Journal of Accounting Literature 41 (2018) 75–88

Contents lists available at ScienceDirect

Journal of Accounting Literature

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

Is earnings management sensitive to discount rates?

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ARTICLE INFO

Keywords:
Earnings management
Accruals
Real activities manipulation
Discount rates

ABSTRACT

We argue that managers' choice to manage earnings depends on the trade-off in the present value of expected future net benefits associated with that choice. Specifically, we examine if discount rates are associated with the likelihood that managers engage in earnings management to meet or beat various earnings targets. We find that discount rates are positively associated with income-increasing earnings management. This means that managers increase both accrual-based and real earnings management when discount rates are higher. However, the economic magnitude of this association is relatively moderate.

1. Introduction

This paper examines whether managers' decisions to engage in income-increasing earnings management are sensitive to discount rates. Rational managers are expected to pursue and favor strategies that maximize their own gains, even at the expense of other stakeholders (Jensen & Meckling, 1976). Financial reporting provides one way to serve self-interests, particularly when information asymmetry exists between users and providers of the reports. Managers can take accounting or real economic actions to manage short-term performance and, consequently, serve self-interests e.g. by triggering earnings-based performance compensation (Gaver, Gaver, & Austin, 1995; Healy, 1985; Holthausen, Larcker, & Sloan, 1995; Watts & Zimmerman, 1986) to meet capital market expectations (Eames, 1998) or prior to IPOs (Teoh, Welch, & Wong, 1998).

There is considerable empirical evidence showing that managerial self-interests affect their decision horizon. For example, CEOs respond to personal earnings-based incentives by engaging in short-term performance-enhancing activities, rather than long-term value creation that would benefit shareholders (Bergstresser & Philippon, 2006; Dechow & Sloan, 1991). Similarly, shorter expected CEO tenure has been associated with higher agency costs, lower earnings quality, and greater probability of information-based trading, providing evidence that shorter decision horizons motivate managers to invest in projects with quicker payback (Antia, Pantzalis, & Park, 2010; Gopalan, Milbourn, Song, & Thakor, 2014).

The purpose of this paper is to examine whether discount rates affect rational managers' decisions to manage earnings for a given decision horizon. To increase current earnings managers may exercise their discretion over accruals or real business decisions. The use of income-increasing accruals-based earnings management or real earnings management to inflate earnings is a short-horizon strategy because of two factors: 1) the reversal of discretionary accruals and real consequences of operational decisions, and 2) managers' reputation risk. First, using accounting discretion related to income-increasing accruals in the current period constrains the ability to manage accruals in the same direction in future periods (Baber, Sok-Hyon, & Ying, 2011; Barton & Simko, 2002; DeFond & Park, 2001). That is, accruals must reverse at some point (Rangan, 1998), unless managers employ even more aggressive earnings

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https://doi.org/10.1016/j.acclit.2018.03.001
Received 10 September 2014; Received in revised form 16 February 2018; Accepted 6 March 2018
Available online 16 March 2018
0737-4607/

management. Similarly, increasing earnings with real business actions is also a short-horizon strategy (Cohen & Zarowin, 2010). Earnings management by real business actions, for example via channel-stuffing increase current cash flow by bringing forward future cash flows. Second, both earnings management strategies are likely to alert analysts, auditors and the press. This increases the risk of reputation loss and labor-market disciplining and pose a threat for managers' future net benefits (Brickley, Linck, & Coles, 1999; Davidson, Xie, Xu, & Ning, 2007; Kaplan, McElroy, Ravenscroft, & Shrader, 2007).

Building on the expectations related to managerial self-serving behaviour and income-increasing earnings management, we hypothesize that a rational manager has greater incentives for short-termism (upwards earnings management) when the discount rates are higher. Using the theoretical model by Buchholz (1988) which invokes game theory and present value analysis, we argue that the choice between reporting true or managed earnings depends on the present value of the expected net benefits attached to those two choices. Expected future benefits from higher earnings from upward earnings management have a short time-horizon imposed by accrual reversal and the economic consequences of real earnings management. Conversely, expected future costs have a long time-horizon; evidence of earnings management or manipulation or even fraud may be discovered long after the CEO has resigned or retired, with lawsuits and criminal prosecution with financial and reputational losses crystalizing losses far in the future. The benefit horizon is short-term (because it is constrained by accrual reversal and cash flow pull-forward) but the cost horizon is long-term (because discovery may be years in the future).

For managers the choice of acting dishonestly involves estimating the net benefits of higher payoffs from earnings managed upwards minus the costs of discovery. On the other hand, the choice of acting honestly involves estimating the benefits of the lower payoffs from unmanaged (and thus lower) earnings, but without the costs of discovery. Given the two different horizon periods for benefits and costs, higher rates will discount costs substantially more than benefits, which may result in a greater net benefit from acting dishonestly relative to acting honestly. Conversely, when rates are zero, there will be no discounting of costs nor benefits, which may result in a lower net benefit (or cost) for acting dishonestly relative to acting honestly. We therefore, expect higher discount rates to be associated with more income-increasing earnings management, if managers act to maximize their wealth.

Our empirical results confirm a positive association between discount rates and income-increasing accruals and real earnings management, also in settings with high managerial incentives (benchmark beating). The coefficients suggest that the economic magnitude of this effect is moderate, a one standard deviation change in the discount rate increases accrual-based and real earnings management by less than one percent of total assets. This is consistent with Evans, Hannan, Krishnan, and Moser (2001), who suggest that large payoffs are needed before managers will sacrifice their integrity. The existence of "partially honest" reports can be evidence of a trade-off model, in which individuals balance wealth maximization, honesty and reputation. Overall, our paper suggests that discount rates influence earnings management when managers have incentives to meet or beat earnings benchmarks. We supplement our empirical findings with a simulation.

We provide several possible explanations for our findings. The most obvious reason, as we show in a simulation, is probably because managers consider that honesty pays in most cases. Second, actual and perceived apprehension rates and reputational costs are most likely to be high enough to have a significant deterrent effect on earnings management and decrease the present value of acting dishonestly. This explanation is supported by previous research on the trade-off model (Evans et al., 2001; Luft, 1997), in which managers are only willing to use low or moderate levels of earnings management to increase wealth, but not to the extent that they will risk their reputation. Third, discount rates are usually low enough to ensure the excess profits from dishonest short-term actions are moderate. Baiman and Lewis (1989) suggest that individuals have a high pay-off threshold that must be reached before wealth maximization overtakes honesty. Therefore, the discount rates alone may not generally provide a strong incentive to engage in earnings management. Finally, attaining a senior management position in a large public corporation probably demands long-term commitment, and individuals with a short-term focus are less likely to be promoted.

We contribute to the literature by showing that in addition to investor sentiment (Simpson, 2013), managers respond to other economy-wide factors such as higher discount rates when considering earnings management. Second, our findings contribute to the literature by extending Kang, Liu, and Qi (2010) in documenting a positive firm-level association between earnings management and discount rates in addition to one-year ahead market returns. Third, our paper extends Buchholz (1988) by explicitly incorporating cost to dishonesty in the model; and fourth, utilizes the model to provide a theoretical underpinning to the recent findings on the association between managers' decision horizon and corporate decision making (Antia et al., 2010; Dechow & Sloan, 1991; Gopalan et al., 2014).

2. Background

This paper examines the association between earnings management and discount rates. Substantial evidence exists documenting that management engage in earnings management by managing accruals or real activities.[1] Managerial myopia has been reported as a key driver of earnings management. For example, managers have been found to overstate earnings to meet capital market expectations (Eames, 1998) and prior to IPOs (Eames, 1998; Teoh et al., 1998) – only to underperform in the following periods due to accrual reversal (Rangan, 1998) or face subsequent detrimental real consequences of operational decisions. Furthermore, direct proxies for CEO short-termism, such as CEO tenure (Ali & Zhang, 2015; Antia et al., 2010), compensation structure (Bergstresser & Philippon, 2006) and contractual protection (Chen, Harford, & Lin, 2015) are strongly associated with earnings management.

This paper tests the association between managerial myopia and discount rates. Buchholz (1988) suggests in a theoretical model

[1] See Healy and Wahlen (1999) and Dechow, Ge, and Schrand (2010) for reviews.