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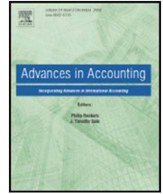

The effect of internal control deficiencies on the usefulness of earnings in executive compensation ☆

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ABSTRACT

Since SOX 404 disclosures are informative about earnings, and due to the widespread practice of using earnings-based measures in executive compensation, this study examines whether reports of internal control material weaknesses (ICMW) under SOX 404 influence firms' reliance on earnings in tying executive pay to performance. Using 391 (366) firm-year observations with reported ICMW and 3648 (3138) firm-year observations for CEOs (CFOs) reporting NOMW under SOX 404, we find a decreased strength in the association between earnings and executives' (CEO and CFO) compensation when the firm reports an ICMW, and as the number of reported ICMW increases. In addition, we find this decreased weight on earnings for the more severe Company-Level than Account- Specific material weaknesses. Our study suggests that the ICMW report under SOX 404 provides incremental information for executive compensation beyond that contained in reported earnings.

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1. Introduction

The accounting scandals at firms such as Enron and WorldCom highlighted deficiencies in corporate governance that were characterised by low financial reporting quality and disproportionate pay-for-performance.[2] To discipline firms and restore investor confidence, legislative authorities enacted the Sarbanes–Oxley Act. Among the reforms is Section 404 of SOX (SOX 404) which requires both the management and the external auditor to report on the adequacy of a firm's internal control over financial reporting. Prior research shows that, relative to non-disclosing firms, firms reporting material weaknesses in internal control (ICMW) have inferior accruals and earnings quality (Ashbaugh-Skaife, Collins, Kinney, & LaFond, 2008; Bedard, 2006; Doyle, Ge, & McVay, 2007b), and lower earnings–returns coefficients (Chan, Farrell, & Lee, 2008). Given the fact that SOX 404 disclosures are informative about earnings, and due to the widespread practice of using earnings-based measures in executive compensation, this study examines whether reports of ICMW under SOX404 influence firms' reliance on earnings in tying executive pay to performance.

A long line of research shows that earnings-based performance measures are commonly used to motivate and reward executives because such measures correspond to manager actions (Gjesdal, 1981). However, there are two drawbacks to using earnings to evaluate executive performance. First, because executives know how their actions impact earnings, they can manipulate this measure to increase their wealth. Second, earnings do not fully reflect the long-term implications of recent executive decisions. Based on these factors, firms place varying weights on earnings in compensating their executives, and the weights are determined by how *sensitive* earnings are to effort and on the *precision*, or lack of noise, with which it reflects executives' actions (Banker & Datar, 1989; Lambert & Larcker, 1987). However, there is evidence that CEOs are shielded from certain negative events, such as firm restructuring (Dechow, Huson, & Sloan, 1994), or above the line losses (Gaver & Gaver, 1998). Our main focus of inquiry is significant because it builds on this line of research by showing that the sensitivity of compensation–performance relations varies cross-sectionally with the quality of the system producing the earnings information.

Weak internal controls potentially permit accounting errors to occur and go undetected, increasing unintentional errors in accrual estimation and/or facilitating intentional earnings management (Doyle et al., 2007b). A report of an internal control deficiency, therefore, signals that the manager is unable to provide reasonable assurance regarding the quality of reported earnings (Ashbaugh-Skaife et al., 2008; Bedard, 2006; Chan et al., 2008; Doyle et al., 2007b). Using the sensitivity-precision framework, the errors introduced by

☆ Data availability: Data used in this paper are publicly available and also can be requested from the authors.

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[2] For example Hall and Liebman (1998) report a 209% increase in CEO mean salary in large US firms from 1980 to 1994, and Bebchuk and Grinstein (2005) document a 146% increase in CEO pay from 1993 to 2003 in S&P 500 firms. Bebchuk and Fried (2004) advance the theory that soaring executive pay is the result of management power.

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weak internal controls are likely to result in earnings that capture executives' effort with low precision, diminishing its use as an assessment tool for evaluating managers' performance. Motivated by the optimal contracting hypothesis, we posit that firms with ICMW report earnings with lower precision-sensitivity.

The purpose of this study is to examine whether firms reporting ICMW place relatively less weight on earnings compared to firms reporting no ICMW (NOMW). In other words, whether ICMW reports influence compensation contracts is an empirical issue because, although ICMW firms report lower earnings–returns coefficients (Chan et al., 2008), prior research does not suggest any direct association between the valuation role of earnings and its usefulness in compensating executives (Bushman, Engel, & Smith, 2006). Under the null hypothesis, the sensitivity of executive compensation to earnings is unaffected by internal control deficiency.

Consistent with prior research, we also examine the weight placed on earnings for firms reporting two different types of ICMW: Account-Specific and Company-Level weaknesses (Doyle, Ge, & McVay, 2007a, b, Doyle et al., 2007b). Account-Specific (AS) material weaknesses arise from routine firm operations and may be resolved by additional substantive auditing procedures. When AS material weaknesses are identified, executives or auditors can easily audit around them by performing additional substantive procedures. Company-Level (CL) material weaknesses, on the other hand, are less easily resolved by auditor involvement and result from lack of resources or inexperience in maintaining an effective control system. Due to the pervasiveness of CL material weaknesses, the scope of audit efforts needs to be frequently expanded to deal with these more serious concerns regarding the reliability of financial statements (Moody's, 2006; PCAOB 2004). The extent to which auditors are able to mitigate the negative effect on earnings of these two types of weaknesses would suggest less noise/greater precision in earnings from Account-Specific relative to Company-Level weaknesses. The impact of precision times sensitivity on the weight of earnings for Account-Specific vs. Company-Level material weaknesses is therefore the second empirical question.

Using 391 (366) firm-year observations with reported ICMW and 3648 (3138) firm-year observations for CEOs (CFOs) reporting NOMW under Section 404 of SOX, we find a decreased strength in the association between earnings and CEO compensation when the firm reports an ICMW, and as the number of reported ICMW increases. Our results are also robust to controls for various firm characteristics that prior studies have found to influence the role of earnings in compensation contracts, including earnings quality proxies such as earnings persistence (Baber, Kang, & Kumar, 1998) and corporate governance characteristics (Chhaochharia & Grinstein, 2009). In addition, for CL material weaknesses, we find evidence of a lower strength in the earnings–compensation relation for the CEOs. We find no such result with AS material weaknesses suggesting that only CL weaknesses affect the weight placed on earnings in compensating CEOs.

This study makes two contributions. First, it contributes to existing literature by making an examination of the role of earnings as a performance measure in executive compensation contracts (Bushman et al., 2006; Sloan, 1993; among others), and by examining how information on the quality of a firm's internal controls influences the earnings–compensation relation. We confirm that weak internal controls result in a diminished role for accounting measures in the CEO compensation relation, consistent with optimal contracting. Specifically, it is the firms with CL weaknesses that reduce the weight on earnings in CEO cash compensation. Overall, our findings suggest that the information in the ICMW report is incremental to, or more timely than, that provided by discretionary accruals or earnings persistence measures.

Second, our study extends a growing body of literature on the relation between executive compensation and ICMW in the post-SOX era. Carter, Lynch, and Zechman (2009) show that the implementation of SOX in 2002 led to a decrease in earnings management, and that firms responded by placing more weight on earnings in bonus contracts for CEOs and CFOs in the post-SOX period. Another study by Hoitash, Hoitash, and Johnstone (2009) suggests that the compensation of the CFO, who has primary responsibility for the quality of the firm's internal controls, is penalized for reports of ICMW. Since prior evidence shows, and stresses the importance of, a performance-based compensation penalty for internal control quality as a non-financial performance measure in the evaluation of executives, our study further investigates whether an ICMW impacts the weight of earnings in compensation contracts under the mandate of SOX 404. We show that firms consider the strength of an earnings generation system and specifically choose to reduce emphasis on earnings-based performance measures in determining CEOs' cash compensation.

The next section of this paper provides background information on the internal control disclosure practices required by the Sarbanes–Oxley Act, discusses the usefulness of earnings as a performance measure and further develops our hypotheses. The third section describes our sample and research design. The fourth section presents our descriptive statistics, results and sensitivity analyses. The fifth section concludes the paper.

2. Prior research and hypothesis

Section 404 of SOX is one of the most visible and tangible changes to firms' internal control systems in recent times [(Public Company Accounting Oversight Board (PCAOB) (PCAOB), 2004)].[3] The pivotal requirement of Section 404 is that management assess the effectiveness of the firm's internal controls over financial reporting and include this information in the firm's annual financial statements. This regulation increases scrutinization by the firm's auditors because the manager assessments must then be separately attested to by the auditor. One of the benefits of the disclosures under Section 404 is that internal control information is now readily available and may be informative as a non-financial measure of executive performance (Hoitash et al., 2009).

Numerous studies have examined the determinants and consequences of ICMW. Early studies document an association between ICMW and firm characteristics, such as business complexity, organizational change, firm size, firm profitability and investment of resources in accounting controls (Ashbaugh-Skaife, Collins, & Kinney, 2007; Doyle et al., 2007a; Ge & McVay, 2005). The implementation of SOX Section 404 has resulted in higher audit fees (Hoitash, Hoitash, & Bedard, 2008; Raghunandan & Rama, 2006), longer audit delays (Ettredge, Li, & Sun, 2006) and improved audit committee quality (Krishnan, 2005). Several studies find negative and significant cumulative abnormal returns (Beneish, Billings, & Hodder, 2008; De Franco, Guan, & Lu, 2005) and lower quality of earnings (Ashbaugh-Skaife et al., 2008; Chan et al., 2008) after SOX 404 disclosures.

Closely related to our study is the literature that examines the association between earnings quality and ICMW. Chan et al. (2008) document a greater use of positive and absolute discretionary accruals for firms reporting ICMW than for firms receiving a favourable report. Ashbaugh-Skaife et al. (2008) also find that firms reporting ICMW after the inception of SOX have lower quality accruals and significantly larger positive and negative abnormal accruals, relative to control firms. Both Ashbaugh-Skaife et al. (2008) and Bedard (2006) find evidence of improvements in earnings quality after the remediation of ICMW under Section 404, whereas Doyle et al. (2007b) claim lower-quality earnings under Section 302, but not Section 404.

[3] SOX 404 sets separation implementation dates for “accelerated filers” (primarily large firms), for “non-accelerated filers” (smaller firms), and for foreign firms. Specifically, Section 404 rules required accelerated filers to comply beginning in 2004, whereas compliance for non-accelerated filers and foreign firms began in phases starting in 2006 and ending in 2009, at which time those two groups reach full compliance.

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