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Abstract

Considerable research has documented the role of debt covenants and conservative financial accounting in addressing agency conflicts between lenders and borrowers. Beatty, A., Weber, J., and Yu, J. [2008. Conservatism and debt. Journal of Accounting and Economics, forthcoming] document interesting, but mixed, findings on the relation between debt covenants and conservative accounting, and the extent to which the two contracting mechanisms act as substitutes or complements. In this paper, I discuss the economic roles of financial reporting, debt covenants, and conservatism within the debt contracting environment, and attempt to fit BWY's findings within this context.

Keywords

financial reporting, conservatism, debt contracts, debt covenants, agency costs of debt

Disciplines

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Conservative financial reporting, debt covenants, and the agency costs of debt[1]

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Abstract

Considerable research has documented the role of debt covenants and conservative financial accounting in addressing agency conflicts between lenders and borrowers. Beatty, Weber and Yu (BWY, 2008) document interesting, but mixed, findings on the relation between debt covenants and conservative accounting, and the extent to which the two contracting mechanisms act as substitutes or complements. In this paper, I discuss the economic roles of financial reporting, debt covenants, and conservatism within the debt contracting environment, and attempt to fit BWY's findings within this context.

JEL classification: M41; G32

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1. Introduction

The role of debt covenants in resolving agency problems between firms and lenders has long been recognized and studied (e.g., Smith and Warner 1979). At the same time, the role of financial reporting conservatism in reducing agency costs associated with debt financing has also been recognized and studied, with evidence showing that observed conservatism in financial reports is associated with capital structure and the cost of debt. Connecting the two is the fact that a firm's debt covenants are typically written over the firm's financial accounting numbers. Thus, it is interesting to consider whether and to what extent, debt covenants adjust reported accounting numbers to achieve a desired level of overall conservatism in the contracting relationship.

Beatty, Weber and Yu (BWY, 2008) examine the relation between conservatism in firms' financial reports and conservative adjustments made to reported financial numbers used in debt covenants. If financial statement conservatism and conservative adjustments to debt covenants each serve a similar role in resolving agency problems, then the two types of conservatism should be substitutes. That is, firms that choose greater financial statement conservatism should require fewer conservative adjustments in debt covenants. Alternatively, if financial statement conservatism and conservative adjustments to debt covenants each have relative strengths and weaknesses in resolving agency problems in debt contracting, then the two types of conservatism may be positively related. That is, firms that require greater conservatism to resolve agency problems in their debt contracting relationships may make more conservative adjustments to both financial statements and debt covenants.

The authors examine two types of conservative adjustments to net worth covenants: income escalators and intangible asset exclusions. Income escalators reduce the slack in the net worth covenant that would otherwise be provided by positive cumulative income, but typically make no analogous adjustment when cumulative income is negative. The effect of the income escalator, therefore, is to allow slack to increase by only a fraction of cumulative profits, but to decrease dollar-for-dollar with cumulative losses. Intangible asset exclusions remove intangible assets from the net worth calculation. This exclusion places constraints on a firm's ability to acquire intangible assets using tangible assets or equity (e.g., substituting tangible assets for intangible assets will reduce covenant slack, and acquiring intangible assets by issuing equity will not increase net worth or covenant slack).

Using a sample of private debt agreements with net worth covenants, the authors find mixed results on the relation between covenant adjustments and financial reporting conservatism. Depending on the setting, the authors' evidence suggests that covenant adjustments may be a substitute for financial reporting conservatism, a complement to financial reporting conservatism, or bear no relation with examined measures of financial reporting conservatism.

My discussion proceeds in three steps. First, I discuss the economic role of debt covenants and financial reporting conservatism in controlling agency conflicts. Next, I discuss the economic role of income escalator and tangible net worth adjustments to debt covenants in controlling agency conflicts. Finally, I discuss BWY's findings in the context of the economic roles of debt covenant adjustments and financial reporting conservatism. I conclude in the last section.

2. Discussion of debt covenants and financial reporting conservatism in resolving agency conflicts

Creditors lend capital to firms. After lending the capital, the primary concern of creditors is to ensure that their capital is eventually returned, with interest. If the creditors expected that the firm's managers would act in the creditors' best interests in all states of the world, there would be little reason to write complex debt contracts; that is, the creditors would need to do little monitoring because the firms' managers would make their best attempt to ensure that the creditors receive their capital with interest.

However, it is well-known that managers will not always act in the best interests of creditors. In particular, agency conflicts can exist between managers/shareholders and creditors that give rise to actions by firms that cause creditors some concern. These concerns are broadly categorized as actions by firms that increase the risk or probability that the creditors will not see their investment returned. Common examples include managers increasing firm leverage by making cash payouts to shareholders in the form of dividends or share repurchases, or increasing the riskiness of the firm's assets through various investment decisions. In many cases, creditors will not be particularly concerned with day-to-day payout policies and investment decisions, as managers of financially healthy, going-concern firms are typically expected to maximize firm value (i.e., the total value of the claims of creditors and equity holders). However, it is well-known that in settings characterized by a substantial probability of distress, managers may make decisions that are advantageous to shareholders to the detriment of creditors. Debt contracting and debt covenants in particular, are primarily concerned with allocating decision rights to creditors in states of the world where managers cannot be trusted to maximize firm value.

To effectively monitor their investments, creditors require: 1) information that allows them to determine when managers/shareholders might take actions that are not in creditors' best interests, and; 2) the ability to have some decision rights over the firm when such circumstances arise. Financial reporting and debt covenants, the main topics in the BWY paper, each serve at least one of the above roles in assisting creditors in effectively monitoring their investments. In particular, financial reporting seems reasonably well-suited to providing creditors with reliable information about net assets, leverage, current-period performance, near-term cash flows, changes in asset mix/riskiness, etc. At the same time, debt covenants that constrain cash payouts and risk choices seem well-suited to providing creditors with decision rights when financial reporting information indicates that managers may take actions detrimental to creditors. It is possible that debt covenants could serve a dual role by also requiring firms to report financial measures that elicit additional information beyond that provided by GAAP financial statements and disclosures. However, such covenants are expected to be more costly to monitor since this supplemental accounting information would likely require additional auditing and processing.

I now turn to the role of "conservatism" in the contracting relationship between firms and their creditors. Ball and Shivakumar (2005) note two important and distinct concepts of conservatism; the first being that conservative financial reporting imparts a downward bias on reported net worth so as to offset managers' tendencies to bias net worth upwards, and the second being that conservative financial reporting commits managers to recognizing bad news in a timely manner.[2] Basu (1997) and Ball and Shivakumar also note that the second of these two roles for conservatism is likely to be the most important, as contracting parties are expected to be able to readily contract around bias. Therefore, the bias role for conservatism is unlikely to improve contracting efficiency.

In light of the monitoring issues described above, it is not difficult to see why creditors might find it helpful to have conservative reporting rules that elicit timely bad news. Creditors concerns about their investments are magnified when firms' financial health deteriorates.[3] Further, as noted by Basu (1997) and Ball and Shivakumar (2005), managers can have asymmetric incentives to be less forthcoming with bad news about firm performance vis-à-vis good news. Or, equivalently, managers are expected to be relatively more forthcoming with good news than bad news, irrespective of how mandated financial accounting rules are structured. Therefore, given that creditors are relatively more concerned about poor firm performance, and that managers are expected to be relatively less forthcoming about poor firm performance, creditors are expected to welcome/demand financial accounting reports that elicit from managers timely information about poor firm performance (see Guay and Verrecchia (2007) for a formal framework that motivates an informational role for conservative financial reporting).

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[2] It is also likely that, conditional on the formal requirements to recognize bad news in a timely manner, firms supplement their bad news recognition with more informal disclosures that better explain the bad news in their accounting reports (e.g., press releases, conference calls, discussion in the MD&A section of the Form 10-K, etc.).

[3] It should be emphasized that although creditors do not have symmetric claims on the firm's cash flows, creditors still require timely information about gains to effectively monitor the firm. It is costly for bondholders to intervene in the decision-making of the firm; costly for both the bondholders and the firm. Therefore, because it is not efficient for bondholders to intervene too frequently, bondholders require timely information about gains that indicate the firm is sufficiently healthy that intervention is unnecessary.

Although all public U.S. firms follow GAAP, this does not imply that all firms have or demand the same degree of conservatism in their financial reports. Accounting rules have evolved endogenously over time to meet the needs of various market participants and contracting parties. Therefore, one might reasonably assume that observed accounting rules conform to the weighted average demands of users of financial statements, where the weighting is based on the relative importance of certain types of contracting parties, their ability to obtain information outside of formal reporting requirements, the importance of recognition versus disclosure to various users of financial statements, lobbying intensity, direct and indirect costs of reporting, etc. Thus, ex ante, one would not expect the rules to perfectly meet the needs of any given firm or any given user of the financial statements.

3. **Conservative adjustments to debt covenants**

A firm and its contracting parties can accommodate demands for relatively greater or lesser conservatism in at least two ways. First, discretion within GAAP allows managers to choose financial reporting that incorporates relatively more or less conservatism. Second, managers and contracting parties can make adjustments to reported accounting numbers within individual contracts to better meet their needs. Adjustments to financial accounting numbers are observed in a variety of contracting contexts, including executive bonus plans and debt contracts. As an aside, adjustments to reported financial numbers are commonly made in a variety of other contexts including analysts' reports, firm valuation analyses, tax accounting, etc. Even companies themselves make adjustments to reported accounting numbers when announcing or discussing their performance (e.g., "core earnings", "pro forma earnings", etc.)

BWY examine the role of debt covenants in facilitating contracting between firms and creditors. Specifically, they examine two types of variations to net worth covenants: 1) income escalators, and; 2) intangible asset exclusions. Net worth covenants require firms to maintain a certain dollar amount of net assets. Income escalators in net worth covenants add a percentage of positive income to the net worth threshold. For example, a 50% cumulative income escalator would add 50% of cumulative positive net income to the net worth threshold. In the absence of the income escalator, the firm would be allowed $1 of slack in its net worth covenant for each $1 of income. With the income escalator, the firm is only allowed $0.50 of slack for each $1 of positive income. When cumulative income is negative, the net worth threshold is not typically reduced and so slack decreases by $1 for each $1 of negative income. This asymmetric treatment of positive and negative income can be considered a form of conservative adjustment in the net worth covenant.

Intangible asset exclusions adjust the computation of net worth to remove intangible assets. Thus, a firm that chooses to use tangible assets to acquire intangible assets (e.g., using cash to acquire another company that is comprised mainly of intangible assets) would reduce the slack in their net worth threshold, and a firm that chooses to use equity to acquire intangible assets (e.g., using stock to buy a patent) would not increase slack (as would be the case if stock was used to acquire tangible assets). This treatment of intangible assets in the net worth covenant places externally acquired intangible assets on a similarly conservative footing with internally generated intangible assets. Specifically, the financial accounting rules for internally generated intangible assets are very conservative, with expenditures on such assets typically being expensed immediately as incurred. The intangible asset exclusion in the net worth covenant effectively treats these externally acquired intangible assets as also being immediately expensed.

So how do these two types of covenants facilitate the contracting between firms and their creditors? Like all debt covenants, net worth covenants and the adjustments to these covenants must serve some role in mitigating the various agency conflicts discussed above between firms and their creditors. It is important to consider, however, that it is inefficient and costly to impose covenants that allocate decision rights to creditors too frequently or too infrequently. Therefore, covenants will be structured to allow slack when such slack is warranted and to reduce slack when concern about slack is warranted.

Income escalators serve to reduce the amount of slack that would otherwise be allowed when firms generate positive income. What purpose does such an adjustment serve? One possibility is that creditors are sometimes concerned that a firm's net worth at the inception of the debt transaction is insufficient to provide a comfortable level of security for its claims. Thus, the creditor imposes a constraint that net worth rise with income over time, which effectively constrains the firm's payout policy by requiring that a certain percentage of income be reinvested. This explanation for the income escalator would naturally imply an asymmetric treatment for negative and positive income. When cumulative income is negative, the creditor will not allow the net worth threshold to drop because the initial net worth threshold is already lower than the creditor finds comfortable. In these negative income circumstances, the creditor is likely to find it valuable to obtain decision rights over the firm's investment and operating decisions.

Another possible role for the income escalators, and the one offered by BWY, is that "the asymmetric treatment of gains and losses afforded by the use of an income escalator will potentially undo the manager's upward bias of the earnings number." Under this perspective, it may be that creditors are willing to allow $1 of additional net worth slack for each $1 of "true" income, but that they do not trust managers to report truthfully, and expect that a portion of the firm's reported income will be fabricated. Thus, the net worth threshold is only allowed to increase by a percentage of reported net income.

Note that the net worth threshold, combined with the income escalator, should be able to adjust for any level of expected bias in current net worth or future income, regardless of the degree of conservatism in the firm's financial reports. At the extreme level, the covenant can be set to prevent slack completely; that is, the net worth threshold can be set equal to the firm's existing net worth at the time of the debt agreement, and the income escalator can be set at 100% such that the net worth threshold increases $1-for-$1 with income over time. In light of this point, it would have been interesting for BWY to examine the initial tightness of the net worth threshold at the inception of the loan agreement. Such an analysis would likely be quite helpful in better understanding how income escalators resolve agency conflicts. However, the data on initial covenant tightness may be costly to obtain.

The role of intangible asset exclusions in net worth covenants is likely to stem from a somewhat different agency conflict than that addressed by the income escalator. As noted above, creditors can be concerned about managers making investment decisions that expose the firm's cash flows (and therefore the creditors' claims) to greater risk. Intangible assets generally derive their value from future cash flows and investment opportunities, and can be also be quite illiquid. As such, other things equal, the cash flows to be generated by intangible assets are expected to be more risky than for tangible assets.

The use of intangible asset exclusion provisions is likely to vary across firms depending on the intensity of recognized intangible assets, and the importance of intangible assets in the business model.[4] Firms with few intangible assets on the balance sheet have either developed their intangible assets internally (and thus such expenditures are not capitalized), have acquired intangible assets but previously wrote them down, or simply don't rely heavily on intangible assets as a factor of production. For such firms, creditors may find it comforting to exclude intangible assets from the net worth covenant to constrain managers' ability to alter the firm's asset mix by substituting away from tangible assets and toward intangible assets, or constrain the ability to obtain additional slack by acquiring intangible assets with equity or debt. In other words, creditors may actually prefer a *greater* degree of conservatism for these firms than that present in financial reporting rules.

Firms with substantial intangible assets on the balance sheet have acquired intangible assets previously and are also likely to rely heavily on intangible assets as a factor of production. For these firms creditors may prefer to include intangible assets in the net worth covenant for two reasons. First, tangible net worth may not be a particularly relevant metric of financial health when a large fraction of a firm's assets are intangibles;

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[4] Note that initial slack in a net worth covenant (regardless of whether intangible assets are excluded) can be set at any desired level of tightness at inception of the loan agreement. Of course, the specific dollar amount of the net worth threshold will need to be adjusted depending on the features of the covenant. For example, if the creditors and borrower desire an initial threshold that provides no slack, the initial net worth threshold can be set at tangible net worth in the presence of an intangible asset exclusion provision (or at reported net worth in the absence of an intangible asset exclusion provision). The key role of debt covenants, however, is to mitigate agency conflicts associated with *future* actions that can be taken by managers. Thus, even though the initial net worth threshold can be set to any tightness desired, the constraints on managers' future behavior will differ depending on the specific provisions of the covenant.

for such firms, creditors will likely want to obtain decision rights when intangible assets are substantially impaired. Second, creditors may have an interest in seeing the firm convert intangible assets to tangible assets over time; as intangible assets are amortized or written down over time, the firm must recoup those income effects in cash flow or other tangible assets to avoid losing covenant slack.

4. Discussion of the analysis by Beatty, Weber and Yu (2008)

BWY examine whether the prevalence of income escalators and intangible asset exclusions in net worth covenants is related to the degree of financial accounting conservatism in firms' financial reports. In particular, they explore whether these conservative covenant adjustments are substitutes or complements for conservatism in financial statements. The substitution effect is expected if firms and creditors view financial statement conservatism and conservative covenant adjustments as serving a similar role in resolving manager-creditor agency conflicts. Analogously, a complementary effect is expected if firms and creditors view financial statement conservatism and conservative covenant adjustments as either serving different roles in resolving the same manager-creditor agency conflicts, or in resolving different agency conflicts.

Ex ante, it seems very unlikely that conservative covenant adjustments, such as income escalators and intangible asset exclusions, would serve as a close substitute for conservative financial reporting demanded by lenders. Schipper (2005) and Guay and Verrecchia (2006) note that firms and lenders are expected to be able to write contracts that adjust for expected bias in reported financial numbers. If this is correct, covenant adjustments may well be a substitute for the bias role served by conservatism in financial reporting. However, it seems much less likely that covenant adjustments can efficiently serve the timely loss recognition, or informational role, of conservatism. To emphasize this point, note that income escalators and intangible asset exclusions provide *no incremental information* about the firm's economic condition. Specifically, income escalators and intangible asset exclusions simply take known financial accounting numbers and make pre-determined formulaic adjustments to the net worth covenant threshold. However, as noted above, this does not mean that such covenant adjustments do not serve a valuable role in controlling agency problems between firms and lenders. Conservatism is only one of several reasons why income escalators and intangible asset exclusions might be used in debt contracts.

At the same time, it seems quite plausible that income escalators and intangible asset exclusions could complement conservatism in financial reports. When creditors are relatively more concerned about agency conflicts with a particular borrower, a greater number of conservative safeguards of all kinds are expected to be observed. Equivalently, when creditors have little concern about agency conflicts with a particular borrower, there is little need/benefit for the borrower to agree to covenant restrictions or to implement overly conservative accounting in financial statements.

BWY begin their analysis by identifying a sample of 2,164 private debt agreements with net worth covenants. The sample is partitioned into agreements that do and do not contain income escalators and intangible asset exclusions. The authors then construct measures of conservative financial reporting for the sample firms, and although measurement issues related to conservatism are an important part of the paper, and in this literature in general, I do not focus on measurement issues in my discussion.

BWY use probit regressions to examine the relation between the existence of a covenant adjustment, either an income escalator or an intangible asset exclusion, and three underlying economic constructs: i) predicted financial statement conservatism explained by non-debt determinants such as litigation and tax; ii) residual financial statement conservatism, and; iii) agency costs of debt.

Examining the determinants of income escalator adjustments, BWY find several results. First, the use of income escalators is positively associated with proxies for the agency costs of debt. This is comforting, but not too surprising given that, in general, all debt covenants are intended to resolve some form of agency conflict between firms and lenders. Second, the use of income escalators is negatively associated with financial statement conservatism explained by non-debt demands, such as litigation and tax, suggesting that this source of financial statement conservatism is a *substitute* for at least some of the agency conflicts that income escalators are intended to resolve. As noted above, because income escalators do not provide new information to creditors, if these covenant adjustments serve a conservatism role, it is expected to stem from their ability to reduce bias in reported numbers.[5] Further, as noted by Guay and Verrecchia (2006), litigation and tax demands for conservatism likely arise from a demand for biasing reported financial numbers, as opposed to providing information. Thus, the notion that conservatism driven by litigation and tax demands could serve as a substitute for the bias-reducing effects of income escalators is plausible.

The use of income escalators is also found to be positively associated with residual financial statement conservatism unexplained by litigation and tax demands. The

[5] Recall from the discussion above that income escalators can constructively reduce agency conflicts even if they do not serve a conservatism role, for example, through their ability to constrain payout policy.

authors interpret this residual conservatism as their proxy for lenders' demands for conservatism. Therefore, this result suggests that, with respect to lenders' demands, financial statement conservatism is *not* a substitute for the agency conflicts that income escalators are intended to resolve. As discussed above, a key role of conservatism in financial reports is to provide timely information about bad news, and further, this role cannot be served by income escalator provisions that provide no new information. Thus, it seems reasonable that when lenders are more concerned about agency conflicts with borrowers, they will prefer both more timely information about bad news and more bias-reducing mechanisms in the loan agreement.

When examining the determinants of intangible asset exclusions in net worth covenants, BWY find no consistent, significant relations with proxies for either agency costs, conservatism explained by litigation and tax variables, or residual conservatism that serves as a proxy for lenders demands for conservatism. The first of these findings, that proxies for agency costs are not associated with intangible asset exclusions, may be the most telling result. As noted above, the primary role of all debt covenants is to control agency conflicts. Therefore, the fact that the authors' proxies for the agency costs of debt do not adequately measure the agency conflicts being controlled by intangible asset exclusions suggests that more research is needed to better understand, or measure, the role of tangible net worth covenants.

Note, however, that the authors' intangible asset exclusion regressions include as control variables, measures of existing goodwill and intangible assets recognized on each firm's balance sheet. Further, these measures are the most significant variables in the authors' regressions and indicate that existing intangible assets are strongly negatively related to the inclusion of an intangible asset adjustment in the net worth covenant. In other words, lenders appear to be *more* concerned with excluding intangible assets from net worth when firms have *fewer* intangible assets at the inception of the loan agreement. This suggests that the intangible asset exclusion is a forward-looking concern on the part of lenders that firms with few intangible assets might decide at a future date to acquire greater levels of intangible assets. And, the fact that firms with substantial intangible assets are less likely to have intangible assets excluded suggests that these assets are important to consider in understanding these firms' net worth, and/or that lenders want the option to have control rights in the event that these intangible assets become impaired (or amortized without recouping the amortization in the form of cash flows or tangible assets).

5. Conclusion

Beatty, Weber, and Yu (2008) examine the relation between firms' choice of conservatism in financial reports and their decisions to accept conservative adjustments to debt covenants. Although the results are mixed, the authors provide some interesting evidence that conservative financial reporting and conservative adjustments in debt covenants are used simultaneously by firms and lenders to resolve agency conflicts. The authors interpret their evidence that contract adjustments do not entirely replace financial reporting conservatism as suggesting that "the specialized needs of lenders may extend beyond the demands for information." However, it seems quite plausible that the reason contract adjustments do not entirely replace financial reporting conservatism is *because* of lenders' demand for information, and the fact that conservative financial reporting has a comparative advantage in eliciting timely information about bad news from managers.

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