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Strategic revenue recognition to achieve earnings benchmarks

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ABSTRACT

I examine whether managers use discretion in revenue recognition to avoid three earnings benchmarks. I find that managers use discretion in both accrued revenue (i.e., accounts receivable) and deferred revenue (i.e., advances from customers) to avoid negative earnings surprises, but find little evidence that discretion is used to avoid losses or earnings decreases. For a common sample of firms with both deferred revenue and accounts receivable, I find evidence that managers do not prefer to exercise discretion in either account. However, further tests show that managers preferred to use discretion in deferred revenue before the Sarbanes–Oxley Act of 2002 went into effect, consistent with them choosing to manage an account with the lowest real costs to the firm (i.e., future cash consequences). My results suggest that the revenue recognition joint project undertaken by the FASB and IASB to reduce managerial estimation in revenue recognition may have the unintended consequence of leading to greater real costs imposed on shareholders as firms are likely to use even greater discretion in accounts receivable.

1. Introduction

Revenue recognition is a timely issue as evidenced by the revenue recognition joint project currently undertaken by The Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB).[1] Depending on the nature of a firm's business, there is an accrual and a deferral that relates to the amount of revenue recognized in an accounting period: accounts receivable

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[1] See http://fasb.org/project/revenue_recognition.shtml for more details.

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and deferred revenue, respectively.[2] I examine both accounts to see if discretion in revenue recognition is used to achieve three earnings benchmarks common in the literature: avoidance of losses, avoidance of earnings decreases, and avoidance of negative earnings surprises. Accrued revenue (i.e., accounts receivable) and deferred revenue (i.e., advances from customers) present a unique opportunity to examine how managers choose between two different types of earnings management. I test whether firms with both accounts available to them exhibit a preference for discretion in the accrual or deferral account.

I provide an intuitive explanation for why discretion in the deferral (i.e., deferred revenue) would be preferred. First, gross accounts receivable is managed primarily through real business activities, such as easing credit policies. Management of deferred revenue, on the other hand, represents a situation where cash has already been received. Thus, management of deferred revenue relates to manipulation of accounting estimates. Managing gross accounts receivable is more costly to firms as it relates to accelerating sales where cash has not yet been collected. Thus, it has future cash consequences whereas deferred revenue does not.

I construct a model for the normal change in short-term deferred revenue to determine abnormal changes in short-term deferred revenue.[3] I derive a similar model for the normal change in gross accounts receivable to determine abnormal changes in gross accounts receivable. I use gross accounts receivable in lieu of net accounts receivable because abnormal changes in net accounts receivable could reflect changes in the allowance for bad debt and I am solely interested in discretion in revenue recognition (i.e., the revenue account).[4] I estimate pre-managed earnings by removing the discretionary component related to the account in question (Dhaliwal et al., 2004; Frank and Rego, 2006), and then test whether abnormal changes in each of these revenue accounts are greater than expected for firms with pre-managed earnings that just miss an earnings benchmark. Next, I examine firms with both accounts to see if managers prefer one account as a means for discretion in revenue recognition.

My results indicate that both deferred revenue and accounts receivable are managed in an attempt to avoid negative earnings surprises. I find little evidence that either are managed to avoid losses or earnings decreases. In addition, I provide evidence that firms preferred to exercise discretion in deferred revenue relative to accounts receivable to avoid negative earnings surprises but that the Sarbanes–Oxley Act of 2002 mitigated this preference.

My study makes several contributions to the literature. First, I provide the first descriptive evidence on deferred revenue, showing that many high technology industries have it on their balance sheets. Second, I provide the first comprehensive analysis of revenue manipulation in relation to all three earnings benchmarks and show that discretion is used to avoid negative earnings surprises but find little evidence for the other two benchmarks. My results provide empirical support for the comprehensive revenue recognition project undertaken by the FASB and the IASB. My results suggest that the current earnings process model for revenue recognition is subject to managerial discretion. Third, my study is the first to examine a common sample of firms with revenue deferrals and accruals used to increase revenue and see whether managers exhibit a preference regarding management of these accounts. I provide evidence that deferred revenue is the preferred earnings management account prior to the Sarbanes–Oxley Act of 2002, indicating managers prefer to minimize real costs to the firm. My results suggest that no such preference exists following the Sarbanes–Oxley Act of 2002. My finding of no preference following the Sarbanes–Oxley Act of 2002 suggests that if the FASB and IASB's proposed asset and liability model for revenue recognition is successful in reducing discretion in deferred revenue, it could lead to significantly more discretionary revenue recognition through gross accounts

[2] Deferred revenue goes by several other names including advances from customers, unearned revenue and revenue received in advance. Surprisingly, little research has examined the deferred revenue account. The only study that directly examines this account is Bauman (2005). Using a sample of 20 firms from the publishing industry, he provides evidence that stock prices treat unearned revenue as an economic asset and that this is due to its underlying liability characteristics.

[3] I use the short-term deferred revenue component and ignore the long-term component because the long-term component of deferred revenue does not reflect revenue that should have been recognized during the current period.

[4] The manipulation of the allowance for doubtful accounts involves the manipulation of accounting estimates related to receivables that will not be collected and should not be related to discretion in revenue recognition through gross accounts receivable. I include the change in the allowance for doubtful accounts in a sensitivity analyses and find that the results are qualitatively unchanged.