Journal of Accounting and Economics 55 (2013) 91–110

Contents lists available at SciVerse ScienceDirect

Journal of Accounting and Economics

journal homepage: www.elsevier.com/locate/jae

Internal control over financial reporting and managerial rent extraction: Evidence from the profitability of insider trading ☆

Hollis A. Skaife [a,*], David Veenman [b], Daniel Wangerin [c]

[a] Wisconsin School of Business, University of Wisconsin-Madison, USA
[b] Erasmus School of Economics, Erasmus University Rotterdam, The Netherlands
[c] Eli Broad College of Business, Michigan State University, USA

ARTICLE INFO

Article history:
Received 24 November 2010
Received in revised form
20 July 2012
Accepted 31 July 2012
Available online 16 August 2012

JEL classification:
D82
G32
J63
M41

Keywords:
Insider trading
SOX 404
Internal control
Tone at the top
Management integrity
Management turnover

ABSTRACT

This paper examines the association between ineffective internal control over financial reporting and the profitability of insider trading. We predict and find that the profitability of insider trading is significantly greater in firms disclosing material weaknesses in internal control relative to firms with effective control. The positive association is present in the years leading up to the disclosure of material weaknesses, but disappears after remediation of the internal control problems. We find insider trading profitability is even greater when insiders are more likely to act in their own self-interest as indicated by auditors' weak "tone at the top" adverse internal control opinions and this incremental profitability is driven by insider selling. Our research identifies a new setting where shareholders are most at risk for wealth transfers via insider trading and highlights market consequences of weak "tone at the top".

1. Introduction

This study examines whether the effectiveness of internal control over financial reporting (ICFR) is related to the profitability of insider trading. ICFR are the policies, processes, and procedures intended to ensure financial statements are reliable. It is well documented in the prior literature that reliable financial reporting is an important mechanism used by firms to communicate credible information to outsiders for their use in resource allocation decisions and in evaluating management's performance (see, e.g., Beyer et al., 2010). When firms have ineffective ICFR, managers have more discretion over accounting estimates and methods due to the lack of formal policies and procedures that restrict managers' accounting choices (Hogan and Wilkins, 2008). Prior research provides evidence that firms with ineffective ICFR disseminate less reliable financial information (Doyle et al., 2007a; Ashbaugh-Skaife et al., 2008; Feng et al., 2009). Prior research also demonstrates less reliable financial

☆ We appreciate the helpful comments from the editor Michelle Hanlon, the reviewer Sarah McVay, Steve Lin, Stefan Veith, participants at the 2010 AAA Annual Meeting and 2011 EAA Congress, and workshop participants at Erasmus University Rotterdam.

* Corresponding author: Tel.: +1 608 263 7979; fax: +1 608 265 6040.
E-mail addresses: hskaife@bus.wisc.edu (H.A. Skaife), dveenman@ese.eur.nl (D. Veenman), wangerin@bus.msu.edu (D. Wangerin).

0165-4101/$ - see front matter
http://dx.doi.org/10.1016/j.jacceco.2012.07.005

information enhances insiders' information advantage (Lambert et al., 2007). When insiders trade their firms' shares based on private information, they are more likely to profit, i.e., extract rents from current shareholders.

We define the profitability of insider trading as the capital gains after purchases and the losses avoided by selling shares. If insiders' trades reflect information already impounded in stock prices, average insider trading profitability should be zero. In contrast, insider trading profitability will be greater than zero when managers trade on their private information. Using a large sample of firms disclosing auditor-attested evaluations of ICFR effectiveness during 2004–2008 in accordance with Section 404 of the Sarbanes Oxley Act (SOX), we find evidence consistent with our main prediction: insider trading profitability is significantly higher in firms disclosing material weaknesses in ICFR. This finding holds after controlling for factors associated with insider trading and determinants of ineffective ICFR, as well as firms' prior buy-and-hold abnormal returns and market reactions to material weakness in ICFR disclosures.

To provide further evidence on the link between insider trading profitability and ineffective ICFR, we also examine insider trading profitability over time. Prior research suggests that information asymmetry declines once firms remediate their ICFR problems and financial reporting quality improves (see, e.g., Ashbaugh-Skaife et al., 2009). If insiders hold less private information because financial reporting is more transparent, then we do not expect to find significant differences in insider profitability once internal control problems are remediated. The results of our over-time analysis indicate that the incremental profitability of insider trading in weak internal control firms is present in the years prior to firms receiving an adverse internal control opinion from their auditors, but disappears in the years after remediation of ineffective ICFR. These results support our main findings and rule out the potential alternative explanation that the greater profitability of insider trading for firms with ineffective ICFR is driven by the negative stock price impact of ineffective internal control disclosures.

Recent research suggests that the attitude of top management partially explains the variation in firms' reporting practices and strategic outcomes (Bamber et al., 2010; Dyreng et al., 2010). We explore whether the attitude of top management is associated with the profitability of insider trading by utilizing auditors' weak "tone at the top" internal control opinions required under Section 404 of SOX. Specifically, a material weakness related to "tone at the top" refers to top management's attitude towards creating and maintaining an ethical culture in the workplace. "Tone at the top" is viewed as the foundation of effective internal control (Committee of Sponsoring Organizations (COSO), 1992) and if there is weak "tone at the top", it is unlikely that even the most comprehensive system of internal control will be effective in constraining self-serving management behavior (Kizirian et al., 2005).[1] If top managers lack integrity, we expect them to be more likely to take advantage of their private information due to weak internal control by engaging in more profitable insider trading.

Based on auditors' internal control opinions, we identify 125 firm-years for which there is a material weakness in ICFR related to weak "tone at the top". Consistent with our prediction, trading profitability is significantly higher when there is weak "tone at the top" relative to other internal control problems. Further tests indicate that the profitability of insider sales, rather than purchases, drives the higher insider trading profitability results for weak "tone at the top" and other internal control problems.

Prior literature documents insider sales transactions are associated with abnormal accruals (Bartov and Mohanram, 2004; McVay et al., 2006). To determine whether ineffective ICFR and weak "tone at the top" are incrementally more informative about insider sales profitability beyond abnormal accruals, we add signed abnormal accruals to our insider sales profitability model. The results indicate (*i*) the relation between ineffective ICFR and insider sales profitability is distinct from previously documented associations between insider sales and positive abnormal accruals, and (*ii*) positive abnormal accruals further contribute to insiders' incremental selling gains when there is weak "tone at the top". The latter finding supports the notion that disclosures of weak "tone at the top" identify a subset of firms where manager-specific "styles" contribute to more information asymmetry via low financial reporting quality thereby allowing greater rent extraction.

In our last analysis, we explore whether insider selling profitability and weak "tone at the top" are associated with executive turnover in the C-suite. Consistent with Johnstone et al. (2010), we find CEO and CFO turnover is more likely when firms have ineffective ICFR. More importantly for our study, we document that the magnitude of CEO and CFO insider selling profitability increases the likelihood of them leaving their firms' employment. Furthermore, we document that the profitability of insider selling combined with weak "tone at the top" incrementally increases the likelihood of CEO and CFO turnover.

Our study makes several contributions. Prior research examining the consequences of material weaknesses in ICFR has focused on earnings quality (Doyle et al., 2007a; Ashbaugh-Skaife et al., 2008; Altamuro and Beatty, 2010), cost of equity (Beneish et al., 2008; Ashbaugh-Skaife et al., 2009), cost of public and private debt (Costello and Wittenberg-Moerman, 2011; Dhaliwal et al., 2011; Kim et al., 2011) the market reaction to internal control reports (Hammersley et al., 2008), the effect on audit firms (Hogan and Wilkins, 2008; Hoitash et al., 2008), and CEO/CFO turnover (Johnstone et al., 2010). We advance the ICFR literature in three ways. First, we provide evidence on another market consequence of weak ICFR by documenting a positive relation between ineffective ICFR and the profitability of insider trading. Second, our study highlights that the internal control problem of weak "tone at the top" has a positive incremental effect on the profitability of insider trading. Third, we provide evidence that the profitability of insider selling by CEOs and CFOs, and this profitability combined with a lack of integrity by the CEO/CFO as signaled by weak "tone at the top", increases the likelihood of CEO/CFO turnover. Overall, we identify and document new market consequences of ineffective ICFR.

[1] Characteristics of weak "tone at the top" include unethical behavior, lack of compliance with policies and procedures, incompetency, and irresponsibility (COSO, 1992).