionPreDrop	0.030	0	0.170	0	1	31.755	5.546
Control variables							
Size	114,610	11,707	258,671	0	3,501,888	45.360	5.017
ROA	-5.244	-0.316	73.095	-2,164	4.566	784.630	-27.053
Leverage	0.453	0.32	1.820	0	27.848	105.389	9.342
Ownership	39.909	36.19	30.451	0	100	1.969	0.370

This table shows the descriptive statistics of the variables used in model 1. From this table the mean, median, standard deviation, minimum values, maximum values, Kurtosis values and skewness values can be observed for each variable.

As previously discussed at the regression diagnostics for model 1 I will test the model for normal distribution of the variables used in the model and multicollinearity issues between variables to ascertain how well the data meets the assumptions of Ordinary Least Squares (OLS). Table 7 shows high Kurtosis- and skewness values for all the variables except ownership indicating possible non-normality issues for those variables. To correct this possible non normality issue I dropped 1 observation based on the shown outlier relating to the compensation variables. As shown in table 7 the compensation related variables show an extremely high max value relative to the mean and median for those variables. To further correct the non-normality issues of the variables I winsorize the 'AvgTotalComp', 'IncentiveRatio', 'TotalCEO', 'CEOIncentiveRatio', 'Size', 'Leverage' and 'ROA' variables and take the natural logartim of the 'IncentiveRatio', 'CEOIncentiveRatio' and 'Size' variables. The 'ProvisionPreDrop' variable concerns a binary variable and therefore it is not appropriate to correct this variable for non-normality issues by winsorizing or taking the natural logarithm. Although non-normality is to be expected due to the low number of observations meeting the set criteria for the 'ProvisionPreDrop' variable I perform additional analyses regarding the

individual components of the compensation disclosure provisions that the JOBS Act provides. I will create a dummy variable 'CDAPreDrop' indicating 1 if the voluntary drop-out firm applied the CDA provision in the last year of the company filed her 10-K filing as an EGC. The same principle will be applied for the 'NEOPreDrop', 'TablesPreDrop', and 'YearsPreDrop' variables and their relating compensation disclosure provision of the JOBS Act. Appendix F, panel A shows the descriptive statistics for those newly created dummy variables and the adjusted descriptive statistics for the corrected variables. The appendix shows lower Kurtosis and Skewness values for the newly created variable compared to the 'ProvisionPreDrop' variable and for all the variables the non-normality issues improved. However, some variables still show relatively high Kurtosis and skewness values and, hence, I have to be very careful in drawing conclusion based on the models which include these variables. In general the corrected variables do not indicate any further non-normality issues.

As I previously discussed for model 1 I presume a linear model and, therefore, investigate whether multicollinearity issues exists. In appendix F, panel B I show the VIF values for the main model used in testing hypothesis 2 which shows an mean VIF of 1.24 for model 2A as well as for model 2ACEO. The values in the table show no indications of multicollinearity issues based on which can be concluded that no multicollinearity issues exists within the model.

Chapter 5

EMPIRICAL RESULTS

In this chapter I discuss the empirical results of the models as formulated and discussed in the previous chapter. The empirical results will be discussed to answer the formulated hypothesis of chapter 3 'Theoretical Framework'. In paragraph 5.1 I discuss the results of empirical model 1 to answer hypothesis 1 and in paragraph 5.2 I discuss the results of empirical model 2 to answer hypothesis 2.

5.1 Results hypothesis 1

To investigate whether EGCs with high compensation for executives prior to an IPO apply the compensation disclosure provision that the JOBS Act provides I used a logistic regression model. In this model I used the application of the compensation provision for the dependent variable and determined whether compensation related independent variables significantly influenced the application of the JOBS Act's compensation disclosure provision. Furthermore, I performed two different analyses based on the minimum requirements of the compensation related disclosures for EGCs. EGCs need to disclose at least for every company the compensation of CEOs, where the titles of the disclosure for the other two named executives might differ. The results of the logistic regressions for model 1A and 1ACEO are tabulated in table 8. In these models the dependent variable used is 'CompensationProvision' which indicates 1 if the EGC disclosed only two years of compensation data, and disclosed compensation data for only three named executives, and did not provide a compensation discussion and analysis, and provided only three compensation tables. When controlling for firm size, profitability, leverage, and insider ownership the top three executives model (model 1A) shows a very small but positive coefficient for the 'AvgTotalComp' variable indicating a positive correlation between the height of the average total compensation for executives in firms who applied all the components of the compensation disclosure provision that the JOBS Act provides. However, the correlation is not considered significant at any of the used significance levels. The CEO model (model 1ACEO) also shows a very small positive coefficient when examining the total CEO compensation and controlling for the same variables. Moreover, the coefficient is considered highly significant and therefore does indicate that EGC with relatively higher compensation for CEOs are more likely to apply all the components of the reduced compensation disclosure provision. Furthermore, model 1ACEO shows a highly significant negative coefficient for the 'CEOIncentiveRatio' variable. This variable is measured by the natural logarithm of the ratio of incentive based compensation to non-incentive based compensation for CEOs. The negative

correlation can therefore be interpreted based on a percent change in the ratio of incentive based compensation. The exact percentage difference can be calculated as $100 * (e^{diff} - 1)$, where e is the exponential and diff is the difference provided by the regression analysis. An increase of 1 in the incentive based compensation ratio for CEOs implies that the EGC is 16.1% less likely to apply all the components of the compensation disclosure provision. This suggest that that non-incentive based compensation is relatively more important in the compensation disclosure decision for EGC.

The results of the regression model in which the regression is performed on components of the reduced compensation disclosure provision are shown in Appendix D. The top three named executives analyses do not show any significant coefficients at a one or five percentage level for the average total compensation variable or the relative importance of the incentive based compensation variable. Only at a ten percentage level a very small negative correlation can be observed for the average total compensation of the top three executive on the reduced number of provided compensation tables by the EGC during their IPO. The CEO models in appendix D do show significant coefficients. When regressing the total CEO compensation and ratio of incentive based compensation for CEOs on the reduced number of named executives officers in the compensation disclosures the same relationships can be found as for the 'CompensationProvision' analysis of model 1ACEO with a high significance. When regressing the total CEO compensation on the reduced CDA provision a very small negative significant coefficient can be observed.

Overall the regression results for the top three named executives models show very small negative coefficients indicating that high compensation for executives prior to an IPO apply (components) of the reduced compensation disclosure provision of the JOBS Act. Although the coefficients show the expected directions the regression results for the top three named executives models are not significant. The CEO models also show negative coefficients overall but for the CEO models coefficients are highly significant. Based on these results it can be concluded that EGCs with relatively higher compensation for CEOs are more likely to apply the compensation disclosure provision of the JOBS Act during their IPOs. Furthermore, the CEO models show that non-incentive based compensation is relatively more important in the compensation disclosure decision for EGCs.

5.2 Results hypothesis 2

To investigate whether executives in EGCs receive a lower compensation after the company voluntary dropped out of the EGC status I used a pooled OLS regression model. In this model I regressed a dummy variable 'VoluntaryDropOut', indicating 1 if the company voluntary dropped out of the EGC status, on the compensation of executives. Furthermore, I included a second independent dummy variable 'ProvisionPreDrop' indicating 1 if the company filed its last 10-K filing before the

Table 8 – 'Logistic Regression results model 1A and 1ACEO'

Variable	Model 1A				Model 1ACEO			
Dependent variable:	*CompensationProvision*				*CompensationProvision*			
	Coef.	**Std. Err.**	**z**	**P>z**	**Coef.**	**Std. Err.**	**z**	**P>z**
AvgTotalComp	6.02e-08	1.39e-07	0.43	0.664				
TotalCEO					5.00e-07	0.047	-3.15	0.001***
Log(IncentiveRatio)	-0.031	0.072	-0.43	0.669				
Log(CEOIncentiveRatio)					-0.149	0.047	-3.15	0.002***
Log(Size)	-0.196	0.024	-0.82	0.409	-0.045	0.024	-1.86	0.062***
ROA	0.086	0.062	1.39	0.165	0.090	0.063	1.43	0.153
Log(Leverage)	0.243	0.048	0.51	0.611	0.017	0.048	0.34	0.731
Ownership	-0.004	0.003	-0.15	0.881	-0.001	0.003	-0.26	0.796
Intercept	-.485	0.258	-1.88	0.060*	-0.412	0.260	-1.59	0.112
Number of observations	633				633			
R-Squared	0.0032				0.0155			

Significant at 10% (*), 5% (**) and 1% (***) levels.

Table 9 – 'Pooled OLS Regression results model 2A and 2ACEO'

Variable	Model 2A				Model 2ACEO			
Dependent variable:	*AvgTotalComp*				*TotalCEO*			
	Coef.	**Std. Err.**	**t**	**P>t**	**Coef.**	**Std. Err.**	**z**	**P>z**
VoluntaryDropOut	-439,762.3	126,185.4	-3.49	0.001***	-605,878.9	185,171.7	-3.27	0.001***
ProvisionPreDrop	696,104.9	216,327.7	3.22	0.001***	969,753.3	317,416.8	3.06	0.002***
Log(Size)	67,597.21	8,418.83	8.03	0.000***	91,384.98	12,365.47	7.39	0.000***
ROA	3,057.159	18,716.29	0.16	0.870	3,262.2	27,462.36	0.12	0.905
Leverage	-83,046.69	92,733.25	-0.90	0.371	-120,867.2	136,112	-0.89	0.375
Ownership	-1,618.834	1,082.828	-1.50	0.135	-3,181.462	1,591.605	-2.00	0.046
Intercept	480,077.5	93,586.52	5.13	0.000***	633,678.9	137,324.7	4.61	0.000***
Number of observations	977				977			
R-Squared	0.1019				0.0900			

Significant at 10% (*), 5% (**) and 1% (***) levels.

drop-out year without providing an CDA, and disclosed only compensation data for three named executives, and provided only compensation data for two years, and provided only three compensation tables. Table 9 shows the pooled OLS regression results for the top three executives analysis (model 2A) and the CEO analysis (model 2ACEO). When controlling for firm size, profitability, leverage, and insider ownership I find for both models highly significant results for both independent variables. The coefficient of the 'VoluntaryDropOut' variable is in both models negative at a one percentage significance level. These results can be interpreted as that the average total compensation for the top three executives as well as the total CEO compensation is significantly lower after the company voluntary dropped out of the EGC status. This is expected based on the formulated hypothesis 2. Regarding the 'ProvisionPreDrop' variable table 9 also shows highly significant coefficients. However, the coefficients for this variable are positive. This correlation can be interpreted as that when the company applies all the components of the compensation disclosure provisions in the last year that the company filed its 10-K form as an EGC results in a higher average total compensation of the executives and a higher total compensation of the CEO after the drop-out.

Although these variables have high Kurtosis values and, hence, I have to be careful in drawing conclusion, these findings are not in line with my expectations. I expected a negative coefficients indicating a higher drop in compensation for firms that voluntary dropped-out of the EGC status and applied all the components of the compensation disclosure provision. The results for model 2A as well as model 2ACEO indicate a drop in compensation of the compensation and seem to confirm hypothesis 2, however, based on the results it cannot be concluded that firms who apply the reduced compensation disclosure provision have a higher drop in compensation.

The empirical results for the models in which the 'ProvisionPreDrop' independent variable is subdivided into the different components of the compensation disclosure provision are shown in Appendix G. Furthermore, this table shows the empirical results for the regressions performed on the ratio of the incentive based compensation to non-incentive based compensation. The results for models 2C, 2CCEO, 2D and 2DCEO do not show any significant coefficients for the 'VoluntaryDropOut' variable. Hence, the relative importance of incentive based compensation does not seem to significantly differ before and after the voluntary drop-out of a firm. Model 2B and 2BCEO do not show different results compared to the discussed results of model 2A and model 2ACEO. Subdividing the compensation disclosure provision into the different components do not seem to influence the discussed results.

Chapter 6

CONCLUSION

In this research I examined the influence of the executive compensation on the executive compensation disclosure provision that the JOBS Act provides. More specifically, this research investigates whether executive compensation determines the application of executive compensation disclosure provisions for EGCs. This research contributes to prior JOBS Act studies, executive compensation studies, and voluntary disclosure studies. Furthermore, this research helps investors to protect themselves from potential motives from executives.

The first hypothesis helps to understand whether EGCs with high compensation for executives prior to an IPO apply the compensation disclosure provision. The analysis of this hypothesis is divided into an analysis regarding the top three named executives and an analysis regarding CEOs. In testing hypothesis 1 a logistic regression model has been used. Overall the regression results for the top three named executives models show very small negative coefficients indicating that high compensation for executives prior to an IPO apply (components) of the reduced compensation disclosure provision of the JOBS Act. Although the coefficients show the expected directions the regression results for the top three named executives models are not significant. The CEO models also show negative coefficients, but for the CEO models the coefficients are highly significant. Based on these results it can be concluded that EGCs with relatively higher compensation for CEOs are more likely to apply the compensation disclosure provision of the JOBS Act in their IPOs. Furthermore, the CEO models show that non-incentive based compensation is relatively more important in the compensation disclosure decision for EGCs.

The second hypothesis included in this research aims at investigating whether EGCs receive a lower compensation after the company voluntary drops out of the EGC status. Furthermore, the influence of the applied compensation disclosure provision at a possible drop in compensation has been investigated. Again, when performing separate analyses for the top three named executives and CEOs I find for both analyses highly significant results. The results indicate that the average total compensation of the top three executives as well as the total CEO compensation is significantly lower after the company voluntary dropped out of the EGC status. Regarding the influence of the compensation disclosure provision the results again show highly significant coefficients. However, the coefficients for this variable are positive. This correlation can be interpreted as that when the company applies all the components of the compensation disclosure provisions in the last year that the company filed its 10-K form as an EGC results in a higher average total compensation of the

executives and a higher total compensation of the CEO after the drop-out. I expected a negative coefficients as I expected the voluntary drop-out firms that applied the reduced compensation disclosure provisions to have a higher drop in compensation. Overall the results show that executives in EGCs receive a lower compensation after the voluntary drop-out. However, based on the results it cannot be concluded that firms who apply the reduced compensation disclosure provision have a higher drop in compensation. These findings are in line with the previously discussed findings of Robinson et al. (2011) who were not able to document that the level of disclosure defects associated with a reduction in excess CEO compensation in the subsequent year. A possible explanation would be that when the executives in EGCs know that they earn an excess compensation they might not want to disclose this excess in compensation, however, it cannot be concluded that this excess in compensation and disclosure defects are driven by tunneling motives.

Based on the results for both hypothesis it can be concluded that CEO compensation does determine the application of executive compensation disclosures for EGCs during their IPOs. However, no such relation can be documented for the average total compensation for the top three named executives. Moreover, based on the results the relative importance of non-incentive based compensation seem to influence the executive compensation disclosures for EGCs during their IPOs. Regarding the influence of the executive compensation and the compensation disclosure decisions for EGC drop-out firms limited amount of evidence has been found. Executives in EGC drop-out firms have lower compensation after the voluntary drop-out, however, based on the results it cannot be documented that the lower compensation is caused by the compensation disclosure provision applied in the year previous to the drop-out of the EGC status.

Limitations and practical implications

This research has several limitations and practical implications which might be of interest for further research. One major limitation is the high kurtosis values of some variables used in model 2 indicating a possible issue for non-normality of the variables used in the model. The high values are to be expected based on the model used in this research and the number of available observations. A limited amount of observations relating to a voluntary drop-out firm year observations is included in the sample due to the limit amount of data available. A possible suggestion for future research regarding this limitation is to perform an analysis using a panel data model in which only unique firms are included in the sample which voluntary dropped out of the EGC status. Due to the limited sample size for the suggested panel data model I accepted the slightly higher kurtosis values in a pooled regression model which allowed me to include a larger sample size. Furthermore, an obvious

suggestion for future research is to extent the sample size in the future when more firm year observations are available.

A second limitation of my research is the adjustments that I had to make on the variables to correct for non-normality issues. Many variables were winsorized to reduce the Kurtosis- and skewness values to more acceptable levels which might influence possible results and the possibility to generalize possible outcomes.

Finally, a suggestion for future research is to examine the individual components of the executive compensation. In my research I mainly focussed on total compensation and the relative importance of incentive based compensation to non-incentive based compensation. In my research I find significant changes in the relevance of the incentive based compensation to non-incentive based compensation when examining the CEO compensation during the IPO. It might be interesting to examine whether this can be explained by an individual component of the CEO compensation.

Chapter 7

Bibliography

Baker, G., Jensen, M., & Murphy, K. (1988). Compensation and incentive: practice versus theory. *Journal of Finance (43)*, 593-616.

Barth, M., Landsman, W., & Taylor, D. (2014). The JOBS Act and Information Uncertainty in IPO Firms. *Stanford University Graduate School of Business Research Paper No.14-26*.

Beatty, R. (1989). Auditor Reputation and the Pricing of Initial Public Offerings. *The Accounting Review 64*, 693-709.

Berdejo, C. (2015). *Going Public After the JOBS Act.* Ohio, LJ, 76.

Boyd, B. K. (1994). Board Control and CEO Compensation. *Strategic Management Journal*(15), 335-344.

Bukh, P., Nielsen, C., Gormsen, P., & Mouritsen, J. (2005). Disclosure of information on entellectual capital in Danish IPO prospectuses. *Accounting, Auditing & Accountability Journal (18 (6))*, 713-732.

Certo, S., Daily, C., Cannella, A., & Dalton, D. (2003). Giving Money to Get Money: How CEO Stock Options and CEO Equity Enhance IPO Valuations. *Academy of Management Journal*(46 (5)), 643-653.

Chaplisnky, S., Hanley, K. W., & Moon, S. K. (2014). The JOBS Act and the Costs of Going Public. *Journal of Accounting Research*, 1-49.

Chong, V., & Eggleton, I. (2007). The impact of reliance on incentive-based compensation schemes, information asymmetry and organisational commitment on managerial performance. *Management Accounting Research (18)*, 312-342.

Core, J., & Guay, W. (1999). The use of equity grants to manage optimal equity incentive levels. *Journal of Accounting and Economics (28)*, 151-184.

Core, J., Holthausen, R., & Larcker, D. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics (51)*, 371-406.

Dambra, M., Field, L., & Gustafson, M. (2015). The JOBS Act and IPO volume: Evidence that disclosure costs after the IPO decision. *Journal of Financial Economics*, 121-143.

Dechow, p., & Sloan, R. (1991). Executive Incentives and the Horizon Problem. *Journal of Financial Economics, 14(1)*, 51-89.

Depoers, F. (2000 (9)). A cist benefit study of voluntary disclosure: some empirical evidence from French listed companies. *European Accounting Review*, 245-263.

Dunbar, C., & Foerster, S. (2008). Second time lucky? Withdrawn IPOs that return to the market. *Journal of Financial Economics 87*, 610-635.

Eng, L., & Mak, Y. (2003). Corporate governance and voluntary disclosure. *Journal of Accounting and Public Policy*, 325-345.

Frydman, C., & Jenter, D. (2010). CEO compensation (No. w16585). *National Bureau of Economic Research*.

Gray, J. S., Meek, G., & Robert, C. (1995). Factors Influencing Voluntary Annual Report Disclosures by U.S., U.K. and Continental European Multinational Corporations. *Journal of International Business Studies (26)*, 555-572.

Guttentag, M. (2013). Protection from what? Investor protection and the JOBS Act. *UC Davis Business Law Journal (207)*, 1-53.

Healy, P. (1985). The Effect of Bonus Schemes on Accounting Decisions. *Journal of Accounting and Economics (7)*, 85-107.

Healy, P., & Palepu, K. (2001). Information asymmetry, corporate disclosure, andthe capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics (31 (1-3))*, 405-440.

Hirshleifer, D., & Suh, R. (1992). Risk, Managerial Effort, and Project Choice. *Journal of Financial Intermadiation*(2), 308-345.

Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics 3*, 305-360.

Jog, V., & McConomy, B. (2003). Voluntary disclosure of management earnings forecasts in IPO prospectuses. *Journal of Business Finance & Accounting (30)*, 125-168.

Kennedy, D., Sivakumar, R., & Vetzal, K. (2006). The implications of IPO underpricing for the firm and insiders: Tests of asymmetric information theories. *Journal of Empirical Finance 13*, 49-78.
Kole, S. (1997). The Complexity of Compensation Contracts. *Journal of Financial Economics*(43(1)), 79-104.
Lambert, R., Lanen, W., & Larcher, D. (1989). Executive Stock Option Plans and Corporate Dividend Policy. *Journal of Financial and Quantitative Analysis*(24(4)), 409-425.
Latham & Watkins. (2013, April 4). *Jobs Act After One Year: A review of the new IPO playbook.* Retrieved June 8, 2016, from LW: https://www.lw.com/search?searchText=a+review+of+the+new+ipo+playbook
Leone, A., Rock, S., & Willenborg, M. (2007). Disclosure of intended Use of Proceeds and Underpricing in Initial Public Offerings. *Journal of Accounting Research 45*, 111-153.
Lerner, J., Shanre, H., & Tsai, A. (2003). Do equity financing cycles matter?: evidence from biotechnology alliances. *Journal of Financial Economics (67 (3))*, 411-446.
Lowrey, M. (2003). Why does IPO volume fluctuate so much? *Journal of Financial Economics (67 (1))*, 3-40.
Lowrey, M., & Shwert, G. (2002). IPO market cycles: bubbles or sequential learning? *Journal of Finance (57)*, 1171-1200.
Lowry, M., & Murphy, K. (2007). Executive stock options and IPO underpricing. *Journal of Financial Economics*(85 (1)), 39-65.
Martin, T. (2012). Tje Jobs Act of 2012: Balancing Fundamental Securities Law Principles with the Demands of the Crowd. *Portland State University - Working paper*, 1-34.
Murphy, K. (1999). Executive Compensation. *Handbook of labor economics, 3*, 2485-2563.
Pagano, M., Panetta, F., & Zingales, L. (1998). Why o companies go public? An empirical analysis. *Journal of Finance (53)*, 27-64.
Parrino, R., & Romeo, P. (2012). JOBS Act eases securities-law regulation of smaller companies. *Journal of Investment Compliance (13 (3))*, 27-35.
Pepper, A. (2015). Long-Term Incentive Plans. In A. Pepper, *The Economic Psychology of Incentives* (pp. 10-25). London: Palgrave Macmillan UK.
Pukthuanthong, K., & Roll, R. (2007). How employee stock options and executive equity ownership affect long-term IPO operating performance. *Journal of Corporate Finance*(13 (5)), 695-720.
Ritter, J., & Welch, I. (2002). A review of IPO activity, pricing, and allocations. *The Journal of Finance 57 (4)*, 795-828.
Sanders, G. (2001). Behavioural Responses of CEOs to Stock Ownership and Stock Option Pay. *Academy of Management Journal (44)*, 477-492.
Schrand, C., & Verrecchia, R. (2005). Information Disclosure and Adverse Selection Explanations. *Working paper, University of Pennsylvania*.
SEC. (1993). *Securities Act of 1993.* Washington: U.S. Securities and Exchange commission.
Stemler, A. (2013). The JOBS Act and crowdfunding: Harnessing the power - and money - of the masses. *Business Horizons (56)*, 271-275.
Tosi, H. L., Werner, S., & Katz, J. (2000). How Much Does Performance Mateer? A Meta-Analysis of CEO Pay Studies. *Journal of Management (26)*, 301-339.
U.S. Securities and Exchange Commission. (2012, April 5). *Jumpstart Our Business Startups (JOBS) Act.* Retrieved May 2, 2016, from SEC: https://www.sec.gov/spotlight/jobs-act.shtml
Westenberg, D. (2012). A Overview of the IPO Process. In D. Westenberg, *Initial Public Offerings: A Practical Guide to Going Public* (pp. 10-20 10-28). Boston: WilmerHale.
Westfall, T., & Omer, T. (2015). The Unintended Consequences of Emerging Growth Company Status on IPO: Auditor Risk and Effort, Valuation, and Underpricing. *University of Nebraska - Lincoln*.
Wharton University of Pennsylvania. (1993-2016, July 26). *Wharton Research Data Services*. Retrieved from Wharton Research Data Services: wrds-web.wharton.ipenn.edu
Willenborg, M. (1999). Empirical Analysis of the Economic Demand for Auditing in the Initial Public Offerings Market. *Journal of Accounting Research 37*, 225-238.
Yermack, D. (1995). Do Corporations Award CEO Stock Options Effectively? *Journal of Financial Economics* (39 (2-3)), 237-269.

Chapter 8

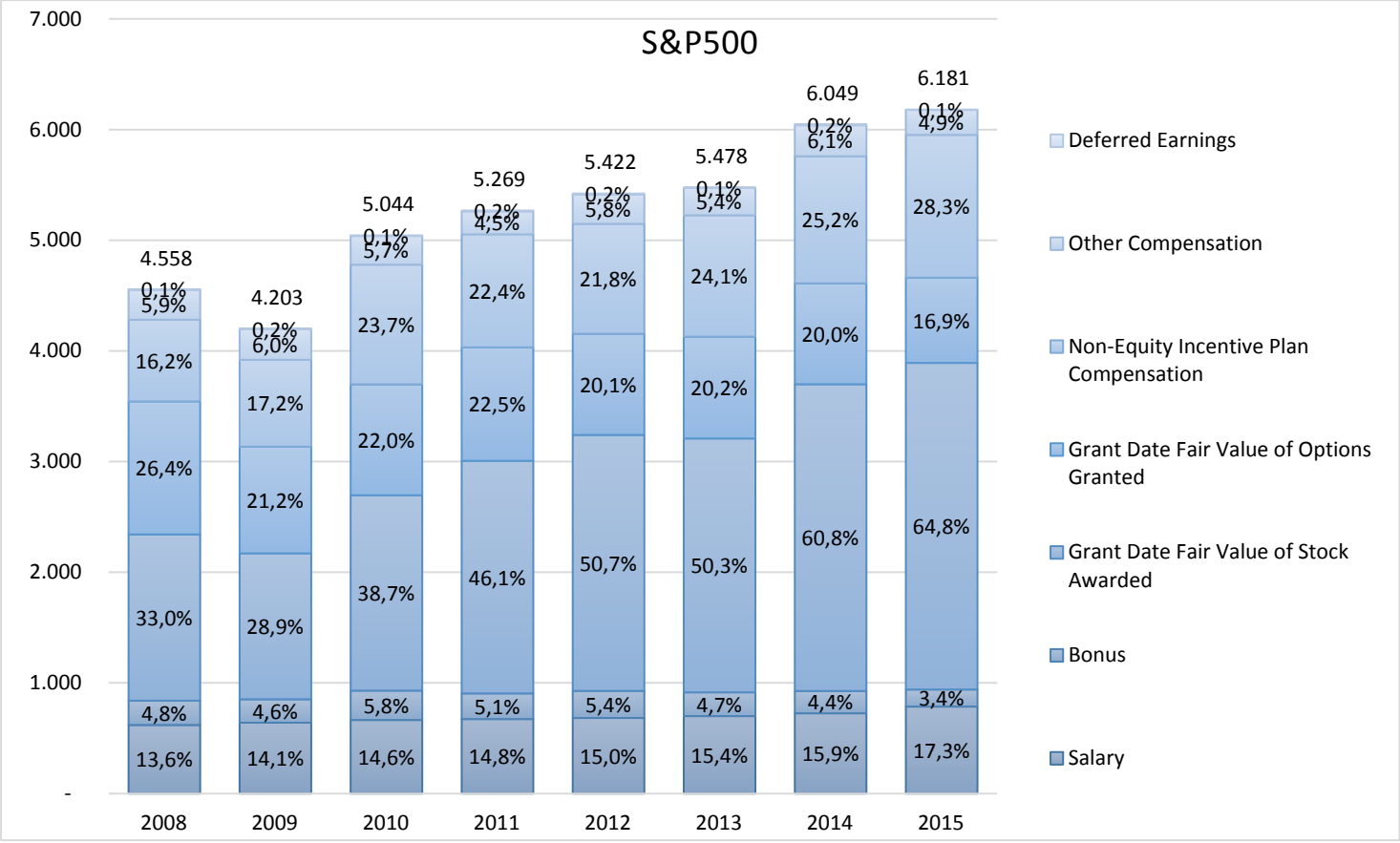
Appendix

Appendix A

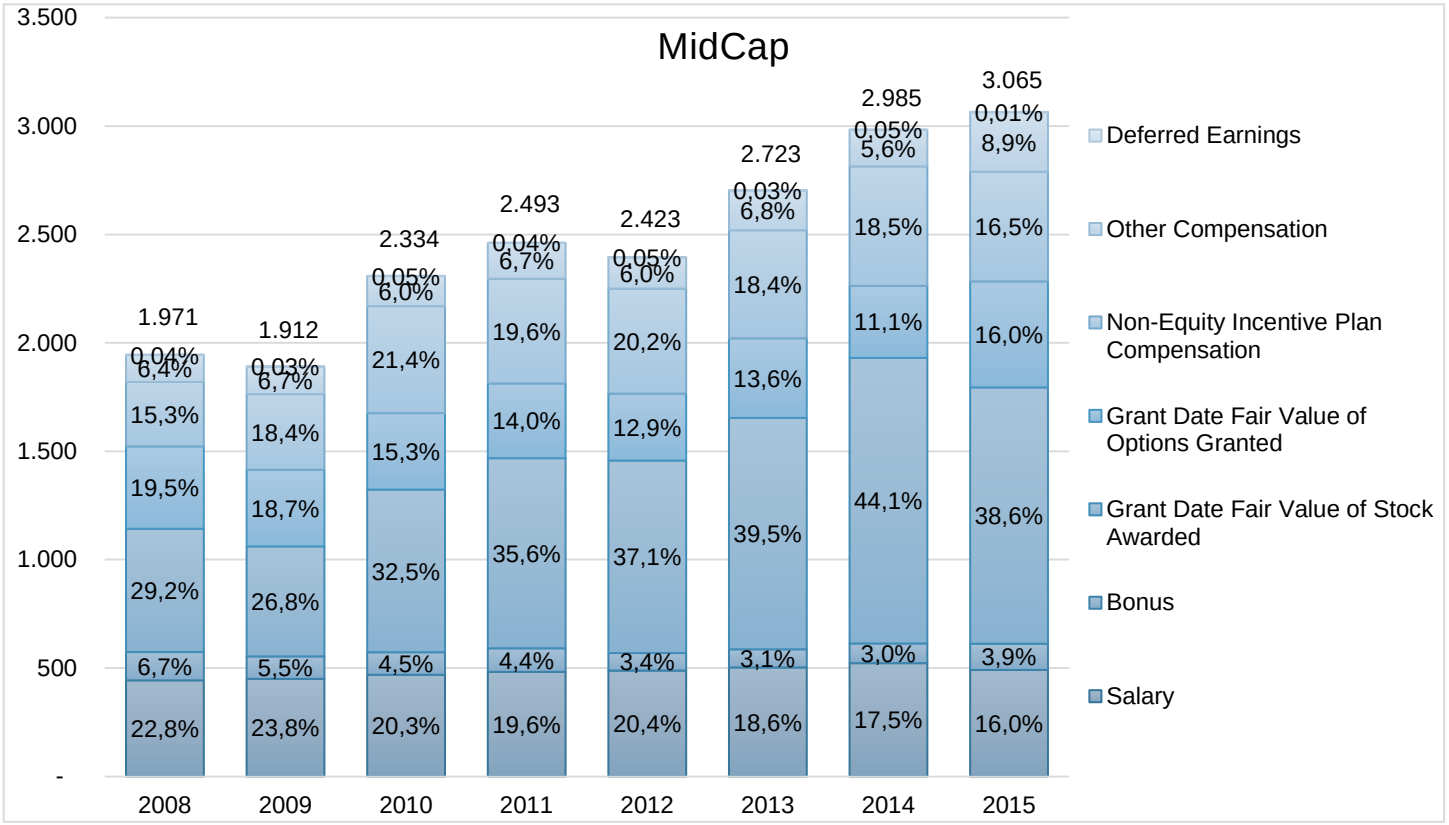
'The structure of executive compensation from 2008 to 2015'

The diagram shows the average level (in thousands of $) and composition (as percentage) of executive pay in S&P 500 firms, MidCap and SmallCap firms from 2008 to 2015 and is based on ExecuComp data. ExecuComp collects compensation data from proxy statements. The figure depicts total compensation and its main components: salaries, bonuses and payouts from long- term incentive plans, the grant-date values of option grants, the grant-date values of restricted stock grants, miscellaneous other compensation and deferred earnings. This figure is an expanded version of Figure 2 in Frydman & Jenter (2010).

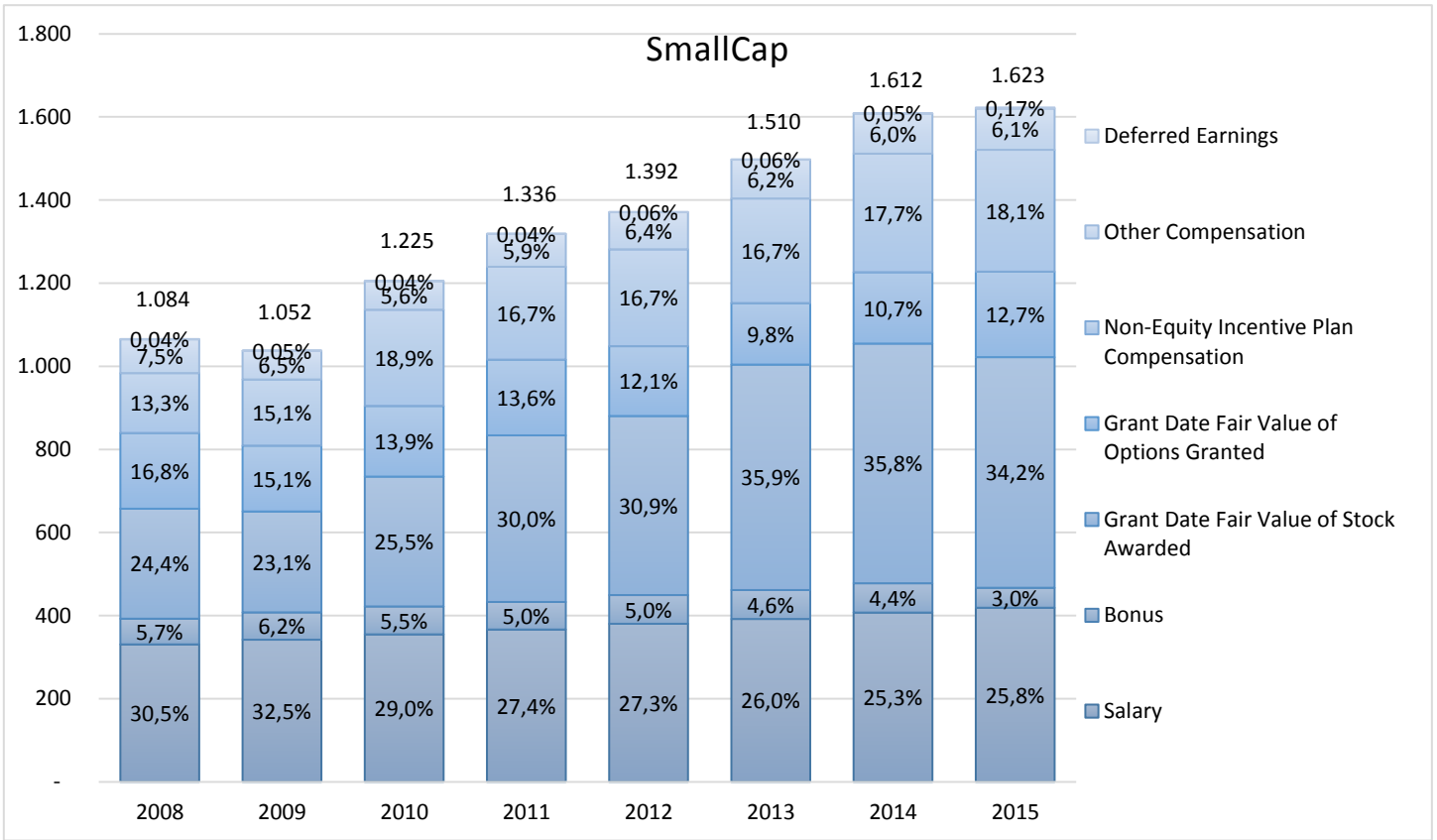
Panel A: 'S&P500 firms'



Panel B: 'MidCap Firms'



Panel C: 'SmallCap Firms'



Appendix B

Empirical model 1 for hypothesis 1

Top three executives analysis

Model 1A (Main model hypothesis 1):

$CompensationProvision = \alpha_1 + \beta_1 * AvgTotalComp + \beta_2 * \text{Log(IncentiveRatio)} + \beta_3 * \text{Log}(Size) + \beta_4 * rOA + \beta_5 * Log(Leverage) + \beta_6 * Ownership + \varepsilon$

Model 1B:

$CDA = \alpha_1 + \beta_1 * AvgTotalComp + \beta_2 * \text{Log(IncentiveRatio)} + \beta_3 * \text{Log}(Size) + \beta_4 * ROA + \beta_5 * Log(Leverage) + \beta_6 * Ownership + \varepsilon$

Model 1C:

$NEO = \alpha_1 + \beta_1 * AvgTotalComp + \beta_2 * \text{Log(IncentiveRatio)} + \beta_3 * \text{Log}(Size) + \beta_4 * ROA + \beta_5 * Log(Leverage) + \beta_6 * Ownership + \varepsilon$

Model 1D:

$Tables = \alpha_1 + \beta_1 * AvgTotalComp + \beta_2 * \text{Log(IncentiveRatio)} + \beta_3 * \text{Log}(Size) + \beta_4 * ROA + \beta_5 * Log(Leverage) + \beta_6 * Ownership + \varepsilon$

CEO analysis

Model 1ACEO (Main model hypothesis 1):

$CompensationProvision = \alpha_1 + \beta_1 * \text{TotalCEO} + \beta_2 * \text{Log(CEOIncentiveRatio)} + \beta_3 * \text{Log}(Size) + \beta_4 * ROA + \beta_5 * Log(Leverage) + \beta_6 * Ownership + \varepsilon$

Model 1BCEO:

$CDA = \alpha_1 + \beta_1 * \text{TotalCEO} + \beta_2 * \text{Log(CEOIncentiveRatio)} + \beta_3 * \text{Log}(Size) + \beta_4 * ROA + \beta_5 * Log(Leverage) + \beta_6 * Ownership + \varepsilon$

Model 1CCEO:

$NEO = \alpha_1 + \beta_1 * \text{TotalCEO} + \beta_2 * \text{Log(CEOIncentiveRatio)} + \beta_3 * \text{Log}(Size) + \beta_4 * ROA + \beta_5 * Log(Leverage) + \beta_6 * Ownership + \varepsilon$

Model 1DCEO:

$Tables = \alpha_1 + \beta_1 * \text{TotalCEO} + \beta_2 * \text{Log(CEOIncentiveRatio)} + \beta_3 * \text{Log}(Size) + \beta_4 * ROA + \beta_5 * Log(Leverage) + \beta_6 * Ownership + \varepsilon$

Appendix C

Regression Model Diagnostics Model 1

Panel A – 'Descriptive statistics of the variables in model 1 after winsorizing and natural log's'

Variable	Mean	Median	S.D.	Min	Max	Kurtosis	Skewness
Dependent variables							
CompensationProvision	0.331	0	0.471	0	1	1.511	0.715
CDA	0.520	1	0.500	0	1	1.006	-0.079
NEO	0.685	1	0.465	0	1	1.639	-0.800
Tables	0.867	1	0.339	0	1	5.689	-2.165
Independent variables							
AvgTotalComp	728,922	475,501	747,728	0	3,035,338	5.903	1.863
Ln(IncentiveRatio)	0.135	0.370	1.343	-7.253	2.384	5.000	-0.868
TotalCEO	899,853	513,348	1.041.803	0	4,105,185	6.024	1.938
Ln(CEOIncentiveRatio)	0.267	0.661	1.316	-7.002	2.584	4.280	-0.670
Control variables							
Ln(Size)	7.743	9.486	4.365	0	13.801	1.795	-0.578
ROA	-0.888	-0.200	1.634	-6.095	0.424	6.688	-2.121
Ln(Leverage)	-0.443	0.231	1.877	-10.146	3.219	4.913	-1.335
Ownership	44.615	45.1	29.634	0	100	1.944	0.185

This table shows the descriptive statistics of the variables used in model 1 after winsorizing the 'AvgTotalComp', 'IncentiveRatio', 'TotalCEO', 'CEOIncentiveRatio', and 'ROA' variables. From this table the mean, median, standard deviation, minimum values, maximum values, Kurtosis values and skewness values can be observed for each variable.

Panel B – 'Multicollinearity test of model 1A and 1ACEO'

Variable	VIF	1/VIF	Variable	VIF	1/VIF
Top Three Executives Analysis (Model 1A)			CEO Analysis (Model 1ACEO)		
Log(Size)	3.51	0.285	TotalCEO	4.82	0.208
AvgTotalComp	2.86	0.350	Log(CEOIncentiveRatio)	3.30	0.303
Ownership	2.50	0.399	Log(Size)	3.29	0.304
Log(IncentiveRatio)	1.33	0.750	Ownership	2.49	0.401
ROA	1.21	0.830	ROA	1.21	0.825
Log(Leverage)	1.15	0.869	Log(Leverage)	1.14	0.875
Mean	*2.09*			*2.71*	

Appendix D

Empirical Result model 1B, 1C and 1D for hypothesis 1

Panel A – 'Logistic Regression results model 1B, 1BCEO, 1C, 1CCEO, 1D and 1DCEO'

Variable	**Model 1B**	**Model 1BCEO**	**Model 1C**	**Model 1CCEO**	**Model 1D**	**Model 1DCEO**
Dependent variable:	*CDA*		*NEO*		*Tables*	
	Coef. (Std. Err.)	**Coef. (Std. Err.)**	**Coef. (Std. Err.)**	**Coef. (Std. Err.)**	**Coef. (Std. Err.)**	**Coef. (Std. Err.)**
AvgTotalComp	1.80e-07		-1.18e-07		-3.31e-07*	
	(1.32e-07)		(1.39e-07)		(1.78e-07)	
TotalCEO		2.67e-07**		4.55e-07***		-6.61e-08
		(1.31e-07)		(1.52e-07)		(1.70e-07)
Log(IncentiveRatio)	-0.070		0.018		0.041	
	(0.070)		(0.074)		(0.105)	
Log(CEOIncentiveRatio)		-0.052		-0.175***		-0.038
		(0.039)		(0.043)		(0.456)
Log(Size)	-0.022	-0.030	0.004	-0.025	-0.051	-0.064
	(0.023)	(0.023)	(0.024)	(0.025)	(0.037)	(0.038)
ROA	0.088	0.091	-0.067	-0.072	-0.051	-0.051
	(0.057)	(0.057)	(0.063)	(0.065)	(0.100)	(0.099)
Log(Leverage)	0.004	0.001	0.001	-0.010	-0.022	-0.019
	(0.045)	(0.045)	(0.048)	(0.048)	(0.066)	(0.066)
Ownership	-0.001	-0.001	0.002	0.001	0.004	0.004
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
Intercept	0.2477155	0.301	0.703***	0.810***	2.330***	2.331***
	(0.247)	(0.247)	(0.264)	(0.270)	(0.398)	(0.401)
Number of observations	633	633	633	633	633	633
Mean VIF	2.09	2.71	2.09	2.71	2.09	2.71
R-Squared	0.0053	0.0080	0.0034	0.0257	0.0262	0.0241

Significant at 10% (*), 5% (**) and 1% (***) levels.
Standard errors reported in brackets.

Appendix E

Empirical model 2 for hypothesis 2

Top three executives analysis

Model 2A (Main model hypothesis 2):

$AvgTotalComp = \alpha + \beta_1 * VoluntaryDropOut + \beta_2 * ProvisionPreDrop + \beta_3 *$ Log(Size) $+ \beta_5 *$ ROA $+ \beta_6 *$ Leverage $+ \beta_7 *$ Ownership $+ \varepsilon$

Model 2B:

$AvgTotalComp = \alpha + \beta_1 * VoluntaryDropOut + \beta_2 * CDAPreDrop + \beta_3 *$ NEOPreDrop $+ \beta_4 *$ TablesPreDrop $+ \beta_6 * YearPreDrop + \beta_7$Log(Size) $+ \beta_8 *$ ROA $+ \beta_9 *$ Leverage $+ \beta_{10} *$ Ownership $+ \varepsilon$

Model 2C:

$Log(IncentiveRatio) = \alpha + \beta_1 * VoluntaryDropOut + \beta_2 * ProvisionPreDrop + \beta_3 *$ Log(Size) $+ \beta_5 *$ ROA $+ \beta_6 *$ Leverage $+ \beta_7 *$ Ownership $+ \varepsilon$

Model 2D:

$Log(IncentiveRatio) = \alpha + \beta_1 * VoluntaryDropOut + \beta_2 * CDAPreDrop + \beta_3 *$ NEOPreDrop $+ \beta_4 *$ TablesPreDrop $+ \beta_6 * YearPreDrop + \beta_7$Log(Size) $+ \beta_8 *$ ROA $+ \beta_9 *$ Leverage $+ \beta_{10} *$ Ownership $+ \varepsilon$

CEO analysis

Model 2ACEO (Main model hypothesis 2):

$TotalCEO = \alpha + \beta_1 * VoluntaryDropOut + \beta_2 * ProvisionPreDrop + \beta_3 *$ Log(Size) $+ \beta_5 *$ ROA $+ \beta_6 *$ Leverage $+ \beta_7 *$ Ownership $+ \varepsilon$

Model 2BCEO:

$TotalCEO = \alpha + \beta_1 * VoluntaryDropOut + \beta_2 * CDAPreDrop + \beta_3 *$ NEOPreDrop $+ \beta_4 *$ TablesPreDrop $+ \beta_6 * YearPreDrop + \beta_7$Log(Size) $+ \beta_8 *$ ROA $+ \beta_9 *$ Leverage $+ \beta_{10} *$ Ownership $+ \varepsilon$

Model 2CCEO:

$Log(CEOIncentiveRatio) = \alpha + \beta_1 * VoluntaryDropOut + \beta_2 * ProvisionPreDrop + \beta_3 *$ Log(Size) $+ \beta_5 *$ ROA $+ \beta_6 *$ Leverage $+ \beta_7 *$ Ownership $+ \varepsilon$

Model 2DCEO:

$Log(CEOIncentiveRatio) = \alpha + \beta_1 * VoluntaryDropOut + \beta_2 * CDAPreDrop + \beta_3 *$ NEOPreDrop $+ \beta_4 *$ TablesPreDrop $+ \beta_6 * YearPreDrop + \beta_7$Log(Size) $+ \beta_8 *$ ROA $+ \beta_9 *$ Leverage $+ \beta_{10} *$ Ownership $+ \varepsilon$

Appendix F

Regression Model Diagnostics Model 2

Panel A – 'Descriptive statistics of the variables for model 2 after winsorizing and natural log's'

Variable	Mean	Median	S.D.	Min	Max	Kurtosis	Skewness
Dependent variables							
AvgTotalComp	897,636	512,453	1,097,372	0	4,399,016	6.712	2.053
Log(IncentiveRatio)	0.324	0.768	1.326	-6.306	2.500	4.514	-0.960
TotalCEO	1,156,011	541,506	1,573,339	0	6,294,367	6.871	2.215
Log(CEOIncentiveRatio)	0.430	1	1.301	-6.081	2.631	4.079	-0.812
Independent variables							
VoluntaryDropOut	0.102	0	0.303	0	1	7.884	2.624
ProvisionPreDrop	0.030	0	0.170	0	1	31.720	5.543
CDAPreDrop	0.051	0	0.220	0	1	17.594	4.074
NEOPreDrop	0.079	0	0.270	0	1	10.774	3.126
TablesPreDrop	0.103	0	0.305	0	1	7.789	2.606
YearsPreDrop	0.105	0	0.307	0	1	7.604	2.570
Control variables							
Log(Size)	7.842	9.361	4.446	0.693	13.441	1.773	-0.528
ROA	-1.106	-0.314	2.094	-8.447	0.207	8.870	-2.578
Leverage	0.243	0.031	0.369	0	1.323	5.130	1.738
Ownership	39.886	36.13	30.458	0	100	1.970	0.371

This table shows the descriptive statistics of the variables used in model 1 after winsorizing the 'AvgTotalComp', 'IncentiveRatio', 'TotalCEO', 'CEOIncentiveRatio', 'Size', 'Leverage' and 'ROA' variables. From this table the mean, median, standard deviation, minimum values, maximum values, Kurtosis values and skewness values can be observed for each variable.

Panel B – 'Multicollinearity test of model 2A and 2ACEO'

Variable	VIF	1/VIF	Variable	VIF	1/VIF
Top Three Executives Analysis (Model 2A)			CEO Analysis (Model 2ACEO)		
ROA	1.42	0.703	ROA	1.42	0.703
VoluntaryDropOut	1.36	0.737	VoluntaryDropOut	1.36	0.737
Log(Size)	1.30	0.779	Log(Size)	1.30	0.770
ProvisionPreDrop	1.25	0.800	ProvisionPreDrop	1.25	0.780
Leverage	1.08	0.922	Leverage	1.08	0.922
Ownership	1.01	0.992	Ownership	1.01	0.992
Mean	*1.24*			*1.24*	

Appendix G

Empirical Result model 2B, 2C and 2D for hypothesis 2

Panel A – 'Pooled OLS Regression results model 2B, 2BCEO, 2C, 2CCEO, 2D and 2DCEO'

Variable	**Model 2B**	**Model 2BCEO**	**Model 2C**	**Model 2CCEO**	**Model 2D**	**Model 2DCEO**
Dependent variable:	*AvgTotalComp*	*TotalCEO*	*Log(Incentive Ratio)*	*Log(CEO IncentiveRatio)*	*Log(Incentive Ratio)*	*Log(CEO IncentiveRatio)*
	Coef. (Std. Err.)	**Coef. (Std. Err.)**	**Coef. (Std. Err.)**	**Coef. (Std. Err.)**	**Coef. (Std. Err.)**	**Coef. (Std. Err.)**
VoluntaryDropOut	-1,244,106***	-1,597,684***	.037	.157	-.193	.234
	(226,252.1)*	(333,157.9)	(0.161)	(0.159)	(0.292)	(0.289)
ProvisionPreDrop			.054	-.049		
			(0.277)	(0.273)		
CDAPreDrop	383,618	505,958.5*			-.428*	-.362
	(1197,200.3)	(290,375.7)			(0.254)	(0.252)
NEOPreDrop	199,381.7	368,556.1			-.273	.001
	(225,016.2)	(331,349.6)			(0.290)	(0.288)
TablesPreDrop	116,766.3	62,982.96			-.200	-.168
	(262,253.1)	(386.167,4)			(0.338)	(0.335)
YearsPreDrop	713,235***	884,465.4**			.950***	.257
	(247,482.2)	(364,447,7)			(0.319)	(0.316)
Log(Size)	66,166.53***	89,198.11***	.046***	.029***	.044***	.028***
	(8,345,774)	(12,301.78)	(0.010)	(0.010)	(0.011)	(0.011)
ROA	5,641.187	7,837.602	-.048**	-.047**	-.044*	-.043*
	(18,613.94)	(27,408.92)	(0.023)	(0.024)	(0.024)	(0.024)
Leverage	-110,972.2	-159,075.9	-.306***	-.023	-.344***	-.037
	(92,169.93)	(135,767.3)	(0.118)	(0.117)	(0.119)	(0.118)
Ownership	-1,420.923	-2,974.449*	.001	-.002	.001	-.002
	(1,078,274)	(1,590.625)	(0.001)	(0.002)	(0.001)	(0.001)
Intercept	473,414.6***	632,412.6***	-.065	.206*	-.055	.222*
	(93,098.67)	(137,093.7)	(0.120)	(0.119)	(0.120)	(0.119)
Number of observations	977	975	977	977	977	977
Mean VIF	2.90	2.90	1.24	1.24	2.90	2.90
R-Squared	0.1240	0.1060	0.023	0.085	0.0340	0.0145

Significant at 10% (*), 5% (**) and 1% (***) levels.
Standard errors reported in brackets.