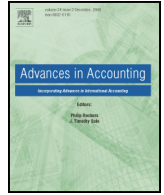




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### New debt issues and earnings management

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#### ABSTRACT

We empirically examine the influence and effects of real earnings management (REM) procedures on the debt market by investigating the bond rating and actual market price of a firm's new debt offerings. Extant research provides conflicting representations concerning the effects of REM techniques on equity shareholders and debt market participants. Our results indicate a negative association between all three REM manipulation methods and perceived credit risk resulting in a lower bond rating, and higher market yield of the firm's debt at issuance. Additional analyses exploring the use of REM techniques to achieve analyst's earnings forecasts indicates that this negative effect is particularly significant for firms who only achieve the earnings forecast by utilizing REM methods. Our research adds to the literature by empirically describing the effects of REM techniques on new debt issuances, and contributes to the ongoing debate regarding the efficacy of engaging in real earnings management to achieve known targets.

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#### 1. Introduction

We empirically examine debt market participant's impounding of various real earnings management (REM) activities acknowledging the direct implications that these activities have for current and future cash flows. Real earnings management is an intentional action to alter the timing or structuring of a transaction in a potentially sub-optimal way to influence earnings in a particular direction (Zang, 2012). Survey evidence supports the conjecture that top executives engage in REM. Graham, Harvey, and Rajgopal (2005) report that 80% of responding CFOs expressed that they would decrease research and development, advertising, and maintenance expenditures, while 55% indicated that they would postpone a new project to achieve earnings expectations. Roychowdhury (2006) empirically examines this proposition and verifies the use of specific types of REM activities by firms in order to avoid reporting annual accounting losses. Existing literature also finds that the use of REM techniques have increased post-SOX (Cohen, Dey, & Lys, 2008), as well as subsequent to class action lawsuits (Zang, 2012). Despite this increased incidence and apparent prevalence, relatively little is known regarding the effects of established REM manipulations on credit markets and the cost of debt capital. Our research is intended to help fill this void in the literature and provide empirical

evidence regarding the effects of real earnings management on a firm's bond ratings and bond yields.

We examine a relatively large sample of newly issued bonds over the period 1990 through 2007. Our results indicate that the use of each of the three REM procedures is associated with lower bond ratings, consistent with the conjecture that bond rating analysts do not view real earnings management techniques in a positive light when assigning a rating to a new bond issue. This is important because rating analysts represent one class of knowledgeable and informed users in regard to firm earnings and operations. Beyond the bond rating effects, we also document that firms engaging in higher levels of REM pay a higher cost for debt capital in the form of increased yield spreads at issuance. This finding is consistent with debt investors also negatively evaluating the use of each of the three REM techniques.

In further exploration of our primary results, we consider specific firm incentives and investigate sample firms' use of REM techniques to achieve important earnings targets (e.g. meeting analysts' earnings forecasts). We perform sub-sample analyses based upon a firm's ability to meet the earnings benchmark with or without the utilization of REM techniques. Overall sub-sample results remain consistent with the primary findings and indicate that using REM techniques to achieve the earnings benchmarks is viewed particularly negatively by both rating analysts and bond investors.

Our research adds most directly to the real earnings management literature. Overall, we provide evidence consistent with the conjecture that both rating analysts and bond investors maintain an overall negative view of firms engaging in real earnings management. In addition, we also add to the literature related to REM in a debt market framework setting. It is frequently important to distinguish and examine the effects

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of specific activities on the debt market separately from potential equity market effects. Management primarily serves the interest of shareholders, while the interests of debt-holders are sometimes secondary. Penman (2007) refers to this as the “moral hazard” of debt that can result in actions and decisions having differential effects on each constituency. The nonlinear payoff structure of debt is one example of the fundamental differences existing between the contingent claims of creditors and equity shareholders. While both bond holders and equity holders have somewhat similar downside risk, i.e. both could lose their entire investment, they differ dramatically in their upside risk potential. Debt holders can only hope to receive interest and principal payments as scheduled, whereas equity holders have virtually unlimited upside potential when managers engage in high risk/reward activities. Consequently, creditors are likely to be more sensitive to circumstances that have the potential to increase the riskiness and timing of future cash flows. We empirically explore the effects of REM techniques on the evaluations of bond rating analysts and bond investors.

The remainder of this paper is structured in the following manner. The next section provides a review of the relevant literature followed by Section 3 which describes the hypotheses development and model development. Section 4 presents details concerning the sample development while Section 5 communicates the results. Finally, Section 6 concludes the paper with a summary.

## 2. Relevant literature

### 2.1. Real earnings management

Real earnings management represents a relatively recent research domain when compared to the vast literature that exists regarding accrual-based earnings management. Graham et al. (2005) find that executives prefer to use REM (by reducing discretionary expenditures or capital investments) over accrual management. This is particularly interesting due to the direct effect that REM has on cash flows versus the use of accruals which have no direct effect on cash flows. Two reasons are posited for executives' preference for REM over accrual manipulation. The first reason is the lowered likelihood of detection by external auditors and regulators which avoids potential negative repercussions. The second reason relates to inherent limitations of accrual management. If firms wait to use only accrual-based measures to meet certain thresholds, they may not have enough flexibility to be able to achieve their desired earnings targets. An additional distinction which exists between the two methods is that accrual management often occurs at the end of the year, but real earnings management needs to begin well before that time in order to effectively alter reported earnings. While this discussion focuses on the intentional manipulation of company activities, creditors and investors may not be able to ascertain whether the actions taken were intended to specifically manipulate earnings or to actually improve operational efficiency. As such, investors and creditors might have difficulty accurately assessing the risk implications of these activities for a firm's newly issued debt securities which can potentially affect the firm's cost of debt capital.

Roychowdhury (2006) focuses on real activities manipulations undertaken by firms to mislead equity investors by narrowly avoiding a negative accounting income for the year. He finds that firms attempt to avoid these losses in three ways: (1) boosting sales through either accelerating timing and/or providing unsustainable discounts or more lenient credit terms; (2) overproducing and allocating more overhead to inventory; or (3) aggressively reducing aggregate discretionary expenses (defined as the sum of R&D, advertising, and SG&A expenses). Cohen and Zarowin (2010) examine seasoned equity offerings from 1987 to 2006 and find instances of both accrual management and real earnings management in the offering year. The authors also document subsequent earnings declines to be more severe for firms employing REM compared to utilizing accrual management techniques. In a somewhat different setting, Gunny (2010) examines the consequences of

real earnings management and finds REM to be associated with firms just meeting earnings benchmarks (zero earnings and last year's earnings). Gunny finds that firms who employ REM to meet the benchmarks have higher subsequent firm performance than those that do not engage in REM and miss or just beat earnings benchmarks. Kothari, Mizik, and Roychowdhury (2012) examine the role of both accruals earnings management and real earnings management at the time of a seasoned equity offering (SEO), and find that managers appear more likely to engage in real earnings management due to its opacity even though there appears to be more long term negative consequences for the firm. Furthermore, Kothari et al. (2012) suggest that any examination of firm performance after SEO## is incomplete without considering the role of real earnings management just prior to the SEO. Our research integrates the suggestions of Kothari et al. (2012) by considering both real and accrual management techniques with respect to newly issued bonds. Collectively, the extant literature available in the equity markets does not definitively establish whether engaging in REM techniques can generally be described as beneficial or detrimental to future firm prospects.

### 2.2. Accrual-based earnings management, accounting quality, and cost of debt

There exist several studies which examine debt and discretionary accrual-based earnings management. Overall, the literature in this area provides some conflicting results and identifies some unresolved issues. Liu, Ning, and Davidson (2010) examine the cost of debt and related discretionary current accruals (based on the Jones, 1991 model) and find that firms that increase discretionary current accruals in the year prior to debt issuance successfully obtain a reduced yield spread. The authors interpret this finding as bond investors being unable to ‘see’ and accurately price accrual management. This result is contrary to those reported in Crabtree and Maher (2009) who document a significant positive association between the level of discretionary accruals and bond yield spreads. In a similar manner, Prevost, Skousen, and Rao (2008) examine the effect of accrual-based earnings management (using discretionary accruals and performance matched discretionary accruals) on the yields of existing debt issues. The authors examine trades of bonds after financial statements have been released and find yields to be increasing in the amount of accrual management with the effect being most pronounced for non-investment grade issues.

Jung, Soderstrom, and Yang (2013) examine firms' ability to manage credit ratings by using discretionary accruals techniques to smooth reported income and thereby reduce earnings volatility. The authors categorize their sample into plus, middle, and minus notches within a particular credit rating class. Their results indicate that firms with plus notch ratings (e.g. BBB+) smooth earnings to a greater extent via discretionary accruals activities than firms in the middle notch of the same rating category (e.g. BBB). Furthermore, the authors document a positive relationship between a change in earnings smoothness and the probability of a future increase in credit ratings. In summary, Jung et al. (2013) conclude that firms are able to partially manage their credit ratings by utilizing discretionary accruals earnings management techniques to smooth reported income, and the magnitude of this effect is increasing with a firms' incentives.

In a similar vein, Alissa, Bonsall, Koharki, and Penn (2013) empirically model a firm's “expected” credit rating and explore the use of both real and accrual earnings management techniques to move a firm from its actual current rating to its expected credit rating. The authors find that firms utilize both types of earnings management techniques in successfully moving upward or downward towards its expected credit rating with the effect being especially pronounced for those firms whose ratings border the critical investment grade cutoff.

Our research differs from Alissa et al. (2013) in several significant ways. First, they develop a model to predict a firm's *expected* credit rating based on observable firm fundamentals, and compare this theoretical prediction to the firm's S&P long term issuer rating available on

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