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The impact of a going-concern audit opinion on corporate governance

Master Thesis in MSc Accounting, Auditing and Control

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Preface and Acknowledgement

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Abstract

This paper examines the effect of a going-concern audit opinion on the corporate governance, measured by the CEO compensation, management ownership, and board size. Previous literature has failed to address whether auditors' opinions affect corporate governance decisions of the companies, such as decisions regarding changes in the remuneration of the CEO or changes in the board size. In the current paper, this relationship is investigated by running multiple OLS regression analyses and by using a sample of firms from the Audit Analytics database from 2002 until 2006. I find that the CEOs of firms that received going-concern opinions suffer 67% decrease in their total compensation, which in economic terms equals to a decrease in the average CEO's total compensation by approximately $4.6 million. Furthermore, companies that received going-concern opinions from their auditors reduce their boards with one person, which means that not only the CEOs, but the directors in the companies also suffer serious consequences after such opinion. I also find that the association between going-concern opinion and management ownership is not significant and it cannot be claimed that a going-concern opinion per se is an important determinant for the decrease in the management share of the capital.

Keywords: Going-concern opinion; Corporate governance; CEO compensation; Management ownership; Board size

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1. Introduction

Financial reporting and disclosure is required because of the information asymmetry and agency conflicts between managers and various stakeholder groups. Regulators, standard setters, auditors and other capital market intermediaries are required to enhance the credibility of management disclosures. Although financial analysts' earnings forecasts and stock recommendations provide valuable new information for the capital market participants, there are some concerns regarding systematic biases in financial analysts' reports, so it is suggested that auditors are the professionals who can best enhance the credibility of financial reports (Healy & Palepu, 2001). Society perceives audit service as an important mechanism for reducing information asymmetry (Beatty, 1989; Willenborg, 1999). It also plays a vital role in mitigating agency problems between managers and shareholders and between shareholders and creditors (Jensen & Meckling, 1976). The information asymmetry is driven mainly because managers have superior information about the company's financial situation than the other stakeholders do. Therefore, owners hire auditors to assure that managers will act in their best interest (Antle, 1982; Watts & Zimmerman, 1986).

According to the professional audit standards every auditor is required to evaluate each client's ability to continue as a going concern and to provide a going-concern opinion when there is a substantial doubt about a client's future viability (AICPA, 1988). According to data, most of the firms that received going-concern opinion over the period 2000 to 2010 have survived for at least one year (Carson et al., 2013). This could suggest that the going-concern opinion has limited predictive value because of the Type I audit reporting errors (Geiger and Raghunandan, 2001), however the extant literature suggests that stakeholders consider going-concern audit opinion predictive (Chen and Church, 1996; Geiger and Raghunandan, 2001), so probably going-concern audit opinion by itself has significant positive effect on the financial condition of the companies. In practice, firms that receive going-concern audit reports try to rebuild the reputation, trust and confidence of investors and general public. In this venue, there is potential interest in exploring the impact of an auditor's going-concern opinion on the corporate governance. For example, whether after receiving going-concern audit report a company that does not have an audit committee is more likely to create such structure. Answers of such questions are likely to be beneficial to both regulators and investors. To date, little research has considered whether firms improve their financial performance after receiving a going-concern opinion, and the possible motivation for this improvement. Probably because auditor qualifications are anticipated to some extent, they do not provide timely signals to the capital market. Hence, it can be assumed that a going-concern opinion would not cause significant changes in the corporate governance of the companies. However, the recent financial distress and bankruptcies of some corporate giants, such as Enron and WorldCom, suggest that boards have not performed their entrusted duties well (Chang, 2009). The main purpose of every board of directors and audit committee is to monitor the management and the CEO and to notice earlier financial problems. It can be assumed that boards of directors that do not notice financial issues in their companies or audit committees that are not familiar with the activities that their firm's managers performs are not effective and do not fulfill their monitoring functions as they are supposed to. The same assumption can be made for companies that receive a going-concern audit report, since this kind of report expresses an auditor's concern regarding the company's future viability, which in turn is directly related to the managers' performance.

In the majority of the articles (e.g., Chen et al., 2013; Chen et al., 1996; Firth, 1978; Sánchez Ballesta et al., 2005), which examine auditor's going-concern opinion, it is explained that companies which received going-concern audit report usually experience varied subsequent outcomes, such as loss of investors, loss of market positions, loss of reputation, etc. However, there are not many studies, which are focused on the improvements or the changes that happen in the companies after a receipt of a going-concern opinion and if those companies undertake steps in order to improve their financial performance and to survive. Such ways to improve a company's financial performance could be a change of the corporate governance strategy, an increase in the voluntary disclosure, a change in the CEO's compensation, a change in the corporate governance structure, etc. This paper examines which corporate governance changes, if any, are related to a going-concern audit opinion, using a sample of US firms.

Since auditor's going-concern opinion is considered a reliable harbinger of future financial difficulties for the companies, for me, personally, it is interesting to examine the corporate governance behaviors of various companies after receiving such an opinion. It is logical to assume that any company in such position would try not to justify the pessimistic expectations of the auditor and consequently would take various measures to improve its financial situation and to restore investors' confidence in the company. There are many well-known measures that companies usually take in order to improve their financial situation, such as reduction in the various expenses, restructuring of departments, etc. However, sometimes such measures are not enough to restore investors' confidence in the company, so different policies and changes must be undertaken in order to regain investors' trust. Some of the measures that can be undertaken could be changes in the corporate governance policy and corporate governance structure, for example, changes in the board size or the board structure of a company, changes in the CEO compensation or changes in the management ownership, etc. In many of the latest financial scandals, such as the accounting failures of Enron and Ahold, along with the accounting frauds in these companies, it is considered the issue of damaged corporate governance principles. Corporate governance is a concept that can be related to "the issues of business ethics, social responsibility, equitable treatment of stakeholders, full and fair disclosure, and the responsibilities of the board of directors and its various committees" (Marshall et al., 2008). Clearly, due to the fraudulent practices of these companies, stakeholders were not treated fairly and managers were not loyal agents of their employers. In my opinion, the relationship between the financial performance of the companies and the related corporate governance policies is very intriguing topic which is worthwhile investigating. Moreover, such an investigation would be useful for regulators, auditors and practitioners.

The research question that I address in my paper is:

Does an auditor's going-concern opinion relate to subsequent changes in the corporate governance?

In order to address this question, the following sub-questions have been considered:

Does an auditor's going-concern opinion relate to changes in the CEO compensation?

Does an auditor's going-concern opinion relate to changes in the stake of the management ownership within the firm?

Does an auditor's going-concern opinion relate to changes in the board size?

This study seeks to expand the current literature by determining whether potential financial distress, as signified by the receipt of a going-concern opinion from an independent auditor, causes significant changes in the corporate governance of a company. I use OLS regression and data for U.S. firms for the period between years 2002 and 2006. First, I would like to investigate the relationship between a going-concern audit opinion and CEO compensation, second, the relationship between going-concern audit opinion and management ownership, and third, the relationship between going-concern audit opinion and board size. The null hypothesis of this paper is that there is no relationship between auditor going-concern opinion and the CEO compensation, management ownership and the board size. If the null hypothesis is rejected it would present an evidence that auditor's going-concern report is indeed a material determinant of the CEO compensation and/or matter for the corporate governance structure of the firm.

Prior research finds that companies that received going-concern audit reports are more likely to switch auditors (e.g., Chow and Rice, 1982; Mutchler, 1984). However, prior literature has not examined the possibility that after receiving a going-concern report companies might be more willing to switch some of the directors in the board of the directors or to make some other changes in the corporate governance structure instead of switching their auditor. Moreover, many articles (e.g., Carcello and Neal, 2000; Parker et al., 2005) that examine the association between corporate governance and going-concern audit opinion are focused on the influence of the corporate governance on the likelihood of a company to receive a going-concern opinion. For instance, Carcello and Neal (2000) examined the relationship between the independence of the audit committee and the likelihood that the client will receive a going-concern opinion. The study of Parker et al. (2005) investigated the impact of certain corporate governance factors on the likelihood of going-concern modification. They, however, do not show if the opposite relation exists, namely, if a going-concern opinion leads to more lax or strict corporate governance structure. This is the main relationship that I address in my paper.

The remainder of this paper is organized as follows. Section 2 discusses the agency theory and the prior literature regarding corporate governance and going-concern audit opinion. Section 3 presents the research question, the sample and the hypotheses of this study, and describes the research method and the variables that are used. Section 4 presents the descriptive statistics and the empirical results. Section 5 concludes.

2. Literature Review

In this section I discuss the agency theory, the information asymmetry problem in the agent-principal relationship and their relation to the corporate governance. After that, I review the existing literature concerning corporate governance, its implications for firm performance and other relevant aspects. Then I review the existing literature concerning going-concern audit opinion, its information content and the value relevance for the stakeholders. Lastly, I create a summary table with some of the articles that are presented in this paper. My aim is to answer the questions: why corporate governance matters; why going-concern audit opinion is important and why stakeholders should take it into consideration when making decisions; and why going-concern audit opinion should have an impact on corporate governance.

2.1 Corporate governance

2.1.1 Corporate governance and the agency theory

In the survey conducted by Fooladi and Farhadi (2011), the auditors give the following definition of corporate governance: "Corporate governance is a controlling mechanism in a company with the aim of ensuring that company will achieve the objective of the stakeholders. It is any rule, law and factor that controls the operation of the company or ensures that company operates in a proper manner in terms of using the money provided by investors."

Going back to the early theory of the agency problem Jensen and Meckling (1976) show that there could be a misalignment between the interests of the firm's shareholders and the interest of the firm's CEO. In the article of Healy & Palepu (2001) it is explained that usually entrepreneurs have certain incentives to overstate the value of different business investment opportunities, for which they have better knowledge and information than savers, in order to attract investors and subsequently to take advantage of these business investments, creating the problem, called an ''agency problem''. In a long run, this could lead to a breakdown in the functioning of the capital market (Akerlof, 1970). Healy & Palepu (2001) discuss several solutions to the information asymmetry problem and the agency problem, such as optimal contracts between entrepreneurs and investors, the establishment of stable board of directors, regulation that requires managers to fully disclose their private information, and the information intermediaries assurance services, in particular the independent auditor's services.

Financial reporting and disclosure is required because of the information asymmetry and agency conflicts between managers and various stakeholder groups. Regulators, standard setters, auditors and other capital market intermediaries are required to enhance the credibility of management disclosures. Although financial analysts' earnings forecasts and stock recommendations provide valuable new information for the capital market participants, there are some concerns regarding systematic biases in financial analysts' reports, so it is suggested that auditors are the professionals who can best enhance the credibility of financial reports (Healy & Palepu, 2001). Society perceives audit service as an important mechanism for reducing information asymmetry (Beatty, 1989; Willenborg, 1999). It also plays a vital role in mitigating agency problems between managers and shareholders and between shareholders and creditors (Jensen & Meckling, 1976). The information asymmetry is driven mainly because managers have superior information about the company's financial situation than the other stakeholders. Therefore, owners hire auditors to assure that managers will act in their best interest (Antle, 1982; Watts & Zimmerman, 1986).

Every CEO is supposed to be a loyal agent of his employer and his/her primary duty is to protect the shareholder's self-interest for which he/she is rewarded with compensation, bonuses or shares in the company. Many studies associate CEO compensation with company performance, some of them examine whether CEOs are switched when the company is performing poorly, while others examine the opposite direction, namely whether CEOs are rewarded for the outstanding performance of their companies (Murphy, 1986; Jensen and Murphy, 1990; Leonard, 1990; Warner et al., 1988). According to Smith and Stulz, (1985) equity compensation is the main mean of aligning the interests of the managers with that of the shareholders, although compensation in stock and stock options is not always a hundred percent linked to firm performance. However, the separation of ownership and control in the companies inevitably causes an agency problem because often these two counterparts have different interests and different attitudes towards risk. According to Jensen and Murphy (1990) managers are not willing to take risks because in case their decision turns out bad, that will ruin their reputation and they can even lose their job. Moreover, executives usually manage only one company at a time, so the risks they bear are very high and cannot be easily diversified away. Managers, thus, have incentives to make relatively safe investments, while shareholders usually prefer risky projects because of their profitability (Smith and Stulz, 1985). So, shareholders and executives have a different investment incentive, which in itself consequently leads to the typical agency problem.

Some authors expound the principal-agent theory with the "hidden action" model which explains that both shareholders and executives are aware of the actions that CEOs must take and the output that must be received, however shareholders cannot observe directly the CEO's actions (Holmstrom (1979); Grossman & Hart (1983)). Therefore, shareholders correlate management's actions with observable performance indicators through contracts. Also, the executive ownership is an important mechanism by which executives may be motivated to act in the best interests of the firm's shareholders. A lot of managers get part of their compensation in the form of ordinary shares in the company and if the stock prices go up, both managers and shareholders benefit, so the former are expected to work harder in order to increase the stock prices.

2.1.2 Board of directors as an element of the corporate governance structure

"Corporate governance is a self-regulatory process of providing guidelines and directions to corporate enterprises with the ultimate aims of achieving transparency of accounting information and accountability of corporate actions. As the setting of corporate governance is different from that of an enacted law, it's implementation requires concerted efforts by shareholders, board of directors, audit committees, managers and other parties in a corporate enterprise." (Ali, 2001) In different countries and companies there are different corporate governance structures. However, the most common corporate governance structures always include board of directors and audit committee. The audit committee is one of the most important corporate governance mechanisms and its main purpose is to ensure external audit quality and monitoring of the management and the internal control. An independent audit committee should monitor the work of the external auditor as well as prevent any pressure from the management to the external auditor. According to Parker (2000) an audit committee should support the external auditor in case of a dispute with the management. In the article of Uang et al. (2006) is stated that a closer monitoring can lead to improved disclosure quality and therefore lower risk of agency problems. Generally, small boards can improve the monitoring function as well as the corporate performance (Yermack, 1996). On the other hand, large boards may be composed of more experts who can help with more efficient management and external audit monitoring (Beasley, 1996; Cohen et al., 2002). However, the most important requirement for one board to be effective and to improve monitoring is to be more independent or to have non-executive directors on the board (Hillier et al., 2005). Fich & Slezak (2008) found that the probability of bankruptcy is significantly affected by a financially distressed firm's governance characteristics. In their article it is stated that smaller and more independent boards with more non-inside directors and with inside directors that own more shares of the company are more effective in avoiding bankruptcy. Also, corporate governance mechanisms, such as an effective board, can potentially reduce both adverse selection and agency problems (Huang & Tompkins, 2010). Other characteristics that have significant effect on the effectiveness of the corporate governance structure, besides board independence, are: board size; audit committee size, independence, expertise and diligence (Mohamad-Nor et al., 2010). Some problems associated with the corporate governance structure may occur if the CEO serves a dual position - a CEO and a chairman of the board. The reason is that such a dual position usually signifies a concentration of a decision-making power and also damages the board independence and reduces the oversight ability of the board (Mohamad-Nor et al., 2010). Huang & Tompkins (2010) found that that investors react more positively to firms in which different people hold the CEO and the board chairman positions.

2.1.3 Corporate governance and its implications for firm performance

In the study of Farber (2005), it is found that after fraud detection companies usually take measures to improve the quality of the board of directors and audit committee activity in order to restore the trust of the society. Moreover, it is found a positive association between the magnitude of the increase in outside director percentage and buy-and-hold abnormal return for three-year period after fraud detection. From this article it can be concluded that companies' measures to improve their financial performance are inevitably related to the improvement in the quality of the board of directors and audit committees as the most important elements of the corporate governance structure. So, in my opinion if there is a going-concern audit report issued, companies will try to improve their financial situation and to restore the society's trust again through some change in the corporate governance structure.

Generally management communicates firm performance and governance to outside directors mainly through financial reporting and disclosure (Healy & Palepu, 2001). However, some of the financial scandals in the recent years (e.g., Enron) attracted the attention of the society and a lot of concerns regarding corporate governance quality were raised. Consequently, regulators instituted rules intended to strengthen the quality of corporate governance. For example, there is an overall strengthening of corporate governance in the post-SOX period which enhances the independence of both the internal audit committee and the external auditors (Chambers and Payne, 2008). The main idea behind these rules is that stronger corporate governance is associated with more credible financial reporting and less financial problems for the companies. On the other hand, weaknesses in the corporate governance can cause poor financial reporting quality, earnings manipulations, financial statement fraud, and weaker internal controls (Dechow et al. (1996); Carcello and Neal (2000)). Moreover, corporate governance can have a significant effect on the probability of a troubled company to go bankrupt, given a measured extent of distress (Fich & Slezak, 2008). This effect can be expressed in two ways. First, there are some recent cases that can be pointed out as examples of corporate governance failures; for example, the recent Enron and WorldCom scandals provide clear evidence that financial and accounting data can be manipulated to disguise poor performance. So, corporate governance can potentially influence the accuracy of the financial and accounting disclosures used to measure the true condition of the firm. Second, the effectiveness of management's response to distress will likely depend upon the characteristics of the firm's governance structure. So, the likelihood of avoiding bankruptcy will also depend on the capabilities of the management to respond to a given level of distress, which in turn depends upon the firm's governance structure. In 2002, Standard & Poor's developed a comprehensive framework for evaluation corporate governance that is based on four governance components: ownership structure and influence, financial stakeholders' rights and relations, financial transparency and disclosure, and board structure and processes (Standard & Poor, 2002). According to Ashbaugh-Skaife et al. (2006) board structure and processes deals with such things as: "(1) board size and composition in terms of proportion of inside, outside, and affiliated directors; (2) board leadership and committee structure; (3) how competent and engaged board members are; (4) whether there are a sufficient number of outside independent directors on the board that represent the interests of all stakeholders, and how those members are distributed across the various committees; and

(5) whether board members are remunerated and motivated in ways that ensure the long-term success of the company".

2.2 Going-concern opinion

2.2.1 Information content of the going-concern audit opinion

Statement on Auditing Standard (SAS) No. 59 (AICPA 1988) requires that, when the auditor concludes that there is a substantial doubt about the ability of an entity to continue as a going concern, and such doubt remains after considering management's plans and other mitigating factors, the auditor must modify the audit opinion to indicate such doubt. Inevitably the going-concern audit opinion should be related to the concept of audit quality. Under this concept it is understood the ability of an auditor to detect accounting misstatements and also it is related to the degree of auditor independence. According to DeAngelo (1981a), audit quality consists of two main stages. First, a material misstatement must be detected, and second, the material misstatement must be reported. Moreover, Titman and Trueman (1986) propose that a good auditor provides precise information regarding the firm's value. Users of financial statements perceived audit reports to provide absolute assurance that company financial statements have no material misstatements and do not perpetrate fraud (Epstein & Geiger, 1994). However, according to the auditors, audit quality is regarded as strict adherence to GAAS/ISA requirements.

As mentioned above, when there is a substantial doubt about an entity's ability to continue to exist and operate, professional auditing standards require the independent auditor to disclose the uncertainty in the auditor's opinion (Jones, 1996). In particular, the auditor has to assess the continuity ability of the client for a reasonable period of time, not to exceed one year beyond the date of the financial statements being audited. When assessing going concern status of a company, independent auditors should consider such problems as negative financial trends, defaults on loans or similar agreements, and non-financial internal and external matters, such as work stoppages or substantial dependence on the success of a particular project (AICPA 1988). If such conditions and events are identified, the auditor should discuss and evaluate management's plans to mitigate the effects of these adverse conditions or events. If the auditor believes that management plans could not be able to overcome the negative trends in the company, the auditor's report should be modified by adding an explanatory paragraph, explaining the auditor's doubt of the entity's ability to survive, following the opinion paragraph (AICPA, 1988; Martens et al., 2008). Lenard, et al. (1998) state that when the auditor verifies the financial condition of any company in the annual audit, the auditor must provide the audit report to be consolidated in the company's financial statement. One of the important things that must be solved is whether the company may survive or not (maintain as a going concern). A going-concern audit report indicates that according to the auditor's evaluation, there is a risk that the company may not survive. From an auditor's point of view, such decision involves several analytical steps. The auditor must take into account the firm's profitability, debt payment capability, liquidity needs in the future, and economic conditions that affect the firm (Lenard, et al., 1998). Furthermore, the prior literature considers going-concern decisions as a two-stage process. The first is the identification of a company with a potential going-concern problem and the second stage is the determination of whether a company with going-concern problem should receive an audit report with a going-concern opinion. The first stage depends on the level of financial distress of the company and auditor's competence, while the second stage is related to auditor independence (Ruiz-Barbadillo et al., 2004). A company can be defined as distressed if it fulfills at least one of the following six conditions: negative retained earnings, negative operating income, negative net income, negative working capital, negative net worth, and negative cash flows (Martens et al., 2008). In order to avoid such trends interactions among the audit committee, the external auditor, the internal auditor, the board, and the management are crucial to effective governance and to achieving high quality financial reporting (Sarbanes-Oxley Act, 2002).

2.2.2 Going-concern opinion and its value relevance for the stakeholders

Truly auditor's going-concern opinion has been a popular subject in the last decade and continues to be a concern of many companies, investors and regulators. Mutchler (1985) and Menon & Schwartz (1987) state that information provided by the auditor can be really useful for investors because auditors generally have better inside knowledge of the client's activities and future plans. In addition, Hopwood et al. (1989) found that the independent audit report has very important value regarding client bankruptcy prediction because some of the information, acquired by the auditor, may not be available to the users of the financial statements, such as investors and analysts. The main objective of the auditor's going-concern opinion is to provide users of financial statements with an early warning of potential financial problems in the company. Auditor’s going-concern opinion can be seen as a valuable risk communication to the equity market (Blay et al., 2011). Financial distress not accompanied by an auditor’s going-concern modified opinion may be interpreted by the market participants as a positive signal showing that the firm is going through financial stress, but the risk of business failure is not severe and that it may not follow liquidation procedure (Blay et al., 2011). This may mislead the users of the financial statements for the true performance of the company. Yet, evidence from different studies that examine the stock market reaction to audit qualifications suggest that most of the information provided by auditors reports is anticipated by the market and that auditor qualifications confirm information already available to investors (Healy & Palepu, 2001; Dopuch et al., 1986). However, an experiment conducted by O’Reilly (2010) confirms that an auditor’s going-concern opinion is perceived to be useful for valuing stocks as it is negative signal about the company’s viability. Moreover, the usefulness of the auditor’s opinion is greater when it provides a signal that differs from what the market expects. Auditors are capable of providing such signal to the market due to their expertise in assessing going-concern issues, as well as their access to inside company information. Investors consider auditor’s information relevant even when the report confirmed prior market expectations, so it can be concluded that investors perceive auditor’s judgement regarding client viability as useful and important piece of information for valuing a company’s common stock (O’Reilly, 2010). In the article of Kothari (2001) it is suggested that investors typically regard accounting information as credible because of the fact that stock prices react to earnings announcements. The study of Jones (1996) shows that independent auditor’s going-concern evaluation has information content and the author proved this by examining the market reaction to the release of the auditor’s opinion. Precisely because investors and other users of financial statements believe that an auditor’s opinion is credible, the companies which received a going-concern opinion would try to change their corporate governance strategy and structure to show that they take really seriously the auditor’s report and take certain measures in order to improve their financial performance and to avoid bankruptcy.

Furthermore, studies performed by Dopuch et al. (1986), Jones (1996) and Loudder et al. (1992) provide evidence of negative abnormal stock price returns following the receipt of going-concern opinions. This negative stock price impact of going-concern opinions suggests that the auditor's opinion regarding the financial health of the company is important for the market participants. The paper of Schaub (2006) also shows evidence of an overreaction of investors to managers' announcements in the major financial media that the firms under their management are to receive a going-concern report. Also, in the article of Chen et al. (2013) it is explained that managers have incentives to avoid receiving going-concern opinion in order to reduce the risk of litigation. Furthermore, in order to grant financing some capital providers require firms to hire an independent auditor to check their financial statements, even when it is not required by regulation (Healy & Palepu, 2001). This implies that banks consider auditors as enhancing credibility. Consequently, investor's reaction regarding going-concern audit report is even more negative when the report cites problems with obtaining financing, which suggests that the going-concern audit report provides new information to investors. Also, the institutional investors are the main driver of the negative reaction to the going-concern audit reports (Menon & Williams, 2010).

One problem discussed in the prior literature regarding going-concern audit opinion is the self-fulfilling prophecy effect (Mutchler, 1984). This effect represents the belief that a client will go bankrupt as a result of a going-concern opinion. Some auditors take this effect into consideration when issuing a report, while others believe that self-fulfilling prophecy effect does not exist. However, it is difficult to distinguish between an auditor's going-concern opinion and other factors causing financial distress. Also, the significance of the going-concern opinion could be simply due to the fact that the auditor has private information that is incorporated in the auditor's opinion (Vanstraelen, 2003).

2.3 Corporate governance and going-concern audit opinion

Some prior studies document an association between corporate governance factors and financial distress (Elloumi and Gueyié, 2001; Lee and Yeh, 2004). In the article of Lee and Yeh (2004) it is stated that firms with weak corporate governance are vulnerable to economic downturns and also the probability of falling into financial distress increases for these kinds of companies. In an article of Carcello and Neal (2003) is mentioned that within the most financially distressed companies there are problems concerning the interactions between auditors, audit committees, and management, so it can be argued that an efficient corporate governance mechanism is vital for the survival of financially distressed companies. Probably the same is true for the companies that received a going-concern audit report because in the aforementioned articles is explained that a going-concern opinion can further worsen the financial distress of those firms. Therefore, I expect that after receiving going-concern opinion, companies will try to improve their corporate governance and make it more effective in order to survive and avoid bankruptcy. However, there are not many articles which can clarify what kind of measures companies use to resist the financial difficulties. Usually, companies which have some financial difficulties use financial decisions for stabilization, such as reduction in the wages of employees, reduction in the costs for advertising, etc., but there are many non-financial decisions and measures that also have impact on the firm survival. Examples are a reduction in the number of insider directors, hiring additional experts in the audit committee, change of the CEO or decrease in his/her compensation, etc. In the article of Vichitsarawong et al., (2010) it is explained that after the Asian financial crisis in 1997/8 the implementation of various corporate governance reform measures have improved earnings conservatism and timeliness among companies in Hong Kong, Malaysia, Singapore, and Thailand. Since certain improvements in the corporate governance can contribute to the improvement of the financial state of the economy after a financial crisis, it is absolutely plausible to assume that certain changes in the corporate governance would improve the financial performance of a company that received a going-concern audit opinion. Other studies have showed the effect of an audit opinion on capital markets (Firth, 1978) or manager's compensation (Chow and Rice, 1982). However, to my knowledge there is no research which shows the effect of audit opinion, especially going-concern audit opinion, on corporate governance.

Table 1 Summary table of the main articles used in the paper

Author/s	Name of the article	Research method	Main findings
Allen Blay, Marshall Geiger, and David North	The Auditor's Going-Concern Opinion as a Communication of Risk (2011)	Cross-Sectional Time-series Analysis	The market interprets the going-concern modified audit opinion as an important communication of risk that results in subsequent changes in the market valuation of distressed firms.
Ann Vanstraelen	Going-Concern Opinions, Auditor Switching, and the Self-Fulfilling Prophecy Effect Examined in the Regulatory Context of Belgium (2003)	Logistic regression	Going-concern opinions significantly increase the probability of bankruptcy. If companies receive a going-concern opinion, they are more likely to switch their auditors at the end of the mandatory term.
Hamid Mehran	Executive compensation structure, ownership, and firm performance (1995)	OLS regression	Firm performance is positively related to the percentage of equity held by managers and to the percentage of their compensation that is equity-based.
Chingliang Chang	The Corporate Governance Characteristics of Financially Distressed Firms: Evidence from Taiwan (2009)	Logistic regression analysis	There is a positive correlation between board size and financial distress. Boards with more outside directors are less likely to fall into financial distress compared to boards with less outside directors.
Krishnagopal Menon and David Williams	Investor Reaction to Going Concern Audit Reports (2010)	OLS regressions	There is a negative excess returns when the going-concern audit report is issued. The reaction is more negative if there are cited problems with obtaining financing or some technical violation of a debt covenant.

Frederick L. Jones	The Information Content of the Auditor's Going Concern Evaluation (1996)	OLS regression	The auditors' reports contain important information. The mean abnormal returns surrounding the release of the auditor's report are lower for going-concern opinions than for clean opinions.
David B. Farber	Restoring trust after fraud: does corporate governance matter? (2005)	OLS regression	There is a positive association between fraud detection and subsequent improvements in the quality of the board of directors and audit committee activity. Also, after fraud detection there is an increase in the percentage of outside directors.
Dennis M. O'Reilly	Do investors perceive the going-concern opinion as useful for pricing stocks? (2010)	An experiment with financial analysts	The going-concern opinion is perceived as relevant piece of information for valuing a company's common stock by investors. The participants consider the going-concern opinion as relevant even when the report confirmed prior market expectations.
Mark Schaub	Investor overreaction to going concern audit opinion announcements (2006)	OLS regression	Investors overreact to going-concern opinion announcements made in the major financial media. After such announcements there is a significant abnormal loss followed by a cumulative significant average gain in the 10-day post-announcement trading.
Eliezer Fich and Steve Slezak	Can corporate governance save distressed firms from bankruptcy? An empirical analysis (2008)	Hazard analysis	The probability of bankruptcy is significantly influenced by a distressed firm's governance characteristics. Smaller and more independent boards with a higher ratio of non-inside directors and with larger ownership percentage for the inside directors are more effective at avoiding bankruptcy.

From the prior literature it becomes clear that corporate governance is the primary mechanism that companies use to set their objectives and strategies and to perform the subsequent monitoring and controlling function. Corporate governance comprises of different policies and procedures which are mainly conducted by the board of directors, the management, the CEO, etc. In my paper I represent corporate governance with three variables, which can be classified as corporate governance elements, namely - board size, CEO compensation and management ownership. Board size, board independence, expertise and diligence are often cited as the determinants of effective corporate governance. Most of the mentioned articles explain that an efficient corporate governance mechanism can reduce the agency problem between the management and the shareholders. It can also significantly improve the financial position of the companies. Moreover, an effective corporate governance mechanism can even help in avoiding bankruptcy. As a whole, it is suggested that effective corporate governance is associated with more credible financial reporting and less financial problems for the companies, while weaknesses in the corporate governance can cause poor financial reporting quality, earnings manipulations, financial statement fraud, and weaker internal controls (Dechow et al. (1996); Carcello and Neal (2000)).

Furthermore, there are articles showing that better corporate governance is associated with positive auditor opinion; however there is lack of research on the opposite relation – whether going-concern audit opinion is associated with changes in the corporate governance. When performing audit engagement every auditor is obligated to evaluate the company's ability to continue as a going concern. As evidenced by most of the articles auditor opinion, in particular auditor going-concern opinion, matters for investors and usually it is taken into consideration when making financial decisions. According to Schaub (2006) investors even overreact to going-concern announcements, which cause significant abnormal losses for the companies. Therefore, in my opinion, the companies which received a going-concern opinion would try to change their corporate governance strategy and structure to show that they take really seriously the auditor's report and take certain measures in order to improve their financial performance, to avoid bankruptcy and to restore investors' trust.

In my paper I study whether the companies that received a going-concern opinion undertake some changes in their board size, CEO compensation, and management ownership in order to avoid future bankruptcy and to improve their performance.

3. Research design

This study aims to measure the impact of an auditor's going-concern opinion on the corporate governance. Corporate governance is represented by three proxies – CEO compensation, management ownership and board size. In this section I introduce the research question, the hypotheses, the data sample, the methodology, and the variables description. Furthermore, Libby boxes are created and validity issues are discussed.

3.1 Research question and hypotheses

3.1.1 Research question

The research question that I address in my paper is:

Does an auditor's going-concern opinion relate to subsequent changes in the corporate governance?

In order to address this question, the following sub-questions have been considered:

Does an auditor's going-concern opinion relate to changes in the CEO compensation?

Does an auditor's going-concern opinion relate to changes in the stake of the management ownership within the firm?

Does an auditor's going-concern opinion relate to changes in the board size?

3.1.2 Hypotheses

The article of Mehran (1994) suggests that the form of compensation is the main motivation for managers to increase firm value. Furthermore, it is explained that there is a positive relationship between firm performance, the percentage of equity held by managers, and the percentage of their compensation that is equity-based. Jensen and Meckling (1976) argue that executive compensation structure can influence a firm's performance. The article of Core et al. (1999) associates CEO compensation with agency problems related to weak corporate governance. According to this paper the CEOs at firms with greater agency problems receive greater compensation; however these firms perform worse on average. Tosi & Gomez-Mejia (1994) find a positive relationship between CEO compensation, monitoring and firm performance. Since prior literature often associates CEO compensation with firm performance, I expect that the CEO of a company that received a going-concern audit opinion would experience a decrease in his/her compensation.

Hypothesis 1: A firm that received a going-concern audit opinion would reduce its CEO compensation.

I decided to include management ownership as a proxy for corporate governance because it captures the degree of the management power. Many articles claim that equity compensation results in better corporate governance. (Ashbaugh-Skaife, 2004; Jensen, 1993; Yermack, 2003). Furthermore, Yermack (2003) states that tying management compensation at least partly to firm performance generally leads to increased performance. Moreover, large percentage of management ownership can be associated with higher level of alignment between the interests of the management and the other shareholders. However, larger ownership also means more management power, which makes replacing or firing a CEO harder (Huang & Tompkins, 2010). A model presented by Stulz's (1988) shows that the firm value at first increases with inside ownership, but when inside ownership gets too high, it starts decreasing. I expect that a going-concern audit opinion would lead to a better monitoring by the firm and decrease in the power of the management.

Hypothesis 2: A firm that received going-concern audit opinion would reduce its management ownership.

It is more likely that larger boards have more communication problems than smaller boards. Furthermore, larger boards are often considered ineffective in monitoring the actions and the policies of top management (Jensen, 1993). In some articles is observed an inverse relationship between board size and firm value (Eisenberg et al., 1998; Mak & Kusnadi, 2005). Also, according to Helland and Sykuta (2005), firms with smaller boards are less likely to be sued. This hypothesis tests whether board size correlates with going-concern audit opinion. In this study, board size is measured by the total number of directors in a board. I expect that firms that received going-concern audit opinion would experience a decrease in their board size.

Hypothesis 3: A firm that received going-concern audit opinion would experience a reduction in its board size.

3.2 Methodology, sample, variables, Libby boxes and validity

3.2.1 Sample

I use data for U.S. firms that are included in the Audit Analytics Database for the period between years 2002 and 2006. My sample is thus representative of the U.S. economy as it includes the leading large, mid-, and small capitalization firms. I use four different databases to obtain all variables that I use in this study and I delete all firm-year observation for which one or more variables are missing, due to the matching process. I am left with 4602 firm-year observations and 1180 unique firms in the cross-section for the CEOs compensation specification. In order to gather the data on CEOs compensation I use ExecuComp database, which is part of Compustat database. Management ownership regression includes 4924 firm-year observations and 1635 unique firms. In order to gather the data on management ownership I use GMI Ratings database. Furthermore, I use 5534 firm-year observations and 1749 unique firms in the cross-section for the board size specification. Data on board size is available at GMI Ratings database. I obtain data on auditors' going-concern opinions from Audit Analytics database. At the end I am left with 64 going-concern audit opinions. To obtain financial indicator variables, such as leverage ratio, ROA and firm revenues, I use Compustat database. In order to obtain data about audit fees and institutional ownership I use Audit Analytics database and Thomson Reuters database.

3.2.2 Methodology

I use OLS regression and an unbalanced panel data first to investigate the relationship between a going-concern audit opinion and CEO compensation, second the relationship between going-concern audit opinion and management ownership, and third the relationship between going-concern audit opinion and board size. The null hypothesis of this paper is that there is no relationship between auditor going-concern opinion and CEO compensation, management ownership and board size. If the null hypothesis is rejected it would present an evidence that auditor's going-concern audit report is indeed a material determinant of CEO compensation, management ownership and board size and/or matter for the corporate governance structure of the firm. I control for factors that have been previously found to be related to CEO compensation, management ownership, board size and corporate governance. Such factors are total fees paid by the firm to its auditor (TOTFEES), firm size (SIZE), leverage (LEV), and profitability (ROA). Board size (BOARD_SIZE) is used as a control variable for the CEO compensation regression and the management ownership regression.

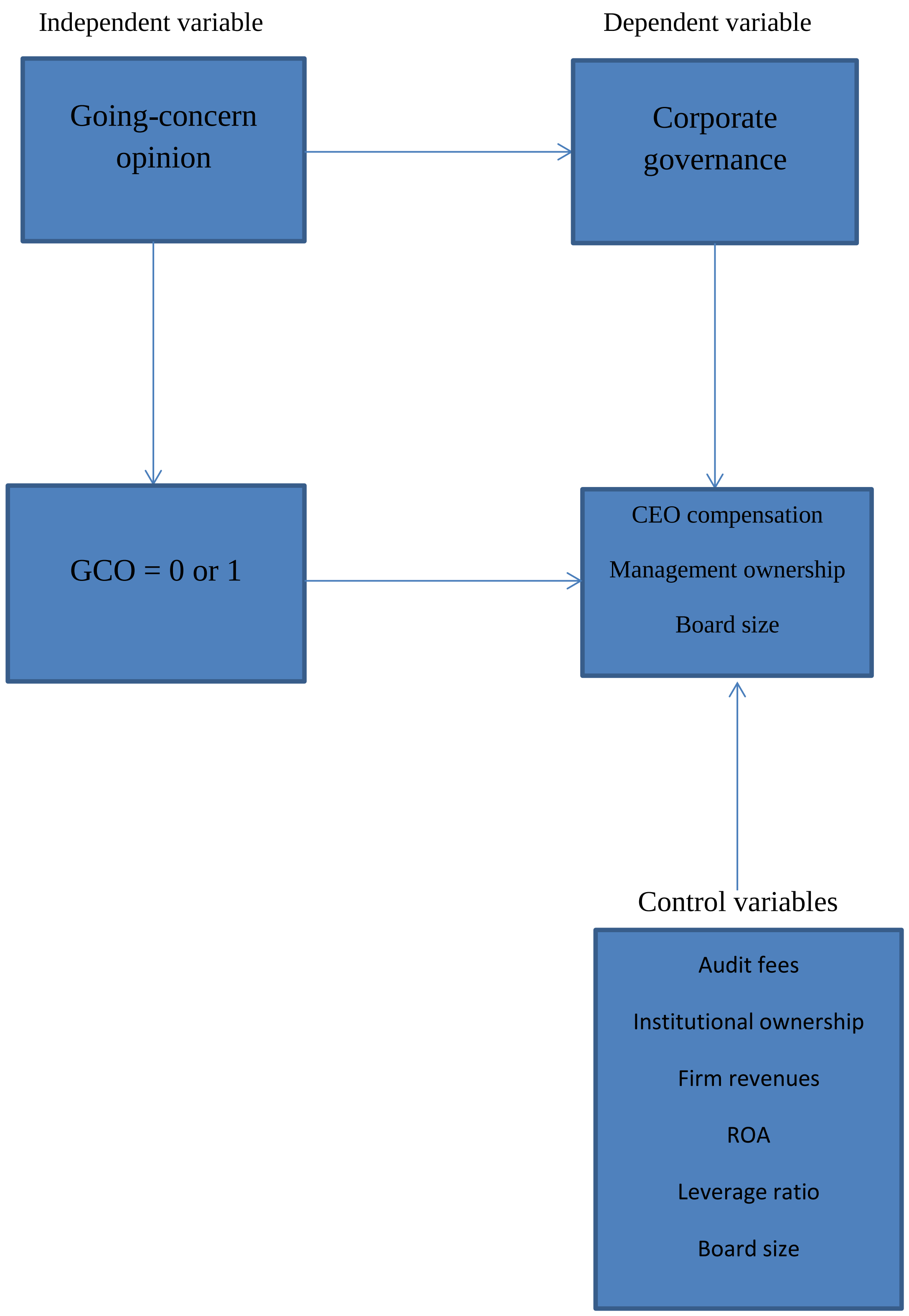
The regression models that I use in my study are:

$$(1)\ Log(CEO\ compensation)_{it} = \alpha + \beta_1\, GCO_{it} + \beta_2\, TOTFEES_{it} + \beta_3\, \%INST_{it} + \beta_4\, SIZE_{it} + \beta_5\, LEV_{it} + \beta_6\, ROA_{it} + \beta_7\, BOARD\_SIZE_{it} + \varepsilon_{it}$$

$$(2)\ Log(Management\ own)_{it} = \alpha + \beta_1\, GCO_{it} + \beta_2\, TOTFEES_{it} + \beta_3\, \%INST_{it} + \beta_4\, SIZE_{it} + \beta_5\, LEV_{it} + \beta_6\, ROA_{it} + \beta_7\, BOARD\_SIZE_{it} + \varepsilon_{it}$$

$$(3)\ Board\ size_{it} = \alpha + \beta_1\, GCO_{it} + \beta_2\, TOTFEES_{it} + \beta_3\, \%INST_{it} + \beta_4\, SIZE_{it} + \beta_5\, LEV_{it} + \beta_6\, ROA_{it} + \varepsilon_{it}$$

3.2.3 Libby boxes and validity of the paper



In my paper I examine whether a going-concern opinion could influence certain changes in the corporate governance of the companies. The independent going-concern opinion variable is operationalized through a dummy variable that equals 0 in case of no going concern opinion and 1 when a going-concern opinion is issued. The operational measures of the dependent corporate governance variables are presented by CEO compensation, management ownership and board size. These operational measures capture the true theoretical meaning of the presented concepts which increases the construct validity of my study. Other potentially influential variables that I include and control for in my study are: audit fees, institutional ownership, firm size (firm revenues), firm profitability (ROA), firm risk (Leverage ratio) and board size (only in the first and in the second regression). They aim to increase the internal validity of the study. Internal and external validity refers to how well a study captures a causal effect between the independent and the dependent variable. Normally archival studies have relatively high external validity because the sample represents a relatively large proportion of the population and reflects real-world data. However, the values of the independent variables are beyond the control of the researcher, so there is relatively low internal validity. Also, the treatment and control conditions are not randomly assigned to the observations.

In my paper I search for association rather than causation between the variables of interest. However, internal validity concerns still exist. Different changes in laws, reporting requirements and accounting policies over the period of interest could affect my findings. In my paper I use different control variables and EViews' function "firm fixed effects" which additionally strengthen the association between the going-concern audit opinion and the corporate governance. Yet, there may be some variables that have not been taken into account in the preparation of this paper, which can cause reduction in the internal validity as well as the external validity. Furthermore, there is likelihood that the data collected can contain mistakes, inaccuracies, and discrepancies, which are beyond my control. This can reduce both internal and external validity. Furthermore, the external validity can be reduced because of the limited number of going-concern opinions (64) that I use in my study.

As a whole, I am facing the general problems that are typical for most of the archival studies in respect to internal and external validity. All of the variables are beyond my control which affect the internal validity of my study, but the fact that I use relatively large samples

(4602, 4924 and 5534 for the first, second and third regression, respectively) and the study reflects real-world data increase the external validity of my research.

3.2.4 Variables

Dependent variables

1. *CEO compensation*

I use total compensation as a measurement of CEO compensation. Total compensation is the sum of salary, annual bonus, and the value of stock options, performance plans, phantom stocks and restricted stocks in thousands of dollars. I use this variable as a proxy for corporate governance because changes in the corporate governance can be associated with changes in the CEO compensation. I believe that a going-concern opinion in the previous year would lead to decrease in the CEO compensation and increase in the monitoring of the CEO.

2. *Management Ownership*

This variable measures the fraction of the firm that the management owns. This is a ratio of the management stock holdings to the total outstanding shares of the firm. I believe that a going-concern opinion in the previous year would lead to mobilization of the interest of the shareholders, rearrangement in the balance of power within the firm and therefore the proportion of shares held by the managers will decrease. This also can be represented as a change in the corporate governance of the company.

3. *Board Size*

This variable represents the number of directors on a given board. Normally, it is believed that smaller boards can improve the monitoring function as well as the corporate performance (Yermack, 1996). Also, corporate governance mechanisms, such as an effective board, can potentially reduce both adverse selection and agency problems (Huang & Tompkins, 2010). Some characteristics that have significant effect on the effectiveness of the corporate governance structure are board independence, board size, audit committee size, etc. (Mohamad-Nor et al., 2010). Therefore, board size can perfectly represent the concept of corporate governance. In this paper I assume that any change in the number of the board of directors represents a change in the corporate governance, which aims to improve the financial performance of the company after receiving a going-concern opinion.

Independent variables

1. *Going-concern opinion (GCO)*

Auditor's going-concern opinion is the independent variable of interest in this study and expresses the auditor's opinion about the future viability of the company. A going-concern audit report is issued when there is a substantial doubt about an entity's ability to continue to exist and operate. The main objective of the auditor's going-concern opinion is to provide users of financial statements with an early warning of potential financial problems in the company. I create GCOit dummy variable, which equals to 1 if firm i received a going-concern audit report and 0 if firm i did not receive a going-concern opinion. I believe that a going-concern audit opinion has a significant association with the corporate governance and also it can cause changes in CEO compensation, management ownership, and board size, which I use as proxies for corporate governance.

2. *Economic determinants of the level of CEO compensation and the percentage of the management ownership within the firm*

In order to capture the true relationship between CEO compensation and corporate governance on one hand and a going-concern audit opinion on the other, I control for number of other determinants of CEO compensation, management ownership, and corporate governance that have been previously found to influence the relationship. Consistent with Core et al. (1999) I expect that larger firms with high growth opportunities pay higher compensation to their CEOs. It could be argued that bigger firms with high growth opportunities are the ones that attract high quality managers, which in turn demand higher compensation due to their impeccable management capabilities. Also, managers in bigger and financially stable companies are more likely to buy more shares of the company and therefore in those firms a larger management ownership percentage is expected. To control for firm size I use the log of total firm revenues. The firm profitability is another strong determinant of

CEO compensation and management ownership. Prior literature on corporate governance has found that CEO compensation is a function of firm performance. To control for profitability and economic performance of the firm I employ the financial ratio "return on assets" (ROA). I expect that higher ROA should be positively related to the compensation a CEO receives and to the percentage of shares held by the management. A going-concern audit opinion and CEO compensation are closely associated with the leverage ratio of the firm. For example, it is often the case that a going-concern audit opinion is influenced by an excessive increase in the firm's leverage ratio. However, it is not always correct to assume that an increase in leverage is a sign of financial problems in the company. It could be the case that the company has suboptimal leverage ratio and a leverage increase would be beneficial to the stockholders. In this case, it would not be justified for the company to decrease the compensation of the CEO, since he is acting in the interest of his shareholders. To control for changes that are due to leverage considerations I include the leverage ratio of the firm as a control variable. The association between firm size, ROA, leverage ratio and board size cannot be predicted with 100% assurance because the decision about the number of the directors in a company is quite subjective decision and it is specific to each company.

3. *Board size and institutional ownership variables*

Core et al. (1999) provide evidence that board structure and corporate ownership variables have a strong impact on CEOs compensation. I control for the effect that the corporate governance structure should have on CEO compensation, in addition to the economic determinants of CEO compensation and management ownership, stated above. I use board size as a control variable for the CEO compensation regression and the management ownership regression. Core et al. (1999) and Yermack (1996) show that an increase in the number of directors on a given board leads to a decrease in its efficiency. The intuition behind this observation is that bigger boards reach consensus more difficultly and are more susceptible to the influence of the CEO. I expect a positive relationship between this variable and CEOs compensation. I also control for institutional ownership. The intuition behind this variable is that usually the institutional investors own high portion of the firm and thus can have influence on the corporate governance decisions of the company, in particular decisions concerning CEO compensation, management ownership, and board size. Also, it can be expected that in companies with high percentage of institutional ownership the management will be monitored more. Such institutions could also be used for mitigation of the agency problem between shareholders and managers (Hartzell & Starks, 2003). It has been shown that institutional ownership affects negatively CEO entrenchment and leads to a decrease in CEOs compensation and management ownership.

4. *Audit fees*

The higher CEO compensation and the larger management ownership are often associated with greater earnings manipulation risk which should be taken into account by the auditors and should be incorporated in their audit fees. In the article of Wysocki (2010) it is suggested that there is an economically large association between the level of executive compensation and the level of auditor compensation. The author lists several factors that would suggest a positive association between the level of CEO compensation and audit fees, namely: complexity, risk, strict governance, managerial entrenchment, and managerial empire building. I also expect a positive association between this variable and CEOs compensation and between audit fees and management ownership. Moreover, the companies with strong corporate governance are more likely to demand additional assurance from their auditors and higher audit quality, resulting in higher audit fees. Furthermore, a positive association is possible between the number of the members on the board of directors and the audit fees because large boards are often associated with more communication and monitoring problems, which could cause the audit fees to increase. Table 2 presents description of all variables used in this study, the computation methods behind every variable, as well as the sources.

Table 2 Variable definitions and sources

Variables	**Definitions and sources**
Dependent Variables:	
Log(Total compensation)	Sum of salary, annual bonus, and the value of stock options, performance plans, phantom stocks, pension plans, deferred compensation, and restricted stocks in thousands of dollars. The data for this variable is available at Wharton research data services - Compustat Executive Compensation - Annual Compensation.
Log(Management ownership)	This variable measures the fraction of the firm that the management owns. This is a ratio of the management stock holdings to the total outstanding shares of the firm. The data for this variable is available at Wharton research data services – GMI Ratings.
Board size	This variable represents the number of directors on a given board. The data for this variable is available at Wharton research data services - GMI Ratings.
Independent Variables:	
Going-concern opinion	GCOi is a dummy variable which equals to 1 if firm i received a going concern audit report and 0 if firm i did not receive a going concern opinion. The data for this variable is available at Wharton research data services - Audit Analytics - Audit Opinions.
Log(Audit fees)	Total fees paid by the firm to its auditor. (Source: Audit Analytics)
Institutional ownership	Percentage of shares held by institutional investors. (Source: Thomson Reuters)

Log(Firm revenues)	Measure of firm size. The log of the dollar value of the firm's revenues for a particular year in thousands of dollars. (Source: Compustat)
ROA	Measure of firm profitability. I compute ROA_{it} = Net $Income_{it}$ / Total $Assets_{it}$ (Source: Compustat)
Leverage ratio	Measure for firm risk. $Leverage_{it}$ = (Total debt in current Liabilities + Total Long-term debt) / (Total debt in current Liabilities + Total Long-term debt + Stockholder Equity). (Source: Compustat)
Board Size	The number of directors on a given board. It is used as control variable for CEO compensation regression and management ownership regression. (Source: GMI Ratings)

4. Results

This section starts with descriptive statistics. Furthermore, the main results, in respect to the associations between going-concern opinion and CEO compensation; going-concern opinion and management ownership; and going-concern opinion and board size, are presented.

4.1 Descriptive statistics

In order to minimize the influence of outliers on the results, I winsorize all continuous variables at the 5% and the 95% level. Furthermore, I take the log of every continuous variable that is highly skewed in order to normalize the distribution of the variable around its mean value. Table 3 presents the descriptive statistics prior to taking the log of the continuous variables. There is a big variance in the remuneration package of the CEOs in my sample. For example, Apple's CEO Steve Jobs received $1 total compensation for the years the firm is included in the sample. On the other side of the bridge is Occidental Petroleum Corporation's CEO Ray Irani who was awarded $305 million of total compensation in 2004. The average firm in the sample has total revenues of $7.3B, which means that the average firm in the sample is relatively large. In approximately 1.4% of the firm-year observations a going-concern opinion takes place. This low rate is due to the fact that for the companies that have received a going-concern opinion often there is no relevant information about CEO compensation, management ownership and board size. The average percentage of shares owned by the management in my sample of firms is 12% and the average number of directors on a given board is approximately 10 individuals, which means that in my sample the companies have relatively large boards of directors. This could suggest communication and monitoring problems in these companies. Moreover, in my sample the average proportion of shares held by the management is not so large. This could create an agency problem because the management would not have such strong incentives to act in the shareholders' best interest since the management does not own a big portion of the company. On the other hand, the average percentage of institutional ownership is 73%, which is high and could suggest that the management and the CEO will be more strictly monitored and controlled.

Table 3 Descriptive statistics

Table 3 presents the descriptive statistics for the various dependent, firm-characteristics, and governance variables. The sample consists of all firms in Audit Analytics Database for the period from 2002 to 2006. Only firm-year observations for which all variables are available are included. Total compensation, audit fees, and firm size are presented in thousands of dollars.

Variables	Mean	Median	St. Dev.	Minimum	Maximum
Panel A. Dependent variables					
Total compensation	6871.04	2878.32	14682.49	0.000	304596.00
Management ownership	0.12	0.06	0.17	0.00	1.00
Board size	9.60	9.00	2.60	0.00	26.00
Panel B. Independent variables					
Going-concern opinion	0.01	0.00	0.083	0.00	1.00
Institutional ownership	0.73	0.74	0.20	0.00	1.00
ROA	0.04	0.05	0.11	-2.91	0.64
Leverage ratio	0.35	0.32	0.50	-12.25	15.07
Board size	9.60	9.00	2.60	0.00	26.00
Audit fees	3503. 96	1483.22	6703.92	7.5	90200
Firm revenues	7308781	1747295	19977930	1672	345977000

Table 4 summarizes the predictions regarding the sign of the relationship between the dependent and the independent variables. The sign of the predictions is corresponding to previous findings in the literature and the large part of them makes sense intuitively. Still there are a few relationships, in which the direction of the relationship cannot be easily predicted. For example, it is logical that the CEO compensation will be higher is financially stable companies with more revenues, also the management will have more incentives to buy shares in such companies, however it is harder to predict whether companies with more revenues are more likely to increase or decrease the size of their board of directors. My main assumptions, which are consistent with the prior literature, are that the presence of a going-concern report will decrease CEO compensation; also the management will reduce its shares if such an opinion is issued; and the going-concern audit opinion will lead to a reduction in the size of the board of directors in most companies.

Table 4 Predicted sign of the relationships between the dependent variable and the set of independent variables

Variables	***CEO Comp.***	***Management Own.***	***Board size***
GCO	—	—	—
Audit fees	+	+	+
Institutional ownership	—	—	—
Firm revenues	+	+	—/+ (?)
ROA	+	+	—/+ (?)
Leverage Ratio	—	—	—/+ (?)
Board Size	+	+	

4.2 Going-concern opinion and CEO compensation

Table 5 presents the correlations between the CEO compensation variable and the independent variables. Usually the correlation is considered as an indicator for the relationship between the variables. However, the correlation measure between the variables does not account for causality direction; therefore further regression analysis must be performed. The correlations between the compensation dependent variable and the independent variable of interest – going-concern audit opinion – provide support for Hypothesis 1. The negative correlation between the going-concern audit opinion and the total CEO compensation is in line with the expectation that a going-concern opinion matters for the remuneration of the CEO and carries the predicted sign. The correlations between the other independent variables and the compensation dependent variable carry the expected sign and correspond to the findings of the previous literature, with the exception of the percentage of institutional ownership and the leverage ratio. As previously found, the compensation of the CEO can be explained to a large extent by the size of the firm he/she is managing (Jensen & Murphy, 1990), so the correlation between firm size and CEO compensation in my firm sample is one of the highest. However, as is suggested by the article of Wysocki (2010), there is an economically large association between the level of executive compensation and the level of auditor compensation. In table 5 it can be seen that the highest correlation is observed between audit fees and CEO compensation, which also is in line with the prior literature, because higher CEO compensation can be associated with greater earnings manipulation risk, which leads to higher audit fees. The correlations in Table 5 indicate that the results in my regression analysis should not be driven by multicollinearity issues since the highest correlation in absolute terms between the independent variables – audit fees and firm size - is (0.56). Furthermore, I winsorize all continuous variables at the 5% and the 95% level in order to minimize the influence of outliers on the results. I take the log of the CEO compensation, audit fees, and firm revenues in order to normalize the distribution of these variables around their mean value. Table 5 presents some preliminary support to my argumentation that a going-concern opinion should matter for the compensation of the CEO. However, there is a problem in looking only into the correlations between the variables. For example, correlation does not necessarily represent causation between the dependent and the independent variables. It could be the case that other potentially influential variables are driving the results. To preclude those possibilities, next I run OLS regression. Table 6 reports the results of an OLS regression with fixed effects (equation 1). The negative and statistically significant coefficient in front of the going-concern opinion dummy variable provides evidence of a negative relationship between the going-concern audit opinion and the CEOs compensation.

Table 5 Correlations between the variables

Table 5 reports the correlations between the Total compensation variable and the independent variables. The sample focuses on companies from Audit Analytics database for the period between 2002 and 2006. In total there are 4602 observations after running the regression.

	CEO compensation	Going concern opinion	Audit fees	Board size	Firm size	Institutional ownership	Leverage	ROA
CEO compensation	1.000000	-0.037367	0.329241	0.298699	0.302399	0.148952	0.064742	0.235624
Going concern opinion	-0.037367	1.000000	0.017533	-0.058531	-0.004036	-0.022187	0.124231	-0.158571
Audit fees	0.329241	0.017533	1.000000	0.309426	0.568070	-0.017920	0.107575	-0.004198
Board size	0.298699	-0.058531	0.309426	1.000000	0.299984	-0.227900	0.131307	0.035825
Firm size	0.302399	-0.004036	0.568070	0.299984	1.000000	-0.109059	0.041397	0.043890
Institutional ownership	0.148952	-0.022187	-0.017920	-0.227900	-0.109059	1.000000	-0.064979	0.160429
Leverage	0.064742	0.124231	0.107575	0.131307	0.041397	-0.064979	1.000000	-0.110240
ROA	0.235624	-0.158571	-0.004198	0.035825	0.043890	0.160429	-0.110240	1.000000

After controlling for firm fundamentals, audit fees, institutional ownership and board size, the effect of the going-concern opinion on the CEO compensation still persists and is highly significant. The coefficient in front of the going-concern opinion variable in table 6 gives grounds for the acceptance of hypothesis 1 and signifies that in the years in which a company receives a going concern audit report, the CEO's total remuneration suffers 67% decrease. This signifies that such company would take drastic measures and it would severely sanction its CEO by reducing his/her compensation. To put that in economic terms a going-concern opinion would decrease the average CEO's total compensation by approximately $4.6 million. The receipt of a going-concern audit opinion could be interpreted as a poor CEO performance and poor corporate governance because better corporate governance is always associated with positive audit opinion. Moreover, as it is explained in the prior literature (Hopwood et al., 1989), the independent audit report has very important value regarding client bankruptcy predictions. This could mean that the reduction in the CEO remuneration is a company's measure to avoid bankruptcy and to regain investors' trust. It can be classified as a financial measure, but also it can be seen as a nonfinancial measure since the CEO is a main element of the corporate governance structure of every company. Some of the control variables carry the predicted coefficient sign and are in line with the findings of the prior literature, such as the audit fees, ROA, and firm revenues, which are significantly and positively related to the total compensation of the CEO. Also, the firm risk, as measure by leverage ratio, and the CEO compensation, as measured by total compensation, are significantly and negatively related as it was predicted. It is interesting to note the relationship between the percentage of institutional ownership and the CEO compensation. According to the results of table 6, institutional ownership has positive and statistically significant impact on the CEO compensation. As argued in this paper, the companies with high percentage of institutional ownership are more likely to monitor closely the CEO. It has been shown that institutional ownership affects negatively CEO entrenchment and lead to a decrease in the CEO compensation. On the other hand, according to Hartzell and Starks (2003) institutional ownership is positively related to the pay-for-performance sensitivity of CEO compensation and negatively related to the level of compensation. Since I have only 64 going-concern opinions in my sample, majority of the other companies in the sample are financially stable and have positive audit opinion, so probably because of that the percentage of institutional ownership is positively and significantly related to CEO compensation. Furthermore, Adj. R-

Squared is 0.65 which means that a high proportion of the variation in the dependent variable, CEO compensation, is explained by the independent variables.

Table 6 The effect of a Going-concern opinion on the CEO compensation

This table presents the results of a regression specification (equation 1) that investigates the relationship between auditor's going-concern opinion and its impact on the CEO compensation. In the second column are presented the results for the dependent variable Total CEO compensation. T-statistics are reported in parentheses below the corresponding coefficient.

*, **, *** Significant at the 10 percent, 5 percent, and 1 percent level, respectively.

	Log(Total CEO Compensation)
Going-concern opinion	-0.67***
	(-3.02)
Log(Audit fees)	0.12***
	(4.32)
Institutional ownership	0.73***
	(4.65)
ROA	1.40***
	(6.96)
Log(Firm revenues)	0.68***
	(10.37)
Leverage	-0.35***
	(-2.93)
Board size	-0.01
	(-1.16)
Coefficient	-3.04
Adj. R-Squared	**0.65**
Number of Observations	**4602**

The results displayed in table 6 suggest that the hypothesis 1 should be accepted and the presence of a going-concern opinion is significantly associated with a reduction in the CEO compensation.

4.3 Going-concern opinion and management ownership

Table 7 presents the correlations between the management ownership variable and the independent variables. A correlation is considered useful indicator for the relationship between the variables. The correlations between the management ownership dependent variable and the independent variable of interest – going-concern audit opinion – provide support for Hypothesis 2. The negative correlation between the going-concern audit opinion and the management ownership is in line with the expectation that a going-concern opinion matters for the proportion of shares owned by the management and carry the predicted sign. Some of the correlations between the other independent variables and management ownership dependent variable carry the expected sign, such as ROA, leverage ratio and institutional ownership, while other correlations do not carry the expected sign, such as audit fees, board size and firm revenues. The correlation between the institutional ownership and the management ownership in my firm sample is one of the highest, which is in line with the prior literature. Usually institutional investors own a high portion of the firm and they can have influence on the corporate governance decisions of the company and in particular decisions about management ownership. Also, it has been shown that institutional ownership affects negatively CEO entrenchment and leads to a decrease in the management ownership. The correlations in Table 7 indicate that the results in my regression analysis should not be driven by multicollinearity issues since the highest correlation in absolute terms between the independent variables – audit fees and firm size - is (0.50). Furthermore, I winsorize all continuous variables at the 5% and the 95% level in order to minimize the influence of outliers on the results. And I take the log of the management ownership, audit fees, and firm revenues in order to normalize the distribution of these variables around their mean value. Table 7 presents some preliminary support to my argumentation that going-concern opinion should matter for the management ownership. However, one problem in looking only into the correlations between the variables could be that a third, omitted variable or reverse causality can influence the main results. Also, correlation does not necessarily represent causation between the dependent and the independent variables. To preclude those possibilities, next I run OLS regression. Table 8 reports the results of an OLS regression with fixed effects (equation 2). The coefficient in front of the going-concern opinion dummy variable is negative, as it was predicted, but it is not statistically significant.

Table 7 Correlations between the variables

Table 7 reports the correlations between the Management ownership variable and the independent variables. The sample focuses on companies from Audit Analytics database for the period between 2002 and 2006. In total there are 4924 observations after running the regression.

	Management ownership	Going concern opinion	Audit fees	Board size	Firm size	Institutional ownership	Leverage	ROA
Management ownership	1.000000	-0.012515	-0.150452	-0.158375	-0.077229	-0.172247	-0.021237	0.020534
Going concern opinion	-0.012515	1.000000	0.007694	-0.015524	-0.003651	-0.015296	-0.033894	-0.103446
Audit fees	-0.150452	0.007694	1.000000	0.296689	0.504676	0.020605	0.099829	0.018823
Board size	-0.158375	-0.015524	0.296689	1.000000	0.228175	-0.202381	0.156236	0.035781
Firm size	-0.077229	-0.003651	0.504676	0.228175	1.000000	-0.034795	0.057585	0.014878
Institutional ownership	-0.172247	-0.015296	0.020605	-0.202381	-0.034795	1.000000	-0.071198	0.151714
Leverage	-0.021237	-0.033894	0.099829	0.156236	0.057585	-0.071198	1.000000	-0.110070
ROA	0.020534	-0.103446	0.018823	0.035781	0.014878	0.151714	-0.110070	1.000000

After controlling for firm profitability, firm size, firm risk, audit fees, institutional ownership and board size, the effect of the going-concern opinion on the management ownership diminishes and becomes insignificant. The coefficient in front of the going-concern opinion variable gives grounds for the rejection of hypothesis 3 because it is not statistically significant. It signifies that in the years in which a company receives a going-concern audit report management ownership decreases with 6% and the average management ownership decreases from 12% to 6%. However, the management ownership reduction could be due to an insider trading of shares prompted by the deteriorating financial conditions of the company and not so much by the auditor's going-concern report. Managers usually have better knowledge of the financial performance of their entrusted companies compared to investors, analysts, auditors, etc. and their decisions to buy or sell shares of their companies can hardly be influenced by outsiders. The association between institutional ownership and management ownership is negative and insignificant. As it was explained, institutional investors own a high portion of the firm, which gives them the power to influence many of the corporate governance decisions of the company and in particular decisions about management ownership. Also, it has been shown that institutional ownership affects negatively CEO entrenchment and leads to a decrease in the management ownership. The Adj. R-Squared is this regression is 0.88 which means that a high proportion of the variation in the dependent variable, management ownership, is explained by the independent variables.

Table 8 The effect of a Going-concern opinion on the Management ownership

This table presents the results of a regression specification (equation 2) that investigates the relationship between auditor's going-concern opinion and its impact on the management ownership. In the second column are presented the results for the dependent variable Management ownership. T-statistics are reported in parentheses below the corresponding coefficient.

*, **, *** Significant at the 10 percent, 5 percent, and 1 percent level, respectively.

	Log(Management ownership)
Going-concern opinion	-0.06
	(-0.48)
Log(Audit fees)	-0.02
	(-1.54)
Institutional ownership	-0.08
	(-0.98)
ROA	0.17
	(1.60)
Log(Firm revenues)	-0.21***
	(-6.13)
Leverage	0.33***
	(4.74)
Board size	0.01*
	(1.67)
Coefficient	-4.44
Adj. R-Squared	**0.88**
Number of Observations	**4924**

The results displayed in table 8 suggest that the hypothesis 2 should be rejected and the presence of a going-concern opinion is not significantly associated with a reduction in the management ownership.

4.4 Going-concern opinion and board size

Table 9 presents the correlations between the board size variable and the independent variables. The correlations between the board size dependent variable and the independent variable of interest – going-concern audit opinion – provide support for Hypothesis 3. The negative correlation between a going-concern audit opinion and the board size is in line with the expectation that a going-concern opinion matters for determining the size of the boards of directors. It is difficult to predict the sign of the relationships between the board size and the control variables because it is unclear, for example, whether a company with more revenues is more likely to increase or decrease the size of its board of directors. However, table 9 shows that there is a negative correlation not only between board size and going-concern opinion, but also between board size and institutional ownership, which is in line with my initial predictions. This is probably true because institutional investors have a significant power to influence different decisions in the company, so they can decide to reduce the board size because it is shown that the large boards of directors usually are more ineffective and inefficient. Furthermore, the opposite – positive – correlation can be observed between board size and audit fees, firm size, leverage, and ROA. The highest correlation is observed between board size and firm size, as measured by firm revenues, because some large companies prefer larger boards of directors with more experts in them. The correlations in Table 9 indicate that the results in my regression analysis should not be driven by multicollinearity issues since the highest correlation in absolute terms between the independent variables – audit fees and firm size - is (0.59). Furthermore, I winsorize all continuous variables at the 5% and the 95% level in order to minimize the influence of outliers on the results. And I take the log of audit fees and firm revenues in order to normalize the distribution of these variables around their mean value. Table 7 presents some preliminary support to my argumentation that a going-concern opinion matters for the board size. However, further regression analysis of the results is required because the correlation measure between the variables does not account for causality direction and also it is possible some omitted variable or reverse causality to influence the results. To preclude those possibilities, next I run OLS regression. Table 10 reports the results of an OLS regression without fixed effects (equation 3). The negative and statistically significant coefficient in front of the going-concern opinion dummy variable provides evidence of a negative relationship between the going-concern audit opinion and the board size.

Table 9 Correlations between the variables

Table 9 reports the correlations between the Board size variable and the independent variables. The sample focuses on companies from Audit Analytics database for the period between 2002 and 2006. In total there are 5534 observations after running the regression.

	Board size	Going concern opinion	Audit fees	Firm size	Institutional ownership	Leverage	ROA
Board size	1.000000	-0.020966	0.311782	0.342150	-0.270895	0.152976	0.029575
Going concern opinion	-0.020966	1.000000	0.009081	-0.007643	-0.018025	-0.031429	-0.101552
Audit fees	0.311782	0.009081	1.000000	0.598709	-0.022547	0.105090	0.016886
Firm size	0.342150	-0.007643	0.598709	1.000000	-0.106841	0.044857	0.052867
Institutional ownership	-0.270895	-0.018025	-0.022547	-0.106841	1.000000	-0.077474	0.139717
Leverage	0.152976	-0.031429	0.105090	0.044857	-0.077474	1.000000	-0.114700
ROA	0.029575	-0.101552	0.016886	0.052867	0.139717	-0.114700	1.000000

The effect of the going-concern opinion on the board size still persists and is highly significant even after controlling for firm fundamentals, audit fees and institutional ownership. The coefficient in front of the going-concern opinion variable in table 10 gives grounds for the acceptance of hypothesis 3 and signifies that in the years in which a company receives a going-concern audit report, the number of the directors on a given board decreases by 1.4 or one person. Usually it is perceived that large boards experience more communication problems and also large boards are more ineffective in monitoring the management. On the other hand, smaller boards can improve the monitoring function as well as the corporate performance (Yermack, 1996). The results from the regression absolutely clearly show a reduction in the size of the boards after receipt of a going-concern opinion, which I argue aims to increase their efficiency and to improve corporate governance as a whole. Fich & Slezak (2008) found that the probability of bankruptcy is significantly affected by a financially distressed firm’s governance characteristics. In their article it is stated that smaller and more independent boards with more non-inside directors and with larger ownership stakes of inside directors are more effective at avoiding bankruptcy. This could mean that the reduction in the board size is a company’s measure to avoid bankruptcy and to regain investors trust after going-concern report is being issued. The reduction in the number of directors can be classified as a corporate governance nonfinancial measure, which is taken in order to improve the financial performance of the company. The negative and highly significant coefficient (-3.65) in front of the institutional ownership in table 10 is plausible because institutional investors usually demand for stable financial position and effective corporate governance and since large boards are not considered effective, institutional investors would use their power to decrease boards size. According to table 10 an increase in the institutional ownership leads to a decrease by 3 to 4 directors in a given board. Furthermore, the coefficient in front of audit fees is positive and significant because usually larger boards carry more risk for the auditor and therefore he/she increases his/her remuneration. It is interesting to note the relationship between the leverage and the board size. According to the results, leverage ratio, which measures firm risk, has positive and statistically significant impact on the board size or in other words, when the firm risk increases companies increase their boards with one director (1.33). The prior literature explains this relation with the explanation that larger boards may be composed of more experts who can help with management monitoring and also can monitor the external audit more effectively (Beasley, 1996; Cohen et al., 2002). The same explanation is plausible for the relationship between firm revenues and board size.

Table 10 The effect of a Going-concern opinion on the Board size

This table presents the results of a regression specification (equation 3) that investigates the relationship between auditor's going-concern opinion and its impact on the board size. In the second column are presented the results for the dependent variable Board size. T-statistics are reported in parentheses below the corresponding coefficient.

*, **, *** Significant at the 10 percent, 5 percent, and 1 percent level, respectively.

	Board size
Going-concern opinion	-1.36***
	(-2.69)
Log(Audit fees)	0.23***
	(5.41)
Institutional ownership	-3.65***
	(-24.27)
ROA	-0.57
	(-1.58)
Log(Firm revenues)	0.67***
	(21.25)
Leverage	1.33***
	(10.22)
Coefficient	0.44
Adj. R-Squared	**0.31**
Number of Observations	**5534**

The results displayed in table 10 suggest that the hypothesis 3 should be accepted and the presence of a going-concern opinion is significantly associated with a reduction in the board size.

Table 11 Summary table with the main hypotheses

	Accept	Reject
H1	✓	
H2		✓
H3	✓	

With the current paper I want to find an answer to the question whether auditor's going-concern opinion can be associated with subsequent changes in the corporate governance, in particular with changes in the CEO compensation, management ownership and board size. My expectations are for negative associations between the independent going-concern opinion variable and the three dependent. Namely in my hypotheses I state that I expect the presence of a going-concern opinion to reduce the CEO compensation, management ownership, and the number of directors on the board. My findings indicate that I can accept hypothesis 1 and hypothesis 3 with 99% confidence. This suggests that auditor's going-concern opinion is indeed a material determinant of the CEO compensation and board size and as a whole it matters for the corporate governance of the firm. The findings for the second hypothesis justify my expectations of a negative relationship between going-concern opinion and management ownership, however the coefficient is insignificant and I should reject hypothesis 2. The results from this regression can be related to the explanation that managers usually have better knowledge of the financial performance of their entrusted companies compared to investors, analyst, auditors, etc. and their decisions to buy or sell shares of their companies can hardly be influenced by outsiders, in this case by auditors. The small management ownership reduction, as can be seen from the results, could be due to an insider trading of shares prompted by the deteriorating financial conditions of the company long before the auditor issued a going-concern opinion.

The prior literature usually relates the remuneration of the CEO to the firm performance. Furthermore, previously a positive correlation has been found between board size and financial distress. Board size also is associated with firm performance. Generally, large boards are considered more ineffective in performing their monitoring and controlling duties compared to small boards. As a whole, the prior studies relate stronger corporate governance with more credible financial reporting and less financial problems for the companies. On the other hand, weaker corporate governance can cause poor financial reporting quality, earnings manipulations, financial statement fraud, and weaker internal controls (Chambers and Payne, 2008; Dechow et al., 1996; Carcello and Neal, 2000). Corporate governance is considered a very powerful mechanism and it can significantly affect the future success or failure of every company. Furthermore, studies performed by Dopuch et al. (1986), Jones (1996) and Loudder et al. (1992) suggest abnormal stock price declines following the receipt of going-concern opinions. This negative stock price impact of going-concern opinions suggests that the auditor's opinion regarding the financial health of the company is important for the market participants and is considered valuable indicator for the firm performance. My findings are consistent with prior literature on similar topics. A going-concern opinion represents the auditor's assessment of the future viability of a company and is considered a reliable harbinger of future financial difficulties. As such, it is absolutely plausible to find that companies that receive a going-concern opinion take certain corporate governance measures, such as reduction in the CEO compensation (hypothesis1) and the board size (hypothesis2), in order to improve their financial performance and disprove the auditors' negative expectations for their financial future. To date, little research has addressed this topic. In my paper I chose to represent corporate governance mechanism as a combination of three variables - CEO compensation, management ownership, and board size. I use relatively new data for my study and I believe that my research has some practical importance because it can show auditors whether going-concern opinion matters for the companies. Furthermore, this study can be useful for CEOs and directors showing that they are likely to be penalized after receiving a going-concern opinion because it is considered that they have not performed well their entrusted responsibilities. Also, my study can add some value to the discussion regarding agent-principal relationship. My paper shows that an auditors' opinion can lead to penalizing measures for the CEO, such as reduction in his/her compensation; it also leads to reduction in the board size, which can be seen as a "wake-up call" to the shareholders, who have a direct responsibility for monitoring the management and for creating a working corporate governance mechanism. This suggests that the auditor's going-concern opinion plays an important role in mitigating agency problems and encouraging managers to act in the shareholders' best interests.

5. Conclusion

In this last section I present the conclusion of this paper. Furthermore, the main limitations of the study are discussed and lastly, some suggestions for future research are made.

In this paper I study the impact of a going-concern audit opinion on the compensation of the CEO as well as on the management ownership and board size by using available data on the firms included in the Audit Analytics database for the period between 2002 and 2006. My results are consistent with the hypotheses that a going-concern opinion leads to penalizing effect, which in turn reduces the CEOs compensation and board size as well as management ownership, although not significantly. CEOs of firms that received going-concern opinions suffer 67% decrease in their total compensation. This could be interpreted as a penalizing measure for the CEO because of the received report. Furthermore, the reduction in the CEO remuneration, can be seen not only as a financial measure aiming to improve the financial health of a company, but also as a measure to regain the investors' trust after receiving a going-concern report from the auditor, which represents a corporate governance mechanism. I also find evidence that a going-concern opinion in general leads to a decrease in the number of directors on a given board, which can be classified as a corporate governance decision. So, this indicates that a going-concern opinion can influence a subsequent corporate governance decisions. Furthermore, according to Yermack (1996) smaller boards can improve the monitoring function as well as the corporate performance. The results from my investigation show that a company that receives a going-concern audit report experiences a reduction in its board size with one director. This is due to the fact that large boards are considered more ineffective and a reduction in their size could improve the decision-making process and the corporate governance in general. Furthermore, in the article of Fich & Slezak (2008) it is explained that smaller and more independent boards with more non-inside directors and with larger ownership stakes of inside directors are more effective at avoiding bankruptcy. Therefore, the reduction in the board size could be a company's measure for avoiding bankruptcy and for regaining investors' trust after going-concern report is issued. Furthermore, I test the association between a going-concern opinion and the percentage of management ownership within the firm, which my results show are negatively related. However, the results of this regression show that the association between a going-concern opinion and management ownership is insignificant and therefore I reject the second hypothesis. Managers usually have better knowledge of the financial performance of their entrusted companies compared to investors, analysts, auditors, etc. and their decisions to buy or sell shares of the companies that they manage can hardly be influenced by outsiders. So, managers do not rely heavily on auditors' opinions and managers largely base their buy and sell decisions on their inside information for the company.

In this paper corporate governance is proxied by the CEO compensation, the management ownership and the board size. The examination of the association between the going-concern opinion and the corporate governance shows that companies that receive a going-concern opinion undertake some changes in their corporate governance policies in order to avoid future bankruptcy, to improve their performance and to restore investors' trust. Such changes are decrease in the remuneration of the CEO and reduction in the board size.

5.1 Limitations

One limitation to this paper is that I use the Audit Analytics database, which provides detailed research on over 150,000 active audits and more than 10,000 accounting firms. Since it is auditing-oriented database, the companies included in my sample are mainly big and medium public companies and it could very well be the case that large capitalization firms drive my results, because CEOs compensation in those firms is larger than the compensation of CEOs in small capitalization firms. Furthermore, large capitalization firms could be better represented in my sample, because I exclude the firms in my sample for which one or more variable are missing. Data on large cap firms is more thoroughly collected by database institutes and firms, while this is not always the case for small cap firms.

Another limitation to this paper is that in my sample there are only 64 going-concern opinions included, which makes the samples not so representative. This could also interfere with my results and could limit their significance. The firms that do not have going-concern opinion are significantly more and they are better represented in my sample, because I exclude the firms in my sample for which one or more variable are missing. Data on firms that do not have going-concern opinion is more thoroughly collected by database institutes and firms, while there is a lot of data missing for the firms that received a going-concern opinion.

Another limitation to this paper is that I do not account for trends in the performance of the firm. It could be the case that a decrease in performance for several years leads to a going-concern opinion, which also coincides with decrease in the compensation of the CEO. In such case it is more reasonable to argue that the downtrend in the firm performance, rather than the going-concern opinions per se have led to a decrease in CEOs compensation.

A next limitation to this paper is that sometimes auditors tend to make Type 1 error – studies show that a low percentage of firms receiving going-concern reports declare bankruptcy in the year following the audit opinions (Myers et al., 2011). This could lower the relation significance between the going-concern opinion independent variables and the three dependent variables – CEO compensation, management ownership and board size.

Finally, there is the question of how representative my results are in general. I have focused my study only on U.S. firms. It would, thus, be interesting to study how going-concern opinion would affect firms outside the U.S.A.

5.2 Discussion and further research

The results in this paper have several implications for firms, their CEOs and our general understanding of the importance of going-concern opinions. Furthermore, these findings could be useful for regulators, auditors and investors. The results in this paper support the hypotheses that firms usually penalize CEOs for receiving a going-concern opinion, and reduce the size of the board of directors. However, the paper does not support the hypothesis that a going-concern opinion leads to a decrease in the management share of the capital. Furthermore, the results suggest that companies could potentially use the corporate governance mechanism to react to a going-concern opinion.

Generally, auditors should not be too optimistic when assessing their clients' future viability and they should not forbear to issue going-concern opinions thinking that such opinions could lead to future bankruptcies of companies. The findings of this paper show that an auditor's going-concern report has its positive influence on the firms and they take certain decisions to make their businesses more stable and prosperous. Furthermore, investors and other stakeholders should not be pessimistic when they witness different corporate governance changes in the firms because these measures are supposed to lead to better firm performance in the future. Moreover, CEOs have to manage their entrusted companies with integrity and in the interest of the company's shareholders. The CEOs should be aware that if they do not perform their duties conscientiously, they will be severely penalized, first, by the auditor’s opinion and second, by the following corporate governance decisions. Furthermore, going-concern opinions seem to have an effect on the corporate governance structure of the firm, especially on determining the board size. A going-concern opinion serves as a “wake-up call” to the shareholders, who have a direct responsibility for monitoring the management and for creating a working corporate governance mechanism.

All of the above could have implications for future research in the field of both corporate governance and going-concern opinion. The future research could investigate the same association but with different corporate governance proxies, such as, some audit committee characteristics, or again the same association can be investigated but instead of a going-concern opinion, a negative auditor opinion can be used. Lastly, it can be examined whether auditors’ opinions can help to establish an optimal CEO compensation package, which could in turn help mitigate the agency problem and the loss of trust in the financial sector as a whole.

Lastly, it is interesting to think about the general impact that audit firms have on society. In the recent years, the impact of the audit firms on all aspects of the economy has significantly increased, as can also be seen from the findings in this paper. This raises many questions, such as: how much do we know about their influence; are we not making the audit firms too powerful; and to what extent should we rely on their opinions. The attempts of various authors to answer those questions could have significant implications for financial regulation.

References:

Akerlof, G., (1970). The market for 'lemons': quality uncertainty and the market mechanism. *Quarterly Journal of Economics* 90, 629–650.

Ali, R. B., 2001, Audit committee composition and auditor reporting: a study in Malaysian environment, Dissertation, *eprints.uitm.edu.my/3881/1*.

Allen D. Blay, Marshall A. Geiger, David S. North (2011) The Auditor's Going-Concern Opinion as a Communication of Risk. *AUDITING: A Journal of Practice & Theory*: May 2011, Vol. 30, No. 2, pp. 77-102.

American Institute of Certified Public Accountants (AICPA). 1988. The Auditor's Consideration of an Entity's Ability to Continue as a Going Concern. Statement on Auditing Standards (SAS) No. 59.New York, NY: AICPA.

American Institute of Certified Public Accountants (AICPA). 2012. The Auditor's Consideration of an Entity's Ability to Continue as a Going Concern (Redrafted). Statement on Auditing Standards (SAS) No. 126. New York, NY: AICPA.

Antle, R. (1982). The auditor as an economic agent. *Journal of Accounting Research*, 20, 503−527.

Ashbaugh-Skaife, H., Collins, D.W., LaFond, R., (2006). The effects of corporate governance on firms' credit raitings. *Journal of Accounting and Economics* 42: 203-243.

Beasley, M. S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *Accounting Review*, 71, 443−466.

Beatty, R. (1989). Auditor reputation and the pricing of initial public offerings. *Accounting Review*, 64, 693−709.

Brown, L.D., Caylor, M.L., (2006), Corporate governance and firm valuation. *Journal of Accounting and Public Policy*, Volume 25, Issue 4, Pages 409–434.

Carcello, J. V. and Neal, T. L., (2000), Audit Committee Composition and Auditor Reporting. *The Accounting Review*.

Carcello, J. V. and Neal, T. L., (2003), Audit Committee Characteristics and Auditor Dismissals following ''New'' Going-Concern Reports. *The Accounting Review*, Vol. 78, No. 1, pp. 95–117.

Carcello, J., & Neal, T. L. (2000). Audit committee composition and auditor reporting. *The Accounting Review*, 75, 453−468.

Carson, E., Fargher, Neil L. , Geiger Marshall, A., Lennox Clive, S., Raghunandan, K., and Willekens Marleen, (2013). Audit Reporting for Going-Concern Uncertainty: A Research Synthesis. Auditing. *A Journal of Practice & Theory*.

Chambers, D., and J. Payne. (2008). Audit Quality and Accrual Anomaly. *Working paper,* Kennesaw State University and University of Kentucky.

Chang, C., (2009). The Corporate Governance Characteristics of Financially Distressed Firms: Evidence from Taiwan. *The Journal of American Academy of Business*. Vol. 15 No. 1.

Chen Chen, Xiumin Martin, and Xin Wang (2013) Insider Trading, Litigation Concerns, and Auditor Going-Concern Opinions. *The Accounting Review*: March 2013, Vol. 88, No. 2, pp. 365-393.

Chen, K.W. and Church, B.K. (1996), "Going concern opinions and the market's reaction to bankruptcy filings", *The Accounting Review*, Vol. 71 No. 1, pp. 117-28.

Chow, C.W., Rice, S.J., 1982, Qualified Audit Opinions and Auditor Switching. *The Accounting Review*, Vol. 57, No. 2 pp. 326-335.

Cohen, J., Krishnamoorthy, G., Wright, A., 2004, The corporate governance mosaic and financial reporting quality. *Journal of Accounting Literature*, pp. 87-152.

Core, J.E., Holthausen, R.W., Larcker, D.F., (1999). Corporate governance, chief executive offcer compensation, and firm performance. *Journal of Financial Economics* Vol.51, pp. 371-406.

DeAngelo, L. (1981a). Auditor independence, "low balling," and disclosure regulation. *Journal of Accounting and Economics*, 3, 113−127.

Dechow, P., Sloan, R., & Sweeney, S. (1996). Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary Accounting Research*, 1, 1−36.

Dennis M. O'Reilly, (2010) "Do investors perceive the going-concern opinion as useful for pricing stocks?", *Managerial Auditing Journal*, Vol. 25 Iss: 1, pp.4 – 16.

Dopuch, N., Holthausen, R. W. and Leftwich, R. W. (1986) Abnormal returns associated with media disclosures of 'subject to' qualified audit opinions, *Journal of Accounting and Economics*, 8, 93–117.

Eisenberg, T., Sundgren, S., and Wells, T.W. (1998). Larger Board Size and Decreasing Firm Value in Small Firms. *Journal of Financial Economics*, 48, 35-54.

Elloumi, F., Gueyié, J.P., 2001 Financial distress and corporate governance: an empirical analysis. *Corporate Governance*, Vol. 1 Iss: 1, pp.15 – 23.

Epstein, M. J., & Geiger, M. A. (1994). Investor views of audit assurance: Recent evidence of the expectation gap. *Journal of Accountancy*, 177, 60−66.

Farber D.B., 2005, Restoring Trust after Fraud: Does Corporate Governance Matter?. *The Accounting Review*: Vol. 80, No. 2, pp. 539-561.

Fich, E., Slezak, S. (2008). Can corporate governance save distressed firms from bankruptcy? An empirical analysis. *Review of Quantitative Finance & Accounting*. Vol. 30 No 2, p225-251.

Firth, M., 1978, Qualified audit reports: their impact on investment decisions. *The Accounting Review*, Vol. 53 No. 3, pp. 642-50.

Fooladi1, M., Farhadi,M., 2011, Corporate Governance and Audit Process. International International Proceedings of Economics Development and Research (IPEDR) Vol.20, *International Association of Computer Science and Information Technology Press*.

Geiger, M.A. and Raghunandan, K. (2001), “Bankruptcies, audit reports, and the Reform Act”, Auditing: *A Journal of Practice & Theory*, Vol. 20 No. 1, pp. 187-95.

Gómez Aguilar, N., Ruiz-Barbadillo, E., de Fuentes Barbera, C., Garcia Benau, M.A., 2004, Audit Quality and the Going Concern Decision Making Process: Spanish Evidence. *European Accounting Review*, Vol. 13, No. 4.

Gompers, P., Ishii, J., Metrick, A., 2003, Corporate Governance and Equity Prices. *Quarterly Journal of Economics* Volume 118, Issue 1 Pp. 107-156.

Grossman, S. and O. Hart (1983), "An analysis of the principal-agent problem", *Ecouometrica* 51: 745.

Hartzell, J., Starks, L. (2003). Institutional Investors and Executive Compensation. *The Journal of Finance*.Vol. LVIII, No. 6.

Helland, E. and Sykuta, M. (2005), ‘‘Who’s monitoring the monitor? Do outside directors protect shareholders’ interests?’’ *The Financial Review*, Vol. 40, pp. 155-72.

Holmstrom, B. (1979), "Moral hazard and observability", *The Bell Journal of Economics* 10: 74-91.

Hopwood, W., McKeown J., Mutchler, J., 1989, A Test of the Incremental Explanatory Power of Opinions Qualified for Consistency and Uncertainty. *The Accounting Review*, Vol. 64, No. 1, pp. 28-48.

j Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*. Volume 31, Issues 1–3, Pages 405–440.

Jensen, M. and K.J. Murphy (1990), "Performance pay and top-management incentives", *Journal of Political Economy* 98 (2): 225-264.

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

Jensen, M.C. (1993). The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems. *Journal of Finance*, 48, 831-880.

Jones, F. L. (1996) The information content of the auditor’s going concern evaluation, *Journal of Accounting and Public Policy*, 15, 1–27.

Jones, F.L., 1996, The information content of the auditor's going concern evaluation. *Journal of Accounting and Public Policy* Volume 15, Issue 1, Pages 1–27.

Kothari, S.P., (2001). Capital markets research in accounting. *Journal of Accounting and Economics* 31, 105–231.

Krishnagopal Menon and David D. Williams (2010) Investor Reaction to Going Concern Audit Reports. *The Accounting Review*: November 2010, Vol. 85, No. 6, pp. 2075-2105.

Lee, T.S., Yeh, Y.H., 2004, Corporate Governance and Financial Distress: evidence from Taiwan. *Corporate Governance: An International Review*. Vol.12, Iss. 3, p. 378–3884.

Lenard, M. J., Alam, P. & Madey, G. R.. (1998). Design and validation of a hybrid information system. Journal of Management Information Systems, 14 (4), 219-237.

Leonard, J. (1990), "Executive pay and firm performance", *Industrial and Labor Relations Review* 43 (3): S13.

Loudder, M. L., Khurana, I. K., Sawyers, R. B., Cordery, C., Johnson, C., Lowe, J. and Wunderle, R. (1992) The information content of audit qualifications, *Auditing*, 11, 69–82.

Mak, Y.T., and Kusnadi Y. (2005). Size Really Matters: Further Evidence on the Negative Relationship between Board Size and Firm Value. *Pacific-Basin Finance Journal*, 13, 301-318.

Mark Schaub (2006) Investor overreaction to going concern audit opinion announcements, *Applied Financial Economics*, 16:16, 1163-1170.

Marshall, McManus and Viele, “Accounting: What the numbers mean”, McGraw-Hill, Eighth Edition, 2008.

Martens, D., Bruynseels, L., Baesens, B., Willekens, M., Vanthienen, J., 2008, Predicting going concern opinion with data mining. *Decision Support Systems* 45: 765–777.

Mehran, H. (1995). Executive compensation structure, ownership, and firm performance. *Journal of Financial Economics*. Vol. 38, pp. 163–184

Menon, K., Schwartz, K.B., 1987, An empirical investigation of audit qualification decisions in the presence of going concern uncertainties. *Contemporary Accounting Research*, Vol. 3, Iss. 2, pp. 302–315.

Mohamad-Nor, M.N., Shafie, R., Wan-Hussin, W.N., 2010, Corporate Governance and Audit Report Lag in Malaysia. Asian Academy of Management *Journal of Accounting and Finance*, Vol. 6, No. 2.

Murphy, K.J. (1986), "Incentives, learning and compensation: a theoretical and empirical investigation of managerial labor contracts", RAND *Journal of Economics* 17 (1): 59-76.

Mutchler, J.F. 1984. "Auditors' Perceptions of the Going-Concern Opinion Decision." Auditing: *A Journal of Practice and Theory* 3 (Spring): 17-30.

Mutchler, J.F., 1985, A Multivariate Analysis of the Auditor's Going-Concern Opinion Decision. *Journal of Accounting Research*, Vol. 23, No. 2, pp. 668-682.

Myers, L., Schmidt, J.,Wilkins, M., (2013). An Investigation of Recent Changes in Going Concern Reporting Decisions Among Big N and Non-Big N Auditors. *Review of Quantitative Finance and Accounting*.

O'Reilly, D.M., 2010, Do investors perceive the going-concern opinion as useful for pricing stocks? *Managerial Auditing Journal*, Vol. 25 Iss: 1, pp.4 – 16.

Parker S., Peters, G.F., Turetsky, H.F., 2005, Corporate Governance Factors and Auditor Going Concern Assessments. *Review of Accounting and Finance,* Vol. 4 Iss: 3, pp.5 – 29.

Rongbing Huang, James G. Tompkins, (2010) "Corporate governance and investor reactions to seasoned equity offerings", *Managerial Finance*, Vol. 36 Iss: 7, pp.603 – 628.

Sánchez Ballesta, J.P., García-Meca, E., 2005 Audit qualifications and corporate governance in Spanish listed firms. *Managerial Auditing Journal*, Vol. 20 Iss: 7, pp.725 – 738.

Sarbanes-Oxley Act 2002.

Schaub, M., 2006. Investor overreaction to going concern audit opinion announcements. *Applied Financial Economics*. Volume 16, Issue 16.

Smith, C. W.; Stulz, R. M. (1985). The Determinants of Firm's Hedging Policies. *Journal of Financial and Quantitative Analysis*, 20 (4): pp 391 – 405.

Standard & Poor, 2002.

Standards No. 22, Planning and Supervision, No. 59, the Auditor's Consideration of an Entity's Ability to Continue As a Going Concern, and No. 62, Special Reports. Statement on Auditing Standards No. 77. New York, NY: AICPA.

Stulz, R.M. (1988), ‘‘Managerial control of voting rights, financing policies and the market for corporate control’’, *Journal of Financial Economics*, Vol. 20, pp. 25-54.

Titman, S., & Trueman, B. (1986). Information quality and the valuation of new issues. *Journal of Accounting and Economics*, 8, 159−172.

Tosi, H.L. Jr. and Gomez-Mejia, L.R., (1994*). The Academy of Management Journal*, Vol. 37, No. 4, pp. 1002-1016.

Uang, J.Y., Citron, D.B., Sudarsanam, S., Taffler, R.J., 2006, Management Going-concern Disclosures: Impact of Corporate Governance and Auditor Reputation. *European Financial Management*, Vol. 12, No. 5, 789–816.

Vanstraelen, A. 2003. Going-Concern Opinions, Auditor Switching, and the Self-Fulfilling Prophecy Effect Examined in the Regulatory Context of Belgium. *Journal of Accounting, Auditing & Finance*; Vol. 18 Issue 2, p231.

Vichitsarawong, T., Eng, L.L., Meek, G.K., 2010, The Impact of the Asian Financial Crisis on Conservatism and Timeliness of Earnings: Evidence from Hong Kong, Malaysia, Singapore, and Thailand. *Journal of International Financial Management & Accounting* 21: 32–61.

Warner, J., R. Watts and K. Wruck (1988), "Stock prices and top management changes", *Journal of Financial Economics* 20: 461-492.

Watts, R. L., & Zimmerman, J. L. (1986). Positive accounting theory. *Prentice-Hall Inc*.

Willenborg, M. (1999). Empirical analysis of the economic demand for auditing in the initial public offering market. *Journal of Accounting Research*, 37, 225−238.

Wysocki, P.,(2010). Corporate compensation policies and audit fees. *Journal of Accounting and Economics* 49: 155–160.

Yermack, D. (2003). Remuneration, Retention and Reputation Incentives for Outside Directors. *Journal of Finance*, 59: pp 2281 – 2308.

Yermack, D., (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics* 40: 185-211.