

“Internal control weaknesses and different kinds of restatements”

Name: Urszula Sienkiewicz

Student number: 429280

Department: Accounting, Auditing and Control

Abstract

The main goal of the thesis is to examine the association between two significant issues for financial markets – restatements and internal control weaknesses. Assessment of internal control is required under two Sections of Sarbanes–Oxley Act, namely 302 and 404. For the thesis, the most important difference between these Sections is the source of the opinion, management or auditor respectively. Under Section 404 the opinion about internal control is more objective than assessment made only by managers under Section 302. This study examine whether the internal control weaknesses under SOX 302 and 404 are differently associated with restatements due to fraud and due to unintentional error.

In order to assess the examined relation, three models of logistic regression have been computed. Taking into account all kinds of restatement as a dependent variable, results indicate that probability of restatement is positively associated only with internal control weaknesses reported under SOX 302. However, computing the regression models with two kinds of restatements as a dependent variables, results are different. The probability of restatement due to error is higher if company reports ICW under SOX 302. This kind of restatements are not statistically associated with SOX 404. Furthermore, the firms with ICW under SOX 404 are significant related to restatements due to fraud. Additionally, the ICW under SOX 302 is not associated with restatement due to fraud, what is consistent with expectation that if the management is involved in the fraud, it is highly probable that they will not disclose internal control weaknesses under SOX 302.

Keywords: material internal control weakness, Sarbanes-Oxley Act of 2002, SOX, Section 404, Section 302, internal control quality, restatement, fraud, earnings management

Data availability: all data used in this study is available in public resources as specified in the text.

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1. Introduction

1.1. Research question and motivation

The purpose of this research is to examine the relation between internal control weaknesses and different kinds of restatements. The assessment of internal control has become an essential part of audit engagements and important responsibilities of management. Many parties are interested in the disclosure of internal control quality. Consequently, The Sarbanes–Oxley Act of 2002 (SOX) was implemented in order to ensure the accuracy and reliability of financial reporting. Assessment of internal control is required under two Sections of SOX, namely 302 and 404. For the study, the most important difference between these Sections is the source of the opinion - management or auditor. Therefore, more specifically, the study investigates how strong material weaknesses revealed under SOX 302 and SOX 404 are associated with the probability of restatements of financial reports. I will take into account two different kinds of restatements, namely fraudulent misstatements as well as those that involve unintentional error. This thesis will attempt to answer the following research question:

RQ: Are material weaknesses in internal control under SOX 302 and SOX 404 associated differently with future restatements?

Nowadays, the quality of financial reporting in general is a crucial issue for many practitioners and academics. Giving the assurance to investors and other meaningful stakeholders about the reliability of financial reports has become more significant goal for management. Therefore, managers provide an evaluation of the quality of the internal control system under requirements of the Sarbanes-Oxley Act, that was implemented in response to large-scale frauds and financial misstatements among public companies. However, under Section 404 the assessment of internal controls is the responsibility of auditors. Hence, the evaluation is more objective than attested by managers only.

Companies communicate to investors an information about material weaknesses (MWs) that could lead to financial misstatements. After an occurrence of misstatement, the company has to restate its financial reports. However, a key issue is the magnitude and, above all, the reason of this misstatement. The question is whether the shareholder was misled by the intention of the manager or if it was an unintentional error. For this reason, it might be important to provide an answer for the research question and provide evidence whether firms that reported material weaknesses are more likely to restate their financial reports as well as

what the reasoning is behind these restatements considering differences in MWs disclosed under two Section of SOX.

On the one hand, the answer for the research question is relevant for academics since up to this point I could not find research examining exactly the same relation between internal control and restatements. On the other hand, the thesis might provide interesting insights for practitioners that could help predict the financial misstatements after revealing material weaknesses under different SOX Sections.

1.2. Key related literature and contribution

This research is related to two streams of existing literature. Considerable amount of prior studies focused on internal control since it has an impact on the quality of financial statements and has become a substantial concern to investors, managers and other stakeholders. Several studies focus on the determinants of internal control (Ashbaugh, Collins, and Kinney, 2007; Doyle, Ge, and McVay, 2007a). Prior research has also investigated the market reaction, especially a trend in stock price changes after disclosure of material internal control weaknesses (Hammersley et al., 2008; Beneish et al., 2008).

Regarding the literature about restatements of financial reports, the subject is less explored than the internal control issue. However, several prior studies have established characteristics of companies restating their financial reports (Kinney & McDaniel, 1989; DeFond&Jiambalvo, 1991; Richardson et al., 2002). Similarly to the internal control weaknesses literature, many studies focus on the consequences of restatements. For instance they examine the relation between restatements and market returns (Kinney & McDaniel, 1989; Dechow et al., 1996). Moreover, Hennes et al. (2008) concentrate on distinguishing errors from irregularities in restatement research and examine the consequences of this identification for the relation between restatements and CEO/CFO turnover.

Although prior research has investigated the capital market consequences of the material weaknesses disclosures and restatement announcements, they provide the evidence in isolation. Therefore, my study will contribute to existing literature by examining the relation between internal control weaknesses and financial reports restatements. I would like to test the probability that companies with disclosed material weaknesses will restate their financial reports. Furthermore, I will focus on different kinds of disclosures and

different reasons of restatements simultaneously. Thus far, I have not found any research linking those kinds of material internal control weaknesses with the probability of the restatements due to fraud or unintentional error.

1.3. Hypotheses Development

Prior research provides information about characteristics of firms that restate earnings and that report material weaknesses. Companies that issue restatements tend to be smaller, less profitable, slower growing, have higher debt, face more uncertainties and receive more qualified audit opinions (Kinney & McDaniel, 1989). On the other hand, Doyle et al. (2007a) present general firm characteristics related to companies with disclosed material weaknesses. They find that those companies are smaller, less profitable, more complex, growing rapidly, or undergoing restructuring. Additionally, Ge and McVay (2005) find that companies reviewed by a large auditor are more likely to report internal control weaknesses. To sum up, restating firms and firms with disclosed material weaknesses have similar characteristics, as presented above. Hence, this assumption might lead to the expectation that the probability of restatement is positively associated with disclosed internal control weaknesses. Moreover, the definition of material weakness indicates that the occurrence of material weakness might lead to material misstatements of financial reports (PCAOB, 2004). Thus, the answer to the research question might seem quite obvious. However, there are interesting issues on how strong this association is and whether the internal control problems are actually indicators of restatements. On the other hand, effective internal control may not influence the reduction of intentional misstatements, because managers may override controls which are difficult to detect. Another contradictory argument involves evidence of prior research that many companies did not disclose material weakness before the restatements of their financial reports. However, taking into account all of the preceding arguments, I assume the following relations:

H1a: The probability that firms restate their financial reports is positively related to material weaknesses reported under SOX 302.

H1b: The probability that firms restate their financial reports is positively related to material weaknesses reported under SOX 404.

In the second part of my study I examine the relation between reported material weaknesses under two different SOX Sections and two kinds of restatements. I focus on Section 302 and 404 of Sarbanes-Oxley Act. An important issue in my research is to make a distinction between these two kinds of disclosure. In particular, the aspect which I want to emphasize is a source of an opinion about internal control. Under Section 302 executives are required to evaluate the effectiveness of internal controls and to certify the accuracy of the reported financial statement. Section 404 requires that in each annual report management and auditors are obligated to assess the internal controls and disclose the opinion. The difference in source of opinion is essential for this study since judgments passed by auditors are more accurate. They detect more internal control deficiencies than management and are more likely to detect severe weaknesses (Bedard & Graham, 2011). For this reason I think that material weaknesses disclosed under different Sections are stronger associated with certain kinds of restatements. I take into account fraudulent restatements and misstatements due to unintentional error. According to the findings of prior studies and my intuition I assume that fraudulent restatements are more likely to occur when material weaknesses are reported by auditors, since the managers that are going to commit fraud, will not inform stakeholders about material weaknesses related to some extent with fraud. On the other hand, honest managers are more likely to reveal weaknesses in internal controls to ensure investors and other stakeholders that possible misstatements are connected with error instead of fraud. Taking into account all arguments presented above, I came up with two forms of secondary hypothesis:

H2a: The probability that firms restate their financial reports due to fraudulent misstatements is higher if material weaknesses are reported under SOX 404 compared to SOX 302.

H2b: The probability that firms restate their financial reports due to unintentional error is higher if material weaknesses are reported under SOX 302 compared to SOX 404.

1.4. Research design

The main purpose of the research is to examine the relation between weak internal control and restatements of financial reports. On the operational level of the research I use the disclosed material weaknesses that reflect independent variables in this study. As a main dependent variable I have decided for proxy for restatements that includes all kinds of

restatements. However, I will use it only to test the first hypothesis. For the latter tests I distinguish restatements between fraudulent misstatements and those due to unintentional error. In order to assess the association between material weaknesses related to internal controls and the probability of financial report restatements I use a logistic regression model.

Using the restatements as a main variable, it is necessary to control the potential effects of firm characteristics that might be associated with the probability that a company will restate financial reports. In order to obtain more reliable results, I use control variables related to both fraudulent and unintentional misstatements. My choice is based on existing literature related to restatements. Prior research finds that incentives associated with earnings management are strongly related to the probability that firms will restate financial reports. Dechow et al. (1996) find that an important determinant of earnings management is the demand for external financing. Following prior studies I use two variables related to incentives for earnings management: an actual amount of financing raised as a measure of external financing and leverage as a proxy capturing the impact of debt contracting on earnings management (Richardson et al. 2002; Dechow et al. 2011). Moreover, I control for complexity of the company since it might have a significant impact on the probability of restatements due to error.

In order to compute the regression, necessary data has been derived from Audit Analytics and Compustat. The research covers the period from 2005 to 2015. The final sample consists of 3,871 firm-year observations of which 741 firm-years have restatements.

1.5. Results

First, the descriptive statistics are presented for the whole sample and divided on subsamples. For the whole sample, more firm-years have ICW disclosure under SOX 404 than under SOX 302. After dividing into two subsamples: firm-years with restatement and non-restatement group, results imply that the percentage of occurrence of material internal control weaknesses under both Section is higher for restatement subsample. Additionally, results indicate that investors are able to pay more for earnings that reflect reliable financial situation of the company. The analysis of the differences between subsample of companies with restatement due to error and due to fraud or fraud and error simultaneously indicate that the average firm with fraudulent financial statement is more profitable than those with restatement due to error. However, the latter is, on average, bigger and with higher market value. Regarding internal control weaknesses, the subsample of firms with fraudulent

financial statements have higher percentage of disclosures for SOX 404 than for SOX 302, what is consistent with expectation that management do not disclose information about internal control weaknesses if the company presents fraudulent numbers.

In order to gain the evidence to support hypotheses, three models of logistic regression have been computed. Taking into account all kind of restatements, the association is statistically significant and positive only for the ICW disclosed under Section 302. However, considering only restatements due to fraud as dependent variable, the association between this kind of restatement and internal control weakness under SOX 404 is statistically significant and positive. The ICW under SOX 302 is not associated with restatement due to fraud, what is consistent with expectation that if the management is involved in the fraud, it is highly probable that they will not disclose internal control weaknesses under SOX 302. Moreover, the probability of restatement due to error is higher if company reports ICW under SOX 302. The results of logistic regression support all of the hypotheses except H1b.

The remainder of the study is structured as follows. In the next section, I discuss the institutional details of the SOX. Moreover, Section 2 presents the theoretical background of internal control, restatements and earnings management and reviews related prior literature. The final part of Section 2 presents hypotheses development. In Section 3, I describe the methodology, research design and sample selection. The results of the study are discussed in Section 4. The summary and conclusions are presented in Section 5.

2. Literature review and hypotheses development

2.1. Internal control

Internal control is the most important aspect for providing reliable financial information. Effective internal control is essential to achieve a firm's goals and targets and to avoid losses. Moreover, it helps to comply with regulations and law and therefore mitigate the risk of lawsuit and damage to a firm's reputation. However, one of the most important aims of internal control is to provide assurance that financial reports are reliable and that all of shareholders and stakeholders are able to make proper decisions based on financial information provided by a company. To sum up, sufficient internal control systems enable companies to approach the right direction without additional problems.

In order to define and integrate many concepts of internal control the Committee of Sponsoring Organizations of the Treadway Commission(COSO) has issued "the Internal Control-Integrated Framework". Internal control is defined as "a process, effected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting, and compliance" (COSO, 2013). According to COSO, internal control consists of five components:

- internal environment,
- risk assessment,
- control activities,
- information and communication,
- monitoring.

In 2004 COSO published "the Enterprise Risk Management-Integrated Framework". The updated framework underlines the meaning of enterprise risk management and is extended to eight components in response to increasing demand for risk management: objective setting, event identification and risk response (COSO, 2004).

The foundation of whole internal control system is the internal environment that is considered a set of standards and rules that influence structures and every process across the organization. Senior management and the board of directors settle all components of internal control environment including management's philosophy, competences of a company's

employees, assignment of authorities and responsibilities of individuals and many more. The control environment rules refer to integrity, ethical values across the company and to the independence level of the board of directors from management (COSO, 2013; PCAOB, 2004).

The second component of the internal control framework is risk assessment. In order to achieve a company's goals, management has to identify and assess potential risks associated with these objectives. Risk assessment additionally involves the establishment of risk tolerance levels and how these risks should be managed. Moreover, due to plentiful changes in business conditions, management persistently assesses potential risks related to these changes. Therefore risk assessment has a significant impact on effectiveness of internal control (COSO, 2013).

In order to ensure high quality of internal control, a company should maintain appropriate control activities that help to achieve objectives and mitigate different risks. The variety of control activities are implemented throughout the whole organization, including all levels and positions. According to the COSO, typical internal controls include a broad range of activities. For instance: approvals, authorizations, verifications, reconciliations, reviews of operating performance, security of assets and segregation of duties (COSO, 2013).

The next essential issue in maintaining effective internal control is proper "information and communication". Without relevant information, the company and its employees are not able to realize their responsibilities and to achieve an entity's objectives. Hence, management gathers or produces relevant information to ensure that other components of internal control function in a proper way. In order to guarantee the flow of information, effective communication processes have to be established. This part of the internal control system enables the dissemination of information across an entire organization, thereby giving management an opportunity to communicate with all personnel regarding the responsibilities and their role in assuring an effective internal control system. The aspect of information and communication apply not only to internal issues, but also to effective communication with customers, suppliers, shareholders or other external parties (COSO, 2013).

The assessment of each part of an internal control system is required to evaluate its effective functioning over time. This is the main aspect within the final component of internal control – monitoring. This is possible through two kinds of actions: ongoing monitoring activities and separate evaluations. The first group of activities are comprised of regular

management and supervisory activities related to normal operations of the entity. Monitoring should be implemented at different levels of the company to ensure that relevant information is timely processed. The second part of monitoring relies on separate evaluations that are conducted less frequently than ongoing monitoring activities. Their extent and frequency depend on the level of potential risks, effectiveness of ongoing activities and other management concerns. Through effective monitoring, employees are able to report significant deficiencies to their superordinate or top management in a timely manner (COSO, 2013).

Although the definition of “effective” internal control from COSO is similar to the one used by both Sections of SOX 302 and 404, the SEC focused on the issues related to the reliability of financial reporting only (Doyle et al., 2007b). Internal control over financial reporting is defined as “A process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles” (PCAOB, 2004, para. 7). It is doubtless that adequate internal control over financial reporting (hereafter: ICFR) is crucial for providing reliable financial information. According to PCAOB, ICFR should fulfill three main goals. The first one is the confirmation that records fairly present the results of transactions and disposal of the entity's assets. Secondly, the ICFR should provide a guarantee that appropriate recording of transactions allows for the preparation of financial statements in accordance with generally accepted accounting principles that all transactions regarding receipts and expenditures are authorized by the management of the company. The third ICFR objective refers to prevention or timely detection of unauthorized dispositions of the entity's assets that might lead to significant distortion in financial statements (PCAOB, 2004; Doyle et al., 2007b).

Effective ICFR improves the reliability and precision of financial data, therefore mitigating potential risks related to unreliable information. Taking into consideration prior studies related to internal control over financial reporting, their results imply that the effectiveness of ICFR is associated with the quality of financial information and therefore leads to variety of market consequences (Rice & Weber, 2012). If a company has a weak internal control, there is a risk of intentionally biased estimation of important financial numbers or unintentional errors due to a lack of experience, for example (Doyle et al., 2007b). Consequently, the company provides unreliable financial reports to shareholders and enhances

the risk of bad news in the future. Moreover, constant wrong application of accounting rules, regardless if it is unintentional error or intentional misuse, leads to biases or noise in financial reports. It results in a situation when the management has more reliable information about the company and thereby influencing the level of information asymmetry (Skaife, Veenman & Wangerin, 2013). Furthermore, regular internal control problems lead to a higher possibility of earnings management at various levels of the company because it is easier to manipulate the numbers (Ge &McVay, 2005). Additionally, low internal control quality might also increase the opportunities for financial fraud, through inappropriate segregation of duties, for example (Ogneva et al., 2007). To sum up, internal controls should be established and maintained in a way that provides assurance of prevention and detection of potential fraud or errors that might have influence on the reliability of financial statements (Doyle et al., 2007b).

2.2. Types of internal control deficiency

Doubtless is the fact that the quality of internal control is meaningful for every company and its shareholders. In order to better understand the effect of low quality of internal control and its causes, prior research and regulators provide different categorization of internal control weaknesses. Under Auditing Standard No. 2, the Public Company Accounting Oversight Board (PCAOB) made a distinction considering levels of severity of internal control weaknesses that result in three categories: control deficiencies, significant deficiencies and material weaknesses. The main differences between these three groups of internal control problems lie in the likelihood that these deficiencies will lead to the financial statement misstatements and in the magnitude of potential misstatements. Significant deficiencies are more serious, more likely and lead to more severe distortion in financial statements than control deficiencies. However, the category with the most severe kinds of deficiencies is material weakness(Hammersley et al., 2008). Therefore, this study will focus on material weaknesses since they lead to more meaningful misstatements. Moreover, the important aspect is the legal obligation of the disclosure of material weaknesses. Hence, it helps to mitigate the self-selection bias (Doyle et al., 2007a). According to the Auditing Standard No. 2, the material weakness is defined as “a significant deficiency, or combination of significant deficiencies, that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected” (PCAOB, 2004).

Many prior studies also use different categorizations of internal control weakness that is based on the type of deficiency. The most common divide is account-specific versus company-level material weaknesses introduced by bond rating agency, Moody's and followed by Doyle et al. (2007a). The first type refers to deficiencies in specific accounts or transaction-level processes and includes for example improper internal controls regarding accounting for income tax, revenue and related receivables, acquisition, consolidation or data access controls (Bizarro et al., 2011). Moody's considers these type of internal control weaknesses as less severe since they are relatively easy to identify through a variety of tests conducted by auditors. Consequently, account-specific weaknesses lead to less serious concerns about the reliability of financial information (Doyle et al., 2007a). A second type of internal control weakness refers to more severe issues, namely company-level internal controls. There are broader aspects of effective internal control included related to control environment, tone at the top or ineffective personnel that influence overall financial reporting processes. The reasoning behind more serious concerns regarding company-specific controls is the small likelihood that deficiencies will be identified by auditors since these problems are more difficult to find, assess and correct (Doyle et al., 2007a; Bizarro et al., 2011). Moreover, company-level weaknesses as for example general problems within control environment might suggest that management is not able to control the business in a proper way (Doyle et al., 2007a).

Another classification often followed is the scheme established by Ge and McVay (2005). They divided internal control issues into nine categories: account-specific; training; period-end reporting/accounting policies; revenue recognition; segregation of duties; account reconciliation; subsidiary-specific; senior management; technology issues. The results from Ge and McVay (2005) and Doyle et al. (2007a) regarding the relation between specific types of internal control deficiencies and firm characteristics will be presented in the next subsection.

In the study of Doyle et al. (2007a), the authors also recognize different types of classifications, based on the reason of deficiency. They distinguish three categories: Staffing, Complexity and General. Staffing problems include improper segregation of duties, not enough qualified personnel or lack of a full-time CFO (Doyle et al., 2007a). According to the results of Ge and McVay (2005) poorly trained staff is commonly a main cause of many material control weaknesses. The high level management also contributes to the occurrence of material weaknesses through inappropriate attitudes to corporate governance and internal

control issues (Ogneva et al., 2007). The second group of deficiency relates to difficulties in applying complex accounting policies. For example, those connected with hedging, derivatives and income tax issues (Doyle et al., 2007a; Ge and McVay, 2005). General problems in this categorization refer mainly to improper revenue recognition or issues related to weaknesses in the period-end reporting process. Internal control weaknesses from the last category imply greater possibilities to manage earnings (Doyle et al., 2007a).

2.3. The Section 302 and 404 of the Sarbanes-Oxley Act

The need for more transparent financial statements has been widely known for many decades. The first statutory regulation regarding internal control was the Foreign Corrupt Practices Act of 1977. Under this Act, public companies were obligated to establish and maintain the internal control system which enables sufficient assurance for investors. However, the only required disclosure related to internal control weakness was the change of auditor that companies have to disclose in their 8-K Form, the statement used to notify shareholders about important events (Ge & McVay, 2005). Despite the introduction of requirements on internal controls, the number of earnings restatements increased substantially in the period between 1997 and 2002 (GAO, 2002).

In the early 2000s the trust in the financial market has significantly broken down due to a series of sudden collapses of several large companies (e.g. WorldCom, Enron). The reason was severe financial reporting scandals, which led not only to firms' bankruptcies, but also to a rise in doubts regarding the accuracy of financial reporting and the trustworthiness of audit opinions. Following the accounting controversies, Congress enacted the Sarbanes-Oxley Act in 2002 (SOX), also known as the Public Company Accounting Reform and Investor Protection Act. The aim of new regulations was to enhance the reliability and quality of financial statements reported by public companies which in turn might allow for a restoration of investors' trust in the capital market (Hoitash et al., 2008; Rice & Weber, 2012). SOX has introduced the most relevant reform in securities legislation since the passage of the Securities Act of 1933 and the Securities Exchange Act of 1934 (Iliev, 2010). The bill has implemented many new regulations and procedures. Among its main provisions are Section 302 and Section 404 related to the internal control over financial reporting. Under these sections managers and auditors are obligated to establish appropriate internal controls, maintain and systematically attest their effectiveness (Ge & McVay, 2005). Regulators expected that disclosure under Section 302 and 404 might provide significant information about the

condition of firms' control systems and act as an early warning about potential future misstatements (Hammersley et al., 2008).

Firstly, the SOX 302 has been implemented in 2002, which requires the firms' chief executive officers and chief financial officers to certify that they assessed the effectiveness of internal control over financial reporting. They are obligated to admit that the reports do not include any misrepresentations and that the financial information is fairly presented (Beneish et al., 2008) . Their opinion should be disclosed quarterly in the reports filed with the SEC. If management identified material weakness in internal controls, they are obligated to provide information about the existence of deficiencies and their general conclusion. Additionally, executives are required to provide information about changes to the internal controls and any corrections of material weaknesses (Ge &McVay, 2005). The regulations under Section 302 preclude management to define their firms' internal controls as effective, when they have identified significant deficiencies (Doyle et al., 2007a).

In 2004, SOX 404 became effective, which also requires an evaluation of the effectiveness of companies' internal controls over financial reporting. However, this applies to both management and auditors alike. This Section is divided into two parts 404(a) and 404(b). Under SOX Section 404(a) companies are obligated annually to disclose management's assessment of a firm's internal controls effectiveness, while 404(b) requires a firm's external auditor to attest management's report as well as provide an independent opinion on the effectiveness of internal controls. More specifically, auditors present three opinions: first regarding the financial statement, second on management's assessment of internal control effectiveness, and third related to the effectiveness of internal control over financial reporting (Ge and McVay, 2005). The unbiased auditors' reports enable investors to make sure that financial statements are reliable and prepared in compliance with required regulations (Lisic et al., 2016). If management or an auditor identify material weakness, they are obligated to disclosed it in the annual report (10-K Form) and to communicate the ineffectiveness of internal control over financial reporting (Rice &Weber, 2012).

The most important aspect in this study is the difference between SOX 302 and SOX 404. First of all, the main issue on which I would like to focus on is the source of assessment. Management's report under SOX 302 is less independent than the external auditor's evaluation of internal control effectiveness under SOX 404. A firm's executives are less likely to disclose internal control deficiencies under Section 302. Regarding the responsibilities of an external auditor to detect the material weaknesses or potential fraud, they probably apply a

lower effective threshold in comparison to management's praxis under SOX 302. Moreover, SOX 404 requires additional documents and more scrutiny by external auditors. Consequently, they are able to identify more deficiencies that could lead to more severe financial reporting failures in the future (Doyle et al., 2007a; Rice & Weber, 2012).

The implementation of Section 302 and 404 have begun an intense debate about costs and benefits of new regulations. Many critics claim that complying with SOX involves huge costs, for instance by requiring a great amount of additional work by both management and auditors (Raghunandan & Rama, 2006). On the other hand, proponents and regulators suggest that the implementation of new provisions increase the quality of financial reporting (Iliev, 2010). Moreover, SOX 302 and 404 should lead to lower numbers of restatements. Regarding the report published by Audit Analytics in 2009, the rate of financial restatements was 46% higher for companies that did not comply with all of the SOX internal control regulations. The important benefits are also stronger corporate governance and on average a greater amount of audit committees with experts (Ernst & Young, 2012).

2.4. Prior research related to internal control weaknesses

After introduction of the Sarbanes-Oxley Act in 2002 and consequently the mandatory disclosure of internal control material weaknesses, many researchers began to investigate all issues related to internal control and advantages and disadvantages of SOX enforcement. Hence the prior research provides many relevant results regarding firm characteristics associated with the disclosure of internal control weaknesses or market consequences of these disclosures.

Many studies present similar results regarding firm characteristic related to companies that disclosed material weaknesses. Those firms are usually smaller, less profitable and have more complex operations (Ge and McVay, 2005; Ashbaugh-Skaife et al., 2007; Doyle et al., 2007a). Moreover, Doyle et al. (2007a) find that companies with material weakness in internal control are younger, growing rapidly or have a higher frequency of changes in an organizational structure like for example M&A or restructuring. These results are consistent with evidence from Ashbaugh-Skaife et al. (2007). However, they also find that firms disclosed material weakness have greater accounting measurement risks and fewer resources to invest in internal control. Overall, these characteristics indicate that maintaining an appropriate internal control might be difficult for those kinds of companies (Doyle et al.,

2007a). Furthermore, the prior research suggests that firms that disclosed weaknesses in internal control are usually audited by large audit firms. The most probable reason of this relationship is a greater legal liability of large audit firms and therefore the audit processes are carried out more carefully in order to find all of the potential internal control weaknesses. Moreover, highly qualified auditors usually work in large audit companies and are consequently more able to detect material weaknesses (Ge and McVay, 2005; Ashbaugh-Skaife et al., 2007). Additionally, Doyle et al. (2007b) argue that firms with disclosed internal control weaknesses have lower accruals quality. However, they found this relation only for overall company-level weaknesses.

Another stream of research regarding disclosures of material weakness in internal control refers to their market consequences. Overall, prior literature provides evidence on negative stock price reaction (Beneish et al., 2008; Hammersley et al., 2008). The disclosure of the firm's problems with internal control over financial reporting results in the reevaluation of a firm's future profitability by investors. However, the main determinants of the strength of a shareholder's reaction is the type of internal control weakness and details provided in the disclosure. The returns are more negative in cases of less auditable weaknesses and when disclosures related to these weaknesses are not precise. However, there is slightly lessened negative market reaction if the company hires a Big 4 auditor (Hammersley et al., 2008). Regarding the relation between internal control weaknesses and cost of equity, results of prior research are contradictory. Ashbaugh-Skaife et al. (2009) find that companies with internal control weaknesses face higher costs of equity. While results of Ogneva et al. (2007) indicate that internal control problems are not directly associated with higher costs of equity. Furthermore, Beneish et al. (2008) contribute to the literature with evidence that stock returns are more negative and the cost of capital is higher for companies that disclosed material weaknesses when audit quality is lower. Prior research focus also on the reaction of audit firms on internal control problems. For instance, Hogan and Wilkins (2008) provide evidence that audit fees are significantly higher for companies with internal control deficiencies. Moreover, the level of audit fees are enhanced with the severity of the weaknesses. Furthermore, a few studies focus on the incentives of disclosure or nondisclosure of internal control weakness. For instance, when a company needs external capital, management is less likely to disclose existing weaknesses, which is consistent with results of prior research that internal control deficiencies lead to higher costs of capital (Rice and Weber, 2012; Ashbaugh-Skaife et al., 2009). Considering the results of these prior studies and great interest in this

issue by researchers, I conclude that internal control effectiveness is crucial for providing reliable financial reports. Moreover, the existence of internal control weaknesses lead to many capital-market consequences.

2.5. Restatements

After the revelation of the biggest financial accounting scandals in the 21st century and the bankruptcy of big American companies, the effective internal control over financial reporting has become one of the most important issues for every capital-market participant. As the definition indicates, material weakness in internal controls can lead to a material misstatement in a company's financial statements. When a misstatement is detected by an auditor or management of the entity, the firm's financial statement must be restated. However, a great amount of accounting errors are discovered every year, but only a portion of them are severe enough to issue necessary restatements (Audit Analytics, 2013). Since the restatements might be due to unintentional error or intentional misleading, the subject of restatements is closely related to the notion of earnings management. The next subsection concerns the details of earnings management and summarizes a portion of prior research related to this popular topic.

Restatements are considered to be very important events for every shareholder, especially after the scandals in early 2000s. Changes in previously revealed financial numbers might lead to declines in an investor's confidence about financial statement credibility and future company performance. Many prior studies investigate market reaction to restatements. Usually, news about restatements lead to large decrease in market value (Richardson et al., 2002). Palmrose et al. (2004) find an average abnormal return of about -9 percent over a 2-day event window. Additionally, they provide evidence that stronger negative market reaction is associated with restatements due to fraud, affecting more accounts or leading to the decline of previously reported income. Similar results are presented in the report "Financial Restatement Trends in the United States: 2003–2012" prepared by Susan Scholz and provided by the Center for Audit Quality (CAQ). Over the study period, the average stock price reaction to restatements was about -1.5%. However, the reactions differ in force by year and type of restatement. On average, the highest negative stock price reactions concern to restatements due to fraud or related to revenue, -6.8% and -4.0%, respectively (Scholz, 2014). Additionally, Hribar et al. (2004) focus on the impact of restatements on the firm's cost of capital and expected future earnings. The results of their study indicate that the restating of

financial reports leads to a decline in expected future earnings and an increase in the estimated cost of capital. Moreover, the increases in the cost of capital are the largest if the restatement is commenced by auditors. The results also suggest that for restating companies with higher leverage, the effect of increasing the cost of capital is stronger (Hribar et al., 2004).

Due to the high interest of issues related to restatements, many studies investigate the topic. However, only a few of them focus on firm characteristics associated with restatements of financial reports. Among the most frequently cited are Kinney and McDaniel (1989) and DeFond and Jiambalvo (1991) which provide evidence that companies announcing the restatements are smaller, less profitable and growing at a slower pace. Additionally, the firms which restated their earnings are likely to have a higher level of debt, engage more qualified auditors and face more severe uncertainties (Kinney and McDaniel, 1989; Richardson et al., 2002). Moreover, Richardson et al. also find that companies that issue restatements have higher market expectations for future growth earnings. However, their results are partially contradictory to studies mentioned above. Namely they find that companies from test and control groups do not vary in size and profitability. Perhaps, the difference in results is caused by different study periods.

It is no doubt that, the possibility of predicting restatements would be a crucial issue for many parties and an important aspect in improving the quality of the capital market. For instance, Dechow et al. (2011) focus on predicting accounting misstatements. The aim of their study is to present a broad database with many described financial misstatements in order to encourage more researchers to research on earnings misstatements. Moreover, they find common financial characteristics that are typical for misstating companies. In order to predict misstatements, they examine variables on different dimensions, namely: (1) accrual quality, (2) financial measures, (3) nonfinancial performance, (4) off-balance-sheet activities, (5) market-based variables. They provide evidence that during the period of misstatements, companies mark lower accrual quality and a decline in financial and nonfinancial measures. They also find that financing activities and off-balance-sheet activities, as operating leases and pension plan assets, are unusually high for misstating companies. Moreover, the growth expectations might be strong incentives to misstatements in order to maintain high stock market valuations. The main aim of Dechow et al. (2011) is to establish a model for predicting misstatements. They present the scaled probability (F-score) that helps to identify a red flag and therefore predict the misstatement.

Furthermore, Mayers et al. (2013) study the determinants of restatements disclosure decisions and market reactions related to these choices. They find that companies with greater outside monitoring by auditors and sophisticated market participants disclose the correction of financial statement more transparently. They show also that decisions regarding transparency of restatements significantly influence market reaction. Additionally, the restatement of financial reports announced by large players may lead to a so called a snowball effect. The choices made by industry peers have an impact on a particular entity's decision about the restatement (Mayers et al. 2013; Audit Analytics, 2013). According to the evidence of Gleason et al. (2008), income-decreasing restatements also lead to the decline in the share price of non-restating companies in the same industry. The strength of this effect depends on the level of "industry adjusted accruals" and the size of a company. When the peer firms use the same auditor as a restating company, the penalty on their stock prices is greater. This phenomena indicates that investors are concerned about the general quality of accounting information in certain industries if one of the largest players restates the financial report.

Moreover, prior research investigates the relation between top management and restatements. For instance, Aier et al. (2005) find that the probability of restatements is significantly lower when CFO's have more financial expertise, measured as: amount of years working as CFOs; MBAs; CPAs. Hennes et al. (2008) show that it is important to distinguish errors from fraudulent misstatements since it has an impact on the relation between restatements and CEO/CFO turnover.

In this study I will focus on two types of financial restatements, namely due to fraud and due to unintentional error. Regarding the source of data needed to conduct the research, I use the categorization of financial restatements provided by Audit Analytics. There is a division into five groups: Financial fraud, Clerical errors and GAAP/Foreign Accounting Principle failure or misapplication, Regulatory Investigation and Other Significant Issues. The first type includes restatements that arise as a result of intentional manipulation of financial numbers or misappropriation of assets. This group is usually the most adverse, but also relatively rare (Audit Analytics, 2013). Therefore, in order to increase the number of observations, I take into account the group of restatements with a regulatory body investigation as well and consider them as restatements due to intentional misleading. Despite these restatements not being confirmed as fraudulent, there is a high probability of intentional misstatement because of commenced regulatory investigation. The second group, namely clerical errors are related to "simple clerical and bookkeeping errors, such as mathematical

mistakes”. The third group refers to restatements due to improper application of accounting principles.

Prior research also investigates which types of errors are most frequently mentioned in the disclosure of restatements. Dechow et al. (2011) provides evidence that a significant number of restatements occur due to overstatement of revenues, capitalizing costs or misstatement of expenses. The results are consistent with the report prepared by Scholz (2014). She presents that restatements related to expenses are the most prevalent in every industry. Regarding the industries with the greatest frequency of restatements, prior research and reports with reviews of restatements indicate that companies from Computer and Software industry restate their earnings more frequent than others industries. However, Financial industry as well as Retail and Services are also subject to restatements with high frequency (Dechow et al., 2011; Scholz, 2014).

To sum up, it is worth pointing out some results of prior studies as well as significant reports as “2015 Financial Restatements Review” prepared by Audit Analytics and a broad review provided by the Center for Audit Quality with information of restatements trends over the course of 10 years. The results indicate that timeliness and the transparency of restatement disclosures has become better over time. Moreover, the level of severity of restatements declined over the period 2003-2012. Additionally, the total number of restatements decreased by almost 59% from 2006 to 2012. Taking into consideration the declining trend of restatements over past few years, the quality of financial reporting indicates considerable improvement (Mayers et al. 2013).

2.6. Earnings management

Earnings management is an issue related to the subject of restatements, especially fraudulent restatements (Ettredge et al., 2010). Companies that restate their financial reports are perfect examples to examine the phenomena of earnings management. Richardson et al. (2002) focus on the case of earnings restatements in predicting earnings management. They assume that if a company restates its earnings, it can be considered as company that intentionally manipulates its financial numbers. However, the report provided by the Center for Audit Quality shows that among all kinds of restatements only 2% from 2003 to 2012 were identified as fraudulent (Scholz, 2014). On the other hand, as the scandals of the early 2000’s show, a few big frauds can lead to a collapse of confidence in the capital market.

According to the definition provided by Healy and Wahlen (1999), earnings management is described as exercising the judgment by management in using appropriate reporting and estimation methods in order to modify financial numbers. It leads to either misleading some stakeholders about the real economic performance of the entity or enhancing contractual payoffs that vary from the level of reported numbers. However, the earnings management might be made in good faith. Managers can use the possibility of the judgment when choosing reporting methods that better fit the company and reflect its economic situation in a more proper way. Consequently, it yields in providing more informative financial reports for stakeholders. It is without a doubt that it is a great benefit of earnings management that provides managers' private information to stakeholders, thereby enhancing the quality of communication between parties. However, earnings management has great disadvantages. Namely, it leads to substantial costs in regards to misallocation of resources and thus to a wrong perception of a firm's real financial situation by stakeholders (Healy and Wahlen, 1999).

There are many forms of managers' judgment. Among others, they have to decide about discretionary expenditures as for example research and development, maintenance or advertising. They are also obligated to choose between different accounting methods for inventory costs or depreciation. Additionally, managers have a choice in estimation methods of future economic events in order to present their value in the most proper way. Moreover, management of working capital is essential in the managers' judgment since it influences cost allocations and net revenues (Healy and Wahlen, 1999).

In every case of earnings management, particular incentives must fuel managers' decisions. According to the prior studies, meeting capital market expectations is considered as the most meaningful motivator for managers (Richardson et al., 2002). One of the strongest incentives is trying to avoid losses and a decline in earnings. Additionally, one of the main goals of managers is maintaining a pattern of increased earnings (Burgstahler and Dichev, 1997). Another motivation for earnings management is to maintain earnings on stable level, so-called income smoothing. If earnings are not subject to fluctuations, it leads to lower risks and thus enhances the company's market value (Subramanyam, 1996). Richardson et al. (2002) also find that the pressure to attract external financing at lower costs acts as a strong incentive to manage earnings. Their results are consistent with findings of Dechow et al. (1996). Prior research provides evidence that management compensation contracts, which are written based on accounting numbers, have an impact on motivating managers to manipulate

financial numbers, as well (Healy and Wahlen, 1999). However, Armstrong et al. (2010) present a review of prior research related to the association of contracting incentives and manipulation of accounting numbers that suggests mixed evidence of its existence in this association. In their study, they find that CEO equity incentives are not positively related to the accounting irregularities.

The vast majority of prior research related to the subject of earnings management examines the way to predict this phenomena. Regarding the strong market reaction to the restatements of financial reports, any signals that might help to predict earnings management is meaningful for many capital market participants (Richardson et al., 2002). The most common methods to detect earnings management are models based on the analysis of accruals (Jones, 1991; Dechow et al., 1995; Dechow and Dichev, 2002; Dechow et al., 2012). Researchers try to isolate the discretionary portion of accruals (Dechow et al. 1995). However, the measure of earnings management seem to be subject of many limitations. Majority of models lack power due to the difficulties with appropriate isolation of discretionary accruals. Moreover, test are often unspecified due to omitted correlated variables (Dechow et al., 2012). The limitations of many commonly used models are presented in the study of Dechow et al. (1995). However, since the publication of this study, many alternative models have been developed. For instance, Dechow and Dichev (2002) present alternative ways to isolate discretionary accruals. Furthermore, Dechow et al. (2012) also propose a new approach in detection of earnings management. They take into account reversals in tests of earnings manipulations. On the other hand, among others Burgstahler and Dichev (1997) propose a new approach in detecting earnings management based on the analysis of earnings distribution. They suggest that changes in working capital and cash flow from operations are used to manipulate earnings. Additionally, Richardson et al. examine the possible occurrence of earnings management using the information from financial statements. They focus on restating companies since they consider these kinds of companies ideal settings to study the issue of earnings management. Their results suggest that operating and investing accruals are considered the main indicators of earnings management. Furthermore, Stubben (2010) examines a different measure of earnings management, namely discretionary revenues. The study compares accrual models and revenue models. The results demonstrate that models based on revenue have more power, are better specified and less biased.

2.7. Hypotheses Development

According to a section of prior studies, material weakness in internal control is strictly related to the issue of restatements (Palmrose et al., 2004; Hoitash et al., 2008; Hammersley, 2008; Audit Analytics, 2009). Thus the answer to the first research question might seem obvious. However, there are interesting issues regarding how strong this association is and whether or not the disclosure of internal control problems are actually indicators of restatements in the future. The evidence of prior research is contradictory, hence the answer might be relevant.

Firstly, prior research provides information about the characteristics of firms that restate earnings and that report material weaknesses. Companies that issue restatements tend to be smaller, less profitable, slower growing, have higher debt, face more uncertainties and receive more qualified audit opinions (Kinney & McDaniel, 1989). On the other hand, Doyle et al. (2007a) present general firm characteristics related to companies with disclosed material weaknesses. They find that those companies are smaller, less profitable, more complex, growing rapidly, or undergoing restructuring. Additionally, Ge and McVay (2005) find that companies reviewed by a large auditor are more likely to report internal control weaknesses. To sum up, restating firms and firms with disclosed material weaknesses have similar characteristics, as presented above. Hence, this assumption might lead to the expectation that the probability of restatement is positively associated with disclosed internal control weaknesses.

Secondly, taking into account intuitive reasoning and evidence of prior studies I assume that the association between internal control weaknesses and the occurrence of restatements should be positive (Hoitash et al., 2008; Audit Analytics, 2009). Since for companies which do not have any problems among internal control, the possibility of committing fraud or making unintentional errors is definitely lower. My reasoning is consistent with prior research as well as the definition of material weakness in internal control. Among others, Feng and Li (2010) find that the restatement rate of companies with material weaknesses is more than twice as high as the rate of the control group. Additionally, the information included in auditing standards released by PCAOB is supportive of my reasoning suggesting a link between strong internal control and fraud prevention (PCAOB 2004). However, there is a possibility that effective internal controls might not lead to the reduction of intentional misstatements since management is able to override controls (Kinney,

2005; Hogan et al., 2008). If managers override controls, it may be difficult to detect it. The reason is that sometimes managers participate in designing and implementing such controls. Additionally, they have greater knowledge of daily operational activities of their companies. However, in cases of controls being overridden and existing weak internal control, management may fail to correct weaknesses on time and hence, auditors suppose that the probability of fraud is higher than usual (PwC, 2011). Rice and Weber (2012) suggest if managers make intentional misstatements, they know that existing material weakness is circumvented. Without a doubt, the weak internal control environment helps them to override controls (Ashbaugh-Skaife et al., 2007).

Furthermore, the issue which also provides a bias regarding the association between internal control disclosures and restatements is the evidence from prior research that suggest many companies with weak internal control do not disclose material weaknesses before the restatements. Rice and Weber (2012) find that a significant number of restating companies failed to communicate their internal control problems until after the restatements. Similarly, Scholz (2014) in her report examines the disclosures of internal control over financial reporting before and after the occurrence of restatement and among others, she finds that between 2009 and 2012 only about 18 percent of restatements are preceded by disclosing material weakness in internal control over financial reporting. Furthermore, Rice and Weber (2012) richexamine the effectiveness of internal control reporting under SOX 404 using the sample of restating companies. Their results show that only about 32 percent of companies disclose the information that material weakness in internal control exists during the misstatement period. The percentage of companies failing to disclose ICW increases and amounts to about 14 percent in the last five years of a sample period. Moreover, Plumlee and Yohn (2010) claim that the number of companies from the sample that restate their earnings are much higher than the number of firms disclosing material weakness in internal control.

Moreover, another situation to emphasize is when material weakness exists but is not disclosed which indicates that neither managers nor auditors detect it or they decide not to disclose it after all (Ashbaugh-Skaife et al, 2007). Prior research suggests that the decision of whether or not to communicate internal control problem is contingent upon the incentives of managers. In some cases, they can choose whether the problem is a significant deficiency or material weakness. Hence, disclosing information about problems with internal control are to a certain extent discretionary since the significant deficiencies are not required to be disclosed (Ashbaugh-Skaife et al., 2007; Leone, 2007). One of the reasons for non-disclosure of

weakness may be the increasing cost of capital in cases of existing internal control problems (Ashbaugh-Skaife et al., 2007). If management has plans to raise outside capital, they are less likely to disclose material weaknesses (Rice and Weber, 2012). However, the decision about not being forthcoming about internal control problems leads to suspicion of earnings management (Dechow et al., 1996).

Earnings management and internal control problems are great subjects of interest to researchers. Chan et al. (2008) examine the issue of earnings management in companies that report material internal control weaknesses under Section 404 and compare them to other firms. Their results indicate that companies reporting those weaknesses have more positive and absolute discretionary accruals than other companies. The authors claim that Section 404 may lead to decreasing the opportunity of intentional misstatement and unintentional errors since the company can improve ineffective controls detected by an auditor under Section 404 under SOX. Consequently, elimination of weaknesses leads to an increase in the quality of accounting disclosures and enhancing investors' trust in financial reporting (PCAOB, 2004). Thus, the detection of weaknesses can also lead to a decrease in the number of restatements in the future. However, the authors conclude that companies disclosing material weaknesses have lower earnings quality. Additionally, the Committee of Sponsoring Organizations of the Treadway Commission prepared a report about fraudulent financial reporting. Regarding the internal control the authors only mention that adverse opinions under Section 404 of SOX in their sample only emphasize already existing internal control issues instead of being directly "diagnostic of future reporting problems" (Beasley et al., COSO, 2010). However, the sample used in this investigation was very small.

The link between restatements and internal control weakness is not obvious. On the one hand, the obligation of assessment of internal controls should discourage managers from committing fraud. If the internal control quality is questionable, the auditor's investigation includes more tests and procedures that, in turn, might deter certain managers from committing fraud (Donelson et al., 2015). Hence, it is possible that the disclosure of internal control weakness might be negatively associated with fraud in the future. The aim of enhancing substantive procedures is the mitigation of a material misstatement (Smith et al., 2000). Moreover, the restatements due to unintentional errors might decrease after the revelation of problems with internal control. The increased involvement of auditors may yield in a better understanding existing problems and more effective detection (Hoitash et al.,

2008). Some of ICW, especially those under SOX 302 in quarterly reports, can be timely remediated, for example before publishing annual financial reports.

On the other hand, the adverse opinions of internal controls provide opportunities to commit fraud. Taking into account the definition of material weakness, stakeholders should be aware of the high likelihood of restatement occurrence. Doyle et al. (2007b) suggest that in cases of a weak internal control environment, management may abuse biased accruals in order to manage earnings. Furthermore, the existence of weaknesses in internal control might be severe, hence timely remediation might be difficult for certain companies and still might lead to significant restatements due to unintentional errors.

As presented above, the evidence of prior research is not straightforward. However, taking into account all of the preceding arguments I assume the following direction of the first hypothesis:

H1a: The probability that firms restate their financial reports is positively related to material weaknesses reported under SOX 302.

H1b: The probability that firms restate their financial reports is positively related to material weaknesses reported under SOX 404.

In the second part of my study I examine the relation between reported material weaknesses under two different SOX Section and two kinds of restatements. I focus on Section 302 and 404 of Sarbanes-Oxley Act. An important issue in my research is to make a distinction between these two kinds of disclosure. In particular, the aspect which I want to emphasize is a source of an opinion about internal control. Under Section 302 executives are required to evaluate the effectiveness of internal controls and to certify the accuracy of the reported financial statements. Section 404 requires that in each annual report management and auditors are obligated to assess the internal controls as well as to disclose the opinion. Judgments passed by auditors tend to be more accurate. They detect more internal control deficiencies than management and are more likely to detect severe weaknesses (Bedard& Graham, 2011). For this reason I think that material weaknesses disclosure under different Sections are more strongly associated with certain kinds of restatements. I will take into account fraudulent restatements and misstatements due to unintentional error.

Some evidence of prior studies indicates that ineffective internal controls over financial reporting establish opportunities to commit fraud or earnings management (Doyle et

al., 2007b). However, for instance Dechow and Dichev (2002) suggest that weaknesses in internal control lead to more frequent unintentional errors. Similarly, Kinney and McDaniel (1989) claim that a weak internal control may increase the likelihood of significant errors. Hence, I would like to investigate which kind of restatements are strongly associated with internal control material weaknesses under two different regimes.

Researchers focus on investigating the relation between accrual quality and material weaknesses. Doyle et al. (2007b) examine this association because they consider a weak internal control leads to intentionally biased accruals in order to manage earnings and unintentional errors in accrual estimation due to a lack of experience, for instance. The researchers find a stronger association between material weakness under SOX 302 and lower accruals quality in comparison to weakness under SOX 404. Additionally, the results indicate that Section 404 overall is not associated with poorer accrual quality.

I believe that investigating the association of internal control weaknesses and restatements between Section 302 and 404 of SOX is relevant. The prior studies have confirmed that the results are different after being distinguished between these two sections. For instance, Hoitash et al. (2008) examine the likelihood of disclosing weaknesses related to certain characteristics of audit committees and the results of tests indicate that those characteristics are significant only for deficiencies under SOX 404. Furthermore, Beneish et al. (2008) provide evidence that the market response to internal control disclosure is more negative to Section 302 than to Section 404. It leads to the conclusion that material weaknesses under SOX 404 are less meaningful with respect to financial reporting consequences.

Furthermore, Bedard and Graham (2011) examine auditor versus client detection of internal control problems. They find that auditors are more likely to detect internal control deficiencies. More specifically they detect about three-fourths of all internal control problems. The authors expect that independence from clients, more experience in testing internal controls and required training and education is the reasoning behind a higher possibility of detection by auditors. Additionally, clients are more prone to underestimate the level of severity of internal control problems that may be attributable to the difficulties with objective self-assessment. Moreover, Doyle et al. (2007b) suggest that an auditor probably is more likely to apply a lower effective threshold in comparison to management's assessment and therefore he or she can find more material weaknesses.

Taking into account all of arguments presented above, I assume that fraudulent restatements are more likely to occur when material weaknesses are reported by auditors, since the managers that are going to commit fraud, will not inform stakeholders about material weaknesses related to some extent with fraud. On the other hand, honest manager are more likely to reveal weaknesses in internal controls to ensure investors and other stakeholders that possible misstatements are connected with error instead of fraud. Taking into account all arguments presented above, I came up with two forms of a second hypotheses:

H2a: The probability that firms restate their financial reports due to unintentional error is higher if material weaknesses are reported under SOX 302 compared to SOX 404.

H2b: The probability that firms restate their financial reports due to fraudulent misstatements is higher if material weaknesses are reported under SOX 404 compared to SOX 302.

3. Methodology and Sample Selection

3.1. Methodology

The main purpose of the research is to examine the relation between weak internal control and restatements of financial reports. On the operational level of the research I use the disclosed material weaknesses that reflect independent variables in this study. SOX_302 is a proxy for material weaknesses reported under Section 302 of Sarbanes-Oxley Act and SOX_404 for those disclosed under Section 404. Both are dummy variables, coded 1 if the company reported at least onematerial internal control weakness under Section 302 or 404 respectively, 0 otherwise. As a main dependent variable I decided for proxy for restatements that includes all kinds of restatements (REST). However, I will use it only to test the first hypothesis. In order to assess the association between material weaknesses related to internal controls and probability of financial report restatements I use the following model of logistic regression:

$$(1) \quad \text{REST}_t = \beta_0 + \beta_1\text{SOX_302}_t + \beta_2\text{SOX_404}_t + \beta_3\text{FINRAISED}_t + \beta_4\text{LEV}_t + \beta_5\text{FOREIGN_TRANS}_t + \varepsilon.$$

For the latter tests I distinguish restatements between fraudulent misstatements or due to fraud and error simultaneously (REST_FRAUD) and due to unintentional error (REST_ERROR_ONLY). All of the mentioned dependent variables will take the form of dichotomous variables coded 1 if the company has restated its financial report due to particular reason, 0 otherwise. In order to test these associations I use the following regression models:

$$(2) \quad \text{REST_FRAUD}_t = \beta_0 + \beta_1\text{SOX_302}_t + \beta_2\text{SOX_404}_t + \beta_3\text{FINRAISED}_t + \beta_4\text{LEV}_t + \beta_5\text{FOREIGN_TRANS}_t + \varepsilon.$$

$$(3) \quad \text{REST_ERROR_ONLY}_t = \beta_0 + \beta_1\text{SOX_302}_t + \beta_2\text{SOX_404}_t + \beta_3\text{FINRAISED}_t + \beta_4\text{LEV}_t + \beta_5\text{FOREIGN_TRANS}_t + \varepsilon.$$

Using the restatements as a main variable, it is necessary to control for the potential effects of firm characteristics that might be associated with the probability that a company will restate reports. In order to obtain more reliable results, I use control variables related to

both fraudulent and unintentional misstatements. My choice is based on existing literature related to restatements.

Prior research finds that incentives associated with earnings management are strongly related with the probability that a firm will restate financial reports. Dechow et al. (1996) find that an important determinant of earnings management is the demand for external financing. Following prior studies I use two variables related to incentives for earnings management. For example Richardson et al. (2002) use the actual amount of financing raised (FINRAISED) as a measure of external financing. FINRAISED is computed as sum of new debt and equity issued by the company (Compustat data item 108 plus data item 111) deflated by total assets (Compustat data item 6). Next, according to prior research (Richardson et al., 2002; Dechow et al., 2007; Ettredge et al., 2010) I choose leverage (LEV) as a variable capturing the impact of debt contracting on earnings management. The variable LEV is computed as total debt (Compustat data item 34 plus data item 9) deflated by total assets (Compustat data item 6).

Based on my intuition, I consider that the complexity of the company might have a significant impact on the probability of restatements due to error, even if the internal control is sufficient. Therefore, I would like to use a control variable associated with complexity. I decided to use proxy mentioned in prior research (Doyle et al., 2007b; Bushman et al., 2004). The aspect connected with complexity is the existence of a foreign currency translation adjustment (FOREIGN_TRANS). This variable is dummy variable equal to 1 if the firm has a non-zero foreign currency translation (Compustat data item 150), and 0 otherwise.

3.2. Sample selection

In order to collect the sample, available data of the Compustat North America and Audit Analytics databases have been used. Data related to restatements and SOX disclosures has been derived from the Audit Analytics databases. The rest of information used to compute the control variables has been downloaded from Compustat North America.

As a consequence of minor observations with restatements due to fraud, the research period covers eleven years from 2005 to 2015, in order to obtain more reliable results. Table 1 presents the sample selection process.

Table 1**Sample selection and Composition**

Total of firm-year observations available in Audit Analytics database (2005-2015)	11,959
Less:	
Firm-years with missing SOX 302 data	722
Firm-years with missing SOX 404 data	3,518
Firm-years with insufficient Compustat data	3,848
Final Sample	3,871
Of which:	
Firm-years with restatement	741
Firm-years with restatement due to fraud	280
Firm-years with restatement only due to error	461

The starting point was to obtain the data about restatements from Audit Analytics Restatement database for all companies available during the sample period. The first step resulted in 11,959 firm-year observations. The sample consists of firm-years with disclosed restatements, 2,192 observations, and with non-restatement firm-years equal to 9,767 observations. Based on the company identification number in Audit Analytics database (company fkey) of companies selected in the first step, data related to SOX disclosure was selected. The second step resulted in eliminating 722 observations due to lack of data on SOX 302 and 3,518 observations due to no information about disclosures under SOX 404. Then, the data required to compute control variables was selected based on the company identifying number - CIK number in Compustat database which is equivalent of Company fkey number from Audit Analytics. Next, the observations with missing Compustat data were deleted (3,848). The final sample counts 3,871 observations, consisting of 741 firm-year with restatements. 280 observations out of 741 are reflected restatements due to fraud or due to fraud and error simultaneously. Thereby, the rest of restatement firm-years are related only to restatement due to error (461 observations).

4. Results

4.1. Descriptive Statistics

Descriptive statistics are set out in Table 2, 3 and 4. In the table 2 the summary statistics of the whole sample is presented.

Variable	Mean	Median	St. dev.	Minimum	Maximum	Skewness
SOX_302	0.3191	0.0000	0.4662	0.0000	1.0000	0.7761
SOX_404	0.3873	0.0000	0.4871	0.0000	1.0000	0.4629
assets	8274.4	260.2	78268	0.0000	0.0000	19.8
netinc	76.9	0.0000	856.9	-27612	22315	3.0810
markval	1567.7	87.6	9751.9	0.0000	0.0000	22.8
mbratio	1.3764	1.2846	78.0	-2030.2	2298.6	1.8926
peratio	3.2161	0.0000	459.3	-20987	22319	1.5774
LEV	1.7966	0.2204	40.9	0.0000	3060.5	65.5
FINRAISED	0.4940	0.0649	5.7763	-0.0397	422.5	61.0
FOREIGN_TRANS	0.2449	0.0000	0.4301	0.0000	1.0000	1.1864
l_assets	5.3344	5.6726	3.0574	-6.9078	14.7	-0.5202
l_markval	4.9990	5.1037	2.4488	-7.6009	12.8	-0.2355
l_LEV	-1.5533	-1.2718	1.7539	-11.2	8.0263	-0.8367
l_FINRAISED	-2.6482	-2.2209	2.3566	-14.5	6.0462	-0.7710

The statistics show that majority of variables have strong skewness that might disturb results of the tests. The skewness of two control variables, *LEV* and *FINRAISED* is equal to about 60-65. Additionally, the two variables to describe the sample as *assets* and *markval* have strong skewness. Therefore, logs of variables with strong skewness have been computed (*l_assets*, *l_markval*, *l_LEV*, *l_FINRAISED*). After calculation of logs the skewness of all variables is on the sufficient level. Regarding the variables related to SOX disclosures, the whole sample consists of 31% of firm-years with disclosed internal control weaknesses under SOX 302 and 38% of firm-years have ICW under SOX 404. The descriptive statistics for the sample divided in two groups – restatement and non-restatement firm-years are presented in Table 3.

Table 3: Descriptive statistics, sorted by occurrence of restatement

<u>Variable</u>	<u>Restatement sample</u>		<u>Non-restatement sample</u>		<u>Difference</u>	<u>p-value</u>
	<u>Mean</u>	<u>St. dev.</u>	<u>Mean</u>	<u>St. dev.</u>		
SOX_302	0.43084	0.49531	0.29372	0.45549	0.1371	0.0000***
SOX_404	0.45068	0.49773	0.37222	0.48343	0.0785	0.0008***
l_LEV	-1.7101	1.7890	-1.5128	1.7426	-0.1973	0.0006***
l_FINRAISED	-2.7910	2.4666	-2.6118	2.3267	-0.1792	0.0215**
FOREIGN_TRANS	0.25109	0.43380	0.24334	0.42914	0.0077	0.5501
l_assets	5.3706	2.7983	5.3251	3.1203	0.0455	0.6271
l_markval	4.9998	2.2459	4.9988	2.5005	0.0010	0.9906
netinc	100.97	1039.8	70.772	803.98	30.2	0.2426
mbratio	3.7287	73.921	0.77655	79.057	2.9521	0.2156
peratio	-22.876	649.53	9.9196	395.76	-32.8	0.0199**

*** p-values are significant at 0.01 level, ** p-values are significant at 0.05 level, * p-values are significant at 0.10 level

The results show that the mean of the variable – l_LEV, representing the level of leverage, is significantly lower for restatements companies (p-value < 0.01) . Similarly, the mean of log of FINRAISED is lower for firms with restatements (p-value < 0.05). The results indicate inconsistency with the expectation and with results of prior studies that companies with higher level of leverage and higher amount of financing raised are more prone to earnings management and thereby to the restatements of their earnings. Moreover, the companies with restatements are more profitable. The mean of the *netinc* is higher for the sample with restatement companies. However, the difference between these two samples is statistically insignificant for the variable *netinc*. Additionally, negative mean of price-to-earnings ratio (*peratio*) for restatements companies sample indicates that many firm-years with restatements have negative income. The mean of the subsample of non-restatement companies is equal to 9.9196 that indicates willingness of investors for paying more dollars for one dollar of earnings. The results can indicate that the investors are able to pay more for earnings that reflect reliable financial situation of the company. The difference between these two subsamples is statistically significant (p-value < 0.05). Regarding the comparison of the occurrence of internal control weaknesses both under SOX 302 and SOX 404, the percentage is higher for restatement sample. 43% of restatements companies disclosed internal control

weakness under SOX 302 and 45% under SOX 404. The results are consistent with the expectation and definition of ICW. Comparing to the non-restatement subsample, 29% and 37% of firm-years have ICW under SOX 302 and 404 respectively.

Table 4: Descriptive statistics, sorted by the kind of restatement

<u>Variable</u>	<u>Restatement due to fraud</u>		<u>Restatement due to error</u>		<u>Difference</u>	<u>p-value</u>
	<u>Mean</u>	<u>St. Dev.</u>	<u>Mean</u>	<u>St. Dev.</u>		
	(REST_FRAUD = 1)		(REST_ERROR_ONLY = 1)			
SOX_302	0.3727	0.4838	0.4721	0.4994	-0.0994	0.0000***
SOX_404	0.4887	0.5003	0.4267	0.4949	0.062	0.0199**
l_LEV	-1.523	1.767	-1.833	1.794	0.31	0.0037***
l_FINRAISED	-2.583	2.379	-2.919	2.512	0.336	0.0233**
FOREIGN_TRANS	0.2393	0.427	0.2586	0.4381	-0.0193	0.4173
l_assets	4.941	3.135	5.638	2.532	-0.697	0.0000***
l_markval	4.727	2.499	5.172	2.053	-0.4450	0.0012***
netinc	195.0	1500	41.3	575.3	153.7	0.0238**
mbratio	5.945	118.2	2.345	12.31	3.6	0.4905
peratio	-61.1	1017	1.022	194.3	-62.1	0.1717

*** p-values are significant at 0.01 level, ** p-values are significant at 0.05 level, * p-values are significant at 0.10 level

A description of the restatements subsample sorted by the kind of restatement is reported in Table 4. The results present the differences between the companies with restatements due to fraud and due to error. The average firm with fraudulent financial statement is more profitable than those with restatement due to error (p-value < 0.05). However, the latter is, on average, bigger and with higher market value (both p-values are significant at 0.01 level). The results are consistent with expectation that bigger companies are more prone to errors in their financial statements and that market is less sensitive to news about restatement due to error than due to fraud. Moreover, the variables used to determine earnings management incentives, leverage and financing raised, have on average higher level for companies with fraudulent financial reports (p-values significant at 0.01 and 0.05 levels respectively). Comparing the occurrence of ICW under SOX 302 and SOX 404, results are consistent with the expectation of the thesis. Within subsample of restating firms due to error, more companies have disclosed ICW under SOX 302 than under SOX 404 and companies

with fraudulent reports have more material weaknesses under SOX 404 than under SOX 302. The percentage of firms with disclosures under these two Sections are similar for subsample of companies with restatements due to error. However, regarding firms with fraudulent financial statements the percentage of disclosures is higher for SOX 404 than for SOX 302, what is consistent with expectation that management do not disclose information about internal control weaknesses if the company presents fraudulent numbers.

4.2. Regression Analyses

In order to obtain the answer to the main research question, three models of logistic regression were used. The table 5 presents the results of logistic regression with dummy variable REST as dependent variable. The variable indicates if the company in particular year restated its financial statements (REST = 1) or not (REST = 0).

Table 5: Logistic regression (dependent variable = REST)

Number of observations: n = 3871
Standard errors based on Hessian

Variable	Coefficient	Std. error	Z	p-value
Const	-1.8295	0.0805	-22.74	0.0000***
SOX_302	0.8160	0.1024	7.967	0.0000***
SOX_404	0.1044	0.1045	0.999	0.3178
FOREIGN_TRANS	-0.1413	0.0928	-1.522	0.1281
L_LEV	-0.0777	0.0253	-3.068	0.0022***
L_FINRAISED	-0.0274	0.0180	-1.518	0.1290

McFadden R-squared 0.0325 Adjusted R-squared 0.0295

Likelihood ratio test: Chi-square(5) = 129.287 [0.0000]

*** p-values are significant at 0.01 level, ** p-values are significant at 0.05 level, * p-values are significant at 0.10 level

The results of model 1 show that probability of restatement is positively associated with internal control weaknesses reported under SOX 302. The association is statistically significant (p-value = 0.01) and supports the hypothesis 1a. However, the ICW under SOX 404 is not significantly associated with the probability of restatement and thereby the results are not consistent with expectation of Hypothesis 1b. The results suggest that if the internal control weakness are disclosed by the management of the company under SOX 302, the

probability of restatement is higher. Moreover, the leverage level has impact on the probability of restatements. The variable of the leverage is significant and negatively associated with the REST variable (p-value = 0.01). The results indicate that the increase of leverage is associated with the decrease of the probability of restatement, what may suggest that the companies with high level of debt against the total assets have to report more reliable financial statements in order to obtain financing source on more beneficial conditions.

Table 6: Logistic regression (dependent variable = REST_ERROR_ONLY)

Number of observations: n = 3871
Standard errors based on Hessian

Variable	Coefficient	Std. error	Z	p-value
Const	-2.4668	0.0988	-24.96	0.0000***
SOX_302	1.0475	0.1214	8.624	0.0000***
SOX_404	-0.1386	0.1248	-1.111	0.2665
FOREIGN_TRANS	-0.1700	0.1115	-1.525	0.1272
L_LEV	-0.0782	0.0296	-2.641	0.0083***
L_FINRAISED	-0.0471	0.0212	-2.224	0.0262**

McFadden R-squared 0.0382 Adjusted R-squared 0.0342

Likelihood ratio test: Chi-square(5) = 115.569 [0.0000]

*** p-values are significant at 0.01 level, ** p-values are significant at 0.05 level, * p-values are significant at 0.10 level

Furthermore, two regression models with the particular kinds of restatements as a dependent variable are conducted. The results present association between the reason of restatement and two kinds of disclosure related to internal control weaknesses. The outcome of the logistic regression with REST_ERROR_ONLY as a dependent variable is presented in the Table 6. The coefficient of SOX_302 is positive with p-value at the 0.01 level what indicates that association is positive and statistically significant. However, the association between dependent variable and SOX_404 is statistically not significant (p-value = 0.2665). According to the results, the probability of restatement due to error is higher if company reports ICW under SOX 302 so the Hypothesis 2b is accepted. Moreover, two control variables are significantly associated with restatements due to unintentional error. The results for the variable L_LEV are similar to those in the first regression model presented in the Table 5, namely the association between REST_ERROR_ONLY and the level of leverage is negative and significant (p-value < 0.01). Additionally, in the second model the coefficient of

the variable `L_FINRAISED` is negative and statistically significant ($p\text{-value} < 0.05$). The results suggest that companies with high level of leverage and higher amount of financing raised are more prone to making effort to present reliable financial statements without errors and thereby the probability of restatement due to error is lower.

Table 7: Logistic regression (dependent variable = REST_FRAUD)

Number of observations: $n = 3871$
Standard errors based on Hessian

Variable	Coefficient	Std. error	Z	p-value
Const	-2.7314	0.118716	-23.01	0.0000***
SOX_302	0.1782	0.155659	1.145	0.2522
SOX_404	0.4502	0.155095	2.903	0.0037***
FOREIGN_TRANS	-0.0483	0.139160	-0.347	0.7285
L_LEV	-0.0493	0.0379889	-1.298	0.1944
L_FINRAISED	0.0131	0.0277326	0.474	0.6354

McFadden R-squared 0.0108 Adjusted R-squared 0.0051

Likelihood ratio test: Chi-square(5) = 22.8873 [0.0004]

*** p-values are significant at 0.01 level, ** p-values are significant at 0.05 level, * p-values are significant at 0.10 level

The results of logistic regression with `REST_FRAUD` as a dependent variable are presented in the Table 7. The outcome of the model 3 is consistent with the expectation. The coefficient of `SOX_404` is positive and statistically significant ($p\text{-value} < 0.01$). The firms with ICW under SOX 404 are more subjected to restatements due to fraud. Moreover, the `REST_FRAUD` is not associated with internal control weaknesses under `SOX_302` what is consistent with the assumption as well. If the management is involved in the fraud, it is highly probable that they will not disclose internal control weaknesses under SOX 302. To sum up, the restatements due to fraud or due to fraud and errors simultaneously are more associated with ICW under SOX 404 than under SOX 302, what supports the Hypothesis 2b.

5. Conclusion

After the revelation of financial reporting scandals at the beginning of 21st century, confidence of investors and other stakeholders in financial reports have significantly decreased. Consequently, many parties have become interested in the disclosure of internal control quality. In the response of the situation on financial markets, the SEC initiated The Sarbanes–Oxley Act in 2002. Assessment of internal control is required under two Sections of SOX, namely 302 and 404. For the thesis, the most important difference between these Sections is the source of the opinion, management or auditor respectively. Under Section 404 the opinion about internal control is more objective than assessment made only by managers under Section 302. The thesis has attempted to answer on the question whether the internal control weaknesses under SOX 302 and 404 are differently associated with restatements, more precisely with two reason of restatement – due to fraud and due to unintentional error.

Firms disclose information about material weaknesses in internal control that could lead to financial misstatements. If the misstatement occurs, the company has to restate its financial reports. However, a main concern is the magnitude and the reason of the misstatement. The question is whether the shareholder was misled by the intention of the manager or if it was an unintentional error. For this reason, it might be crucial to provide an answer for the research question and find the evidence whether firms that reported material weaknesses are more likely to restate their financial reports as well as what the reasoning behind these restatements is considering differences in source of internal control opinion under two Section of SOX.

The thesis incorporates to two streams of accounting research. The first one relates to internal control issues as determinants of internal control quality or market reaction to disclosure of material weaknesses of internal control. The second stream related to the research of the thesis concerns the topic of restatements of financial reports. Some studies have determined characteristics of firms with disclosed restatements (Kinney & McDaniel, 1989; DeFond&Jiambalvo, 1991; Richardson et al., 2002). Additionally, the researchers focused also on the consequences of restatements such as for example relation between restatements and market returns (Kinney & McDaniel, 1989; Dechow et al., 1996).

The main goal of the thesis is to provide answer on research question regarding association between two significant issues for financial markets – restatements and internal control weaknesses. Based on the evidence gained by prior research, restating firms and firms

with disclosed material weaknesses have similar characteristics. They tend to be smaller, less profitable, have higher debt, face more uncertainties and receive more qualified audit opinions (Kinney & McDaniel, 1989; Ge & McVay, 2005; Doyle et al., 2007a). Hence, this assumption leads to the expectation that the probability of restatement is positively associated with disclosed internal control weaknesses. Moreover, the definition of material weakness indicates that the occurrence of material weakness might lead to material misstatements of financial reports (PCAOB, 2004). However, the association is not so obvious because managers can override controls what is difficult to detect (Kinney, 2005; Hogan et al., 2008). This situation might lead to occurrence of restatements without disclosure of internal control weaknesses. The assumption is supported by evidence of prior research that many firms did not inform about material weakness in internal control before the restatements of financial reports (Ashbaugh-Skaife et al, 2007; Rice & Weber, 2012; Scholz, 2014). The second part of the research addresses the relation between reported material weaknesses under two different SOX Section, 302 and 404, and two kinds of restatements, due to fraud and due to unintentional error. An important issue of the study is to make a distinction between the source of the opinion under these two kinds of disclosure. Under Section 302 executives are required to evaluate the effectiveness of internal controls and to certify the accuracy of the reported financial statements. Section 404 requires that in each annual report management and auditors are obligated to assess the internal controls. The opinion disclosed by auditors tends to be more accurate. They detect more internal control deficiencies than management and are more likely to detect severe weaknesses (Bedard & Graham, 2011). Therefore, I assumed that material weaknesses disclosure under different Sections are more strongly associated with certain kinds of restatements. The expectations are as follows: fraudulent restatements are more likely to occur when material weaknesses are reported by auditors, since the managers that are going to commit fraud, will not inform stakeholders about material weaknesses related to some extent with fraud. On the other hand, honest managers are more likely to reveal weaknesses in internal controls to ensure investors and other stakeholders that possible misstatements are connected with error instead of fraud.

In order to examine the relation between the reason of restatement and internal control weaknesses, logistic regressions have been computed. Data, necessary for the study, has been derived from Audit Analytics and Compustat databases and covers the period from 2005 to 2015. First, the descriptive statistics are presented for the whole sample and divided on subsamples. In the whole sample, 31% of firm-years disclosed material ICW under SOX 302

and 38% of firm-years have ICW under SOX 404. After dividing into two subsamples: firm-years with restatement and non-restatement group, the results of descriptive statistics indicate that companies with restatements have lower level of leverage and lower amount of financing raised. These outcomes are inconsistent with the expectation that companies with higher level of leverage and higher amount of financing raised are more prone to earnings management and thereby to the restatements of their earnings. Additionally, results support the expectation that investors are able to pay more for earnings that reflect reliable financial situation of the company. The percentage of occurrence of material internal control weaknesses under both Sections is higher for the restatement subsample. Other differences between these two subsample are statistically insignificant. The next analysis relates to descriptive statistics of two subsamples sorted by kind of restatements, namely due to unintentional error and due to fraud or fraud and unintentional error simultaneously. The average firm with fraudulent financial statement is more profitable than those with restatement due to error. However, the latter is, on average, bigger and with higher market value. The results are consistent with expectation that bigger entities tend to be more complex and thereby more prone for restatement due to error. Additionally, results imply that market is less sensitive to the news about restatement due to error than due to fraud. Moreover, the variables used to determine earnings management incentives, leverage and financing raised, have on average higher level for companies with fraudulent financial reports than for those with financial statement with errors. Regarding internal control weaknesses, the subsample of firms with fraudulent financial statements have higher percentage of disclosures for SOX 404 than for SOX 302, what is consistent with expectation that management do not disclose information about internal control weaknesses if the company presents fraudulent numbers. Within subsample of restating firms due to error, more companies have disclosed ICW under SOX 302 than under SOX 404.

In order to gain the evidence to support hypotheses, three models of logistic regression have been computed. Results indicate that probability of restatement is positively associated with internal control weaknesses reported under SOX 302. However, the ICW under SOX 404 is not significantly associated with the probability of restatement. Moreover, the results imply that the increase of leverage is associated with the decrease of the probability of restatement, what may suggest that the companies with high level of debt against the total assets have to report more reliable financial statements in order to obtain financing source on more beneficial conditions. Furthermore, two regression models with the particular kinds of

restatements as a dependent variable have been conducted. According to the results, the probability of restatement due to error is higher if company reports ICW under SOX 302. Regarding the results related to the level of leverage and amount of financing raised, the association with restatement due to error is negative what suggests that companies with high level of leverage and higher amount of financing raised are more prone to making effort to present reliable financial statements without errors. However, the association between these two control variables, level of leverage and the amount of financing raised, and restatement due to fraud is statistically not significant. Regarding the main association in the third model, between ICW under SOX 302 and 404 and restatements due to fraud, the results are supporting the hypothesis. The firms with ICW under SOX 404 are more subjected to restatements due to fraud. The ICW under SOX 302 is not associated with restatement due to fraud, what is consistent with expectation that if the management is involved in the fraud, it is highly probable that they will not disclose internal control weaknesses under SOX 302.

The evidence obtained conducting this research might have a contribution for the academics and practitioners as well. On the one hand, the answer for the research question is relevant for academics since up to this point I could not find research examining exactly the same relation between internal control and restatements due to two different reason. On the other hand, the thesis might provide interesting insights for practitioners that could help predict the possibility of financial misstatements after revealing material weaknesses under different SOX Sections.

This study have a few limitations. First, the examined association between internal control quality and restatement is related only to the entities that are subject to SOX disclosure. Second, the study examines the association between restatements and material ICW related to the same year. The above mentioned limitation was driven by the lack of sufficient data related to the previous year IC quality of particular observations. Another limitation is the omitting the magnitude and number of internal control weaknesses that might have significant impact on the probability of restatement. The examination of association between the magnitude of internal control weaknesses and probability of restatement for the same period and for the future periods as well might be the issue for the future research. Moreover, the association between internal control quality and particular financial statement line items affected by the restatement could be relevant.

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