Research in Accounting Regulation 25 (2013) 30–40

Contents lists available at SciVerse ScienceDirect

Research in Accounting Regulation

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

Internal control reporting and market liquidity

Thomas D. Dowdell [a,*], Jang-Chul Kim [b], Bonnie K. Klamm [c], Marcia Weidenmier Watson [d]

[a] *North Dakota State University, College of Business, Accounting, Finance, and Information Systems Department, 212 Barry Hall, NDSU Dept. 2410, P.O. Box 6050, Fargo, ND 58108-6050, USA*
[b] *Northern Kentucky University, Haile/US Bank College of Business, Accounting, Finance, and Business Law Department, USA*
[c] *North Dakota State University, College of Business, Accounting, Finance, and Information Systems Department, USA*
[d] *Mississippi State University, Richard C. Adkerson School of Accountancy, USA*

ARTICLE INFO

Article history:
Available online 12 December 2012

Keywords:
Internal control reporting
Market liquidity
Bid-ask spreads
Information asymmetry

ABSTRACT

We investigate the impact of the Sarbanes-Oxley Act of 2002 (SOX) on information asymmetry by analyzing the relation between SOX Sections 302 and 404 control reports and market liquidity using bid-ask spreads. Lower market liquidity indicates higher levels of information asymmetry implying that market participants perceive financial statement misstatement risk is higher. If SOX disclosures contain relevant information, then one would expect firms reporting internal control material weaknesses to have lower market liquidity. Accordingly, we find that market liquidity is lower (i.e., bid-ask spreads are higher) for firms reporting ineffective control compared to firms reporting effective control using either annual SOX 404 internal control reports or quarterly SOX 302 disclosure control reports, which suggests that SOX 302 and 404 reports provide useful information for identifying firms with a higher risk of financial statement misstatement. However, we do not find consistent results using two alternative liquidity measures: trading volume and market quality indices. We then examine whether changes in control reports are associated with changes in market liquidity. We generally do not find that firms with improved (deteriorated) control reports experience a larger decrease (increase) in bid-ask spreads or larger increases (decreases) in trading volume and market quality indices compared to other firms, suggesting that market participants do not discern a change in information asymmetry when the effectiveness of internal controls over financial reporting changes.

Introduction

An effective process of capital allocation based on reliable and relevant information provides an efficient and liquid market for buying and selling securities (AICPA, 1994). Market liquidity deteriorated at the beginning of the 21st century due to a number of high-profile accounting scandals (Jain, Kim, & Rezaee, 2008). In response, the United States Congress passed the Sarbanes-Oxley Act of 2002 (SOX) to improve the reliability of financial reporting. We investigate whether required reports under part of that legislation, specifically, Sections 302 (disclosure controls) and 404 (internal controls over financial reporting), affect market liquidity.

Jain et al. (2008) assess the impact of accounting scandals and SOX on the market's liquidity as a whole, finding that the legislation led to an improvement in market liquidity. But they do not examine the effect of the internal control reports on market liquidity for individual firms. At the firm level, most extant SOX research focuses primarily on the characteristics of firms reporting weaknesses as well as the impact of ineffective reports on stock prices, cost of capital, and analysts' forecasts, with very little investigation of the impact of a reported internal control material weakness on market liquidity (e.g., Beneish,

* Corresponding author. Tel.: +1 701 231 5876.
E-mail addresses: Thomas.Dowdell@ndsu.edu (T.D. Dowdell), kimj1@nku.edu (J.C. Kim), Bonnie.Klamm@ndsu.edu (B.K. Klamm), MWatson@cobilan.msstate.edu (M.W. Watson).

1052-0457/$ - see front matter
http://dx.doi.org/10.1016/j.racreg.2012.11.009

Billings, & Hodder, 2008). Lev (1988) suggests that disclosure regulations should be evaluated based on their effect on information asymmetry as measured by market liquidity, rather than based on stock-price reactions, because information may be useful without causing any change in the stock price. Thus, market liquidity provides an important additional source of evidence, beyond stock prices, about the impact of SOX and the value of its internal control weakness disclosures.

Whereas Jain et al. (2008) report that market liquidity (at the macro-level) improved subsequent to the SOX legislation, we expect market liquidity to differ between firms reporting effective controls and those reporting ineffective controls. Our reasoning is that material weaknesses in internal control potentially indicate a higher risk of material misstatement in the financial statements. This higher risk increases information asymmetry, which, in turn, reduces market liquidity. Therefore, we investigate two questions on the relation between SOX 302 and 404 control reports and market liquidity using bid-ask spreads, an accepted measure of information asymmetry (e.g., Frino & Jones, 2005; Glosten & Milgrom, 1985; Gregoriou, Ioannidis, & Skerratt, 2005; Hagigi, Kluger, & Shields, 1993; Kanagaretnam, Lobo, & Whalen, 2005).

First, we investigate whether market liquidity is lower (i.e., bid-ask spreads are higher) for firms reporting ineffective internal control compared to firms reporting effective internal control. Consistent with the Beneish et al. (2008) results for SOX 302 reports during 2004, we find this to be the case based both on our sample of annual SOX 404 internal control reports and on our expanded sample of quarterly SOX 302 disclosure controls reports during 2004 through 2007. Lower market liquidity provides evidence of higher information asymmetry, which in turn indicates that market participants consider the financial statements of firms with control weaknesses to be less reliable. Such evidence also provides support that SOX 302 and 404 reports are useful to investors. However, we find mixed results on this first question using two alternative liquidity measures: trading volume and market quality indices.

Second, we investigate whether changes in internal control or disclosure control reports are associated with changes in market liquidity. This provides a stronger test of the linkage between the SOX 404/302 reports and market liquidity. For annual SOX 404 reports, we generally do not find that firms with improved control reports (current report shows effective control but prior report showed ineffective) experience a larger decrease in bid-ask spreads compared to other firms. Additionally, firms with deteriorated control reports (current report shows ineffective control but prior report showed effective) do not experience a larger increase in bid-ask spreads compared to other firms. Thus, there is no evidence of change in information asymmetry when internal controls over financial reporting change from ineffective to effective (effective to ineffective).

For the quarterly SOX 302 reports, both improving and deteriorating firms experience a larger decrease in bid-ask spreads compared to other firms due to a higher frequency of change reports (improve or deteriorate) occurring in the fiscal fourth quarter, which also has lower bid-ask spreads. When our SOX 302 sample is limited to interim quarters, the results are similar to those for the SOX 404 reports: no evidence that improved (deteriorated) reports are associated with decreases (increases) in bid-ask spreads. The implication again is that the market participants do not discern a change in information asymmetry when the SOX 302 report changes. Using our alternative liquidity measures, trading volume and market quality indices, we also generally find that improved (deteriorated) SOX 404 and 302 reports are not associated with increases (decreases) in market liquidity.

The remainder of this paper is organized as follows. Section two provides the background and research questions. Section three discusses the sample and the results. Section four concludes.

Background and research questions

The legal/regulatory environment primarily determines the quantity and reliability of publicly available information, especially at the firm level (Brockman & Chung, 2003). Moreover, regulated disclosures that are of high-quality improve market liquidity by reducing information asymmetries (Heflin, Shaw, & Wild, 2005). Theoretical models show that a reduction in information asymmetry from increased disclosure increases market liquidity (e.g., Diamond & Verrecchia, 1991). In fact, Lev (1988) suggests that disclosure regulations should be evaluated based on their effect on information asymmetry, rather than based on stock-price reactions, because information may be useful without causing any change in the stock price.

In response to various corporate scandals, the U.S. Congress passed the SOX requiring increased corporate disclosures with the intention of protecting investors and reducing information asymmetry. An analysis of market liquidity pre- and post-scandal and post-SOX reveals that at least on a short-term basis, SOX had no effect on market liquidity, implying a lack of immediate improvement in financial reporting quality (Jain et al., 2008)—potentially due to the various effective dates of different sections of the law. However, the analysis did support significant long-term positive liquidity effects, providing evidence of improvement in the quality of financial reporting (Jain et al., 2008). To better understand the impact of SOX on liquidity, our paper investigates whether liquidity differs for firms with effective and ineffective disclosure and internal controls using SOX 302 and 404 reports.

SOX Sections 302 and 404 both address the effectiveness of internal controls. Section 302, which became effective August 2002, requires a quarterly certification by the firm's officers that CEO/CFOs (1) are responsible for establishing and maintaining internal controls, (2) have implemented internal controls to ensure that material information is made known to such officers, and (3) make a statement regarding the effectiveness of the controls (SEC, 2003). Section 302 refers to the controls as "disclosure controls" and those controls cover all of the firm's reports filed under the Exchange Act.

Under Section 404, which became effective for accelerated filers for year-ends beginning November 15, 2004, the law requires the annual evaluation of internal controls