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Income smoothing and the cost of debt

Si Li [a,1], Nivine Richie [b,*]

[a] Wilfrid Laurier University, Lazaridis School of Business and Economics, Canada
[b] University of North Carolina Wilmington, United States

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ABSTRACT

The literature on income smoothing focuses on the effect of earnings smoothing on the equity market. This paper investigates the effect of income smoothing on the debt market. Using the Tucker–Zarowin (TZ) statistic of income smoothing, we find that firms with higher income smoothing rankings exhibit lower cost of debt, suggesting that the information signaling effect of income smoothing dominates the garbling effect. We also find that the effect of earnings smoothing on debt cost reduction is stronger in firms with more opaque information and greater distress risk.

1. Introduction

Although income smoothing has existed for decades, there is limited academic research on earnings smoothing. For example, Graham et al. (2005) report that "an overwhelming 96.9% of the survey respondents indicate that they prefer a smooth earnings path. Such a strong enthusiasm among managers for smooth earnings is perhaps not reflected in the academic literature." More recently, Dichev et al. (2013) state that "earnings management is driven by a host of intertwined factors but capital market motivations dominate, followed by debt contracting, and career and compensation issues."

* Corresponding author. Tel.: +1 910 962 3606.
E-mail addresses: sli@wlu.ca (S. Li), Richien@uncw.edu (N. Richie).
[1] Tel.: +1 519 884 0710x2395.

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There are generally two schools of thought as to what motivates managers to smooth. First, smoothing presents an arguably efficient vehicle for managers to reveal private information because it is easier for investors to predict future earnings from smoother earnings. Second, smoothing represents "garbling"; that is, smoothing is an exercise undertaken by managers in an attempt to fool analysts and others and to enhance managerial careers or compensation. The first school of thought (the information signaling view) is reflected in the works of Ronen and Sadan (1981), Demski (1998), Sankar and Subramanyam (2001), Srinidhi et al. (2001), Kirschenheiter and Melumad (2002) and Goel (2003), among others. Essentially, this school holds that income smoothing may reveal private information in much the same way that dividend smoothing can lead to information revelation (Miller and Rock, 1985). The second school of thought (the information garbling view) is reflected in the works of Beidleman (1973), Lambert (1984), Healy (1985), Fudenberg and Tirole (1995), Arya et al. (1998) and Demski and Frimor (1999), among others.

A handful of empirical studies have investigated the issue of income smoothing in the context of equity markets. Subramanyam (1996) finds that stock returns are positively associated with contemporaneous discretionary accruals, which are a measure of income smoothing. Hunt et al. (2000) find that income smoothing improves price-earnings multiples. Tucker and Zarowin (2006) report that the changes in the current stock prices of higher smoothing firms contain more information about these firms' future earnings than do the changes in the current stock prices of lower smoothing firms. Taken collectively, these studies support the notion that income smoothing represents an efficient vehicle for managers to reveal private information. Using survey data, Graham et al. (2005) find that the overwhelming majority of managers prefer a smooth earnings growth rate.[2]

Instead of examining the effect of income smoothing on the equity market, our paper examines the effect of income smoothing on the credit market. If income smoothing is informative and mitigates the asymmetric information problem between the firm and investors, then smoothing firms may exhibit a lower cost of debt capital due to lower information risk. This idea follows from the theory in Trueman and Titman (1988), who argue that a smooth earnings stream may potentially decrease assessments of default risk, and thus decrease the debt cost of capital. However, if income smoothing is garbling, and creditors can recognize smoothing as garbling, then smoothing firms could exhibit a higher cost of debt capital as creditors punish managers for gaming earnings.

Investigating the credit market is of great interest for the following reasons. First, investors in the bond market are predominantly institutional investors. For example, transactions with less than \$1 million face value are considered "odd lots" (that is, less than the normal unit of trading). Because creditors are typically professional investors, they may be more able than equity stakeholders to differentiate the information effect from the garbling effect. Therefore, examining the signaling versus garbling debate through the lens of credit markets can help enhance our understanding of earnings smoothing. Second, Lang and Maffett (2011) argue that firm-level transparency could affect equity and debt differently. They mention that "Earnings smoothing is likely to be a particular issue…given the importance of stakeholders other than equity investors. In particular, stakeholders such as labor unions, governments and debt holders are exposed more directly to losses than to gains and so prefer lower risk. As a consequence, managers have incentives to report smooth earnings to create the impression of a less risky earnings stream." Managers have incentives to signal to the market to obtain debt financing at a lower cost because, all else being equal, lower debt costs imply more money left for shareholders and managers.

In addition to contributing to the literature on incoming smoothing, this study is related to extant studies that identify the determinants of the cost of debt. For example, Chen et al. (2007) report that bond liquidity is an important factor in explaining corporate yield spreads. Tang and Yan (2006) document liquidity effects with respect to credit default swap spreads. Our research suggests that income smoothing could serve as an additional factor that determines the cost of debt, as measured by credit spreads. Finally, this study is related to a growing body of research that addresses the issue of accounting transparency and asset pricing. In this context, the research presented here is perhaps most closely related to Yu (2005), who finds that firms with

[2] As far as we know, there is no direct empirical evidence for how earnings smoothing affects the cost of equity capital. The accounting literature does provide evidence that earnings management (as measured by accrual quality) "is frequently considered to increase opacity, decrease liquidity and increase equity cost of capital" (Lang and Maffett, 2011).