



REGULAR PAPER

## Real earnings management activities prior to bond issuance

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**Abstract** We examine real activities manipulation by firms prior to their debt issuances and how such manipulation activities affect bond yield spreads. We find that bond-issuing firms increase their real activities manipulation in the five quarters leading to a bond issuance. We document an inverse association between yield spread and pre-issue real activities manipulation, i.e., firms engaged in abnormally high levels of real activities manipulation are associated with subsequent lower cost of debt.

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## Introduction

We examine the presence of real earnings management (RM) around bond issues and their impact on the cost of issued bonds.<sup>1</sup> As per Roychowdhury (2006), firms engage in RM activities either to avoid reporting losses or to respond to

prevailing economic conditions. We find that there exists pre-issue real activities manipulation at bond issuing firms, which subsequently reduces their cost of debt.

Earnings management can be divided into two, i.e., accruals-based earnings management (AM) and real activities manipulation (RM). AM involves accounting manipulations with little to no cash flow consequences. Conversely, RM impacts the firm cash flows more significantly. Roychowdhury (2006) examines firms' RM practices and finds that manipulating firms attempt to avoid losses by (i) offering price discounts to artificially boost sales figures; (ii) overproduction that results in high inventory figures and reduces the cost of sales to boost the firm's reported earnings; and, (iii) reducing discretionary expenditure (for

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<sup>1</sup> In this paper, RM, REM, real earnings management and real activities manipulations are used interchangeably and carry the same meaning.

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instance, research and development (R&D)) to improve margins. Such actions, which constitute RM, are likely to adversely affect the firm's long run profitability and cash flows (Roychowdhury, 2006; Wang and D'Souza, 2006; Cohen and Zarowin, 2010; Zang, 2012).

AM and RM collectively form earnings management practices; however, this paper examines RM, and not AM, for the following reasons. The effect of AM on the cost of debt is already documented in Francis et al. (2005), Bharath et al. (2008), Prevost et al. (2008), and Liu et al. (2010). They find that firms managing earnings upwards issue debt at a lower cost. Liu et al. (2010) conclude that bondholders fail to see through the inflated earnings numbers in pricing new debt. However, the focus of the studies was solely on AM. Since the cash flow consequences of AM and RM differ as well as their use (see Zang, 2012), the results based on AM cannot be extended to firms that manage earnings using RM. Following the passage of the 2002 Sarbanes-Oxley Act (SOX), more firms are using RM than AM (Cohen et al., 2008) as it is more difficult to charge management for engaging in RM, which is often disguised as normal business decisions. Since investors rely heavily on issuing firm's financial reports to price a new bond issue, we attempt to fill a gap in the literature by examining RM (which is widely acknowledged as a common practice (Graham et al., 2005) that affect the financial reports on which investors rely for bond pricing decisions.

Our sample consists of 1578 bond issuers from 1980 to 2012. We follow the same methods as in Roychowdhury (2006) and Zang (2012) to compute the proxies for real earnings management. We find that firms increase the use of real earnings management prior to a bond issue. Next, there exists an inverse association between the pre-issue level of real earnings management and bonds' yield spread. We also document an increase in issuing firms' use of real earnings management post-SOX. Lastly, earnings manipulating firms tend to be large and profitable, yet they exhibit more earnings volatility as well as issue more noninvestment grade bonds.

Our findings contrast with Ge and Kim (2014). To start with, there are significant differences between our samples and data sources that could explain the divergent results and we discuss them later in the paper. Ge and Kim (2014) find a positive association between bonds' risk premiums and the following two factors: sales manipulation and overproduction. They find no significant association between the risk premium and each of abnormal discretionary expenditure and the composite score of real earnings management. In contrast, we find an inverse association between bonds' yield spreads and each of abnormal production cost, abnormal discretionary expenditure, total real earnings management as well as unexpected total real earnings management. Thus, our findings are more consistent across a greater number of real earnings management variables.

It is important to note that not all earnings management are construed as managerial opportunism. For instance, a firm may accrue more production costs in anticipation of increased demand (i.e., growth for which it needs to raise more financing). Similarly, a firm may postpone discretionary expenses to prioritize investments in productive capacity and working capital. Cuts in discretionary expenses will

also reduce costs and improve liquidity. Likewise, firms may manipulate earnings in the short run to promote a bond issue without necessarily suggesting that they are misrepresenting the accounts. Thus, until we can clearly differentiate between good and bad earnings management (a weakness of our paper that we acknowledge in the conclusion), there is the risk that the findings would be dependent on the samples and methods used.

The rest of the paper is organized as follows. Literature Review and Hypotheses Development Section presents the related literature and hypothesis development. Data Section describes the data. Methodology Section elaborates the research methodology. Empirical Results Section discusses the results. Summary and Conclusions Section concludes the paper.

## Literature review and hypotheses development

The phenomenon of earnings management has been documented in issuances of equity as well as debt. Teoh et al. (1998a) suggest that initial public offering (IPO) firms manage accruals upwards to inflate earnings (also see Chaney and Lewis (1998), Morsfield and Tan (2006)). The authors find high-accrual IPOs post-issuance stock return performance to be disappointing. Thus, there is little justification for the initial investor enthusiasm toward these IPOs.

Conversely, Ball and Shivakumar (2008) and Chang et al. (2010) IPO findings are opposite to the above. In the main, these authors conclude that investors' due diligence as well as underwriters' reputation inhibit high-quality firms from engaging in accruals manipulations (also see Hei Wai et al., 2012).

Rangan (1998), Teoh et al. (1998b), Shivakumar (2000), and Cohen and Zarowin (2010) document earnings management at firms engaged in seasoned equity offerings (SEOs). Rangan (1998) and Teoh et al. (1998b) find that manipulators are associated with poor post-issue performance. While most of the findings are based on AM, Cohen and Zarowin (2010) document that SEO firms also engage in RM. The authors find that post-SEO operating underperformance is not driven solely by accrual reversals, but also due to RM. Kothari et al. (2015) observe that RM is positively associated with overvaluation at the time of SEO. However, these firms underperform in the long run.

Nonetheless, the findings based on equity issues cannot be extended to debt issues in a straightforward manner. While both equity and debt are sources of finance to a company, yet only debt can lead the firm to bankruptcy. The financial burden imposed by debt on the company is far greater than that of equity. Shareholders are the residual claimants and in the normal course of business there is no obligation imposed legally on the firm to pay them.

Liu et al. (2010) document that firms manage earnings upward by manipulating discretionary accruals (AM) prior to bond issues. They also find that such firms can issue debt at a low cost and bondholders fail to see through the inflated earnings numbers in pricing new debts (also see Alissa et al., 2013). This could be due to the self-reverting property of accruals, which implies that the real cash flow consequences of AM over the long run is minor. Conversely, the cash flow

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