

Study of Accounting Conservatism

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ABSTRACT

This paper examines the role of accounting conservatism on the design of private debt contracts. Specifically, I distinguish two arguments that offer different explanations for how accounting conservatism improves debt contracting efficiency. One argument suggests that lenders care about *ex post* timely loss recognition (*income statement argument*), and the other argument contends that lenders care about the cumulative effect of *ex ante* timely loss recognition (*balance sheet argument*). I provide evidence consistent with the *balance sheet argument*. Lenders reward borrowers' timely loss recognition when it leads to more reliable net asset values in the balance sheet by lowering interest rate spreads. In addition, while on average, lenders adversely price the buildup of accounting slack caused by *ex ante* conservative accounting practices, this penalty is absent when the accounting slack is more likely to be caused by *ex ante* timely loss recognition. I also find that lenders are more likely to use collateral and less likely to use financial covenants for firms with high levels of past conservatism, regardless of the source of conservatism. Taken together, the results show that it is important to distinguish the type and source of conservatism. Overall, the results suggest that the role of accounting conservatism in debt contracting is more complex than documented in prior literature.

Keywords: Loan collateral; Accounting conservatism; Debt contracting; State-owned enterprises; State-owned banks

INTRODUCTION

There is a growing interest in understanding how accounting attributes, such as conservatism, affect lenders' decisions on debt contract terms. Part of the reason is that the demand from debt contracting constitutes one of the important explanations for the existence of conservatism. This paper examines how lenders structure contracts in reaction to the type and source of conservatism in borrowers' financial statements. Current literature in this field proposes two theoretical explanations for conservatism's impact on debt contracting. One explanation emphasizes the income statement effect of conservatism (*IS argument*) and the other explanation highlights the balance sheet effect of conservatism (*BS argument*). According to the *IS argument*, conservatism is considered to improve contracting efficiency through ongoing timely recognition of bad news in the income statement. Since lenders particularly care about timely recognition of bad news, they utilize the level of *ex ante* conservatism to infer *ex post* conservatism in earnings. Under the *BS argument*, conservatism is beneficial to lenders through the cumulative effect of timely recognition of losses on asset values reported in the balance sheet. Therefore, lenders utilize the level of *ex ante* conservatism to evaluate the quality

of the balance sheet in providing reliable estimates of net asset values. Both arguments agree that conservatism provides valuable information to lenders, who have an asymmetric exposure to firms' risks. However, these arguments differ with respect to how conservatism affects information used by lenders.

2. Related studies and hypotheses development:

2.1 Conditional and unconditional conservatism:

Two aspects of conservatism result in understatement of the book values of net assets relative to the economic values. One is defined by Basu as representing "accountants' tendency to require a higher degree of verification for recognizing good news than bad news in financial statements". The asymmetric verification leads to timely recognition of economic losses but not economic gains. Examples of this type of conservatism include lower of cost or market accounting for inventories and asset write-downs. Under timely loss recognition, reported earnings are more sensitive to contemporaneous losses, which make the income statement more informative to users who care about firms downward risks but not the upside potential. The impact on the income statement

also flows through to the balance sheet due to the clean surplus relation between the two financial statements. Writing down assets under bad news but not writing up for good news results in persistent understatement of net assets on the balance sheet. The other aspect of conservatism that causes understatement of assets is “the selection of „conservative accounting methods”. Examples are immediate expensing for R&D costs, the use of accelerated depreciation method, and LIFO inventory valuation. This type of conservatism lowers asset values, and such a balance sheet effect persists over time. However, its income statement effect is reversible, from understating earnings in the early years of an assets life to eventually overstating earnings in the later years.

Both aspects of conservatism introduce understatement of asset values, but they differ in their potential to convey new information in the financial statements. Timely loss recognition introduces understatement conditional on the type of the news. In contrast, applying conservative accounting methods brings in understatement by systematically allocating the cost over the life of an asset, without reflecting new information about changes in asset values. Thus, the former is usually labeled as conditional conservatism, whereas the latter is called unconditional conservatism.

The cumulative effect of both types of conservatism is reflected as persistent understatement of net asset values on the balance sheet. Such realized conservatism creates accounting slack⁵ that constrains future application of conditional conservatism.⁶ This can be illustrated with the following example. Suppose a firm has a very low book value of an asset compared to its economic value, either caused by past asset write-downs or by adopting very conservative accounting methods or both. When there is a negative shock, unless the shock is sufficiently big so that the economic value drops below the book value, the firm will not recognize the bad news in the financial statement. Therefore, over a wide range of economic shocks conditional conservatism would not be observed for a firm. Moreover, even if the negative shock was big enough to trigger a write-down, the magnitude of the write-down for such a firm would be smaller than for firms with less accounting slack.

2.2 The role of accounting conservatism in debt contracting:

Accounting conservatism has been considered as a reporting mechanism that increases debt contracting efficiency. Two arguments are proposed with different emphases and implications.

Basu and Ball and Shivakumar [2] represent the IS argument that highlights the news-dependent nature of conditional conservatism. In debt contracting, timely loss recognition affects the

effectiveness of financial covenants, which are used to define the property and decision rights between debtholders and shareholders. Once borrower’s financial condition deteriorates, timely loss recognition triggers covenant violations more quickly. Therefore, debt holders are able to obtain the control rights in a timely manner and take necessary actions to protect their interests. In contrast, unconditional conservatism does not bring any new information to lenders. It even reduces the likelihood and the magnitude of conditional conservatism during the contracting period. Thus, unconditional conservatism is likely to reduce contracting efficiency, or is at best neutral.

Following the spirit of this argument, Zhang provides empirical evidence that conditional conservatism benefits lenders *ex post* through timely signaling of default risks and benefits borrowers *ex ante* in obtaining lower interest rates. Nikolaev documents a positive association between timely loss recognition and covenant intensity, defined as the number of financial covenants used in a debt contract, in a sample of public debt agreements, suggesting that conditional conservatism increases the effectiveness of the use of covenants. Moerman finds a negative relation between timely loss recognition and bid-ask spreads charged on the traded loans, suggesting that conditional conservatism reduces information asymmetry by revealing losses in a timely fashion. In addition, both Zhang and Moerman test unconditional conservatism in their settings and are unable to document contracting implications. In contrast, Bauwhede finds a negative relation between unconditional conservatism and credit ratings, implying negative consequences for a firm resulting from unconditional conservatism. These results are consistent with the argument that only conditional conservatism improves debt contracting efficiency.

The *BS argument* represented by Watts emphasizes the enhanced reliability of financial statements resulting from conditional conservatism. Specifically, the cumulative financial effect of conditional conservatism produces a reliable estimate of the lower bound of net asset value as well as cumulative earnings from the beginning of a firm’s operations. Such a valuation approach echoes the orderly liquidation concept of “anticipating all possible losses and no unverifiable gains”. It helps to prevent inappropriate distributions to management and shareholders at the expense of debtholders and assists lenders in assessing potential borrowers’ asset values as collateral, monitoring borrowers’ ability to pay, and restricting managers’ action to reduce net asset values. In accordance with this argument, Ahmed *et al.* [1] find that conservative accounting helps to mitigate shareholder-bondholder conflicts over dividend policy and reduce firm’s borrowing costs.

2.3 Hypotheses:

A few prior studies have examined the interaction between conditional and unconditional conservatism. Beaver and Ryan model how on one hand, the level of unconditional conservatism preempts future application of conditional conservatism, and on the other hand, conditional conservatism resets unconditional conservatism.⁸ Roychowdhury and Watts empirically examine the relation of conditional and unconditional conservatism in multiple periods and find a negative association between beginning unconditional conservatism and subsequent conditional conservatism. They also document a positive association between conditional conservatism and end-of-period unconditional conservatism over a period of two years or beyond. These results are consistent with Beaver and Ryan's conjectures on the relation between conditional and unconditional conservatism.⁹ In a recent study, Louis, Lys, and Sun document that the effect of conditional conservatism on analyst forecast errors decreases in the level of unconditional conservatism. Such an interaction effect demonstrates the constraining effect of accounting slack on future asymmetric accounting treatment of gains and losses in this applied setting.

3. Data and research design:

3.1 Sample selection:

I obtain private debt information from the Dealscan database. I focus on dollar denominated loans during the period from 1996 through 2003. I exclude borrowers in financial and regulated utility industries, because the debt contract terms for these

industries differ substantially from other industries. The basic unit in Dealscan is a loan, which is also referred to as facility or tranche. A borrower usually enters into multiple loans at the same time with either a single bank or a group of banks. These loans are grouped into a package, which is also named as deal. Because all loans in a package are subject to the same covenants and accounting conservatism measures, the analysis in this paper is based on the package level. However, as the terms of "loan" and "debt" are widely used, I will sometimes use them to denote a package as well. For example, statements about loan/debt characteristics or loan/debt violations refer to the characteristics and violations of packages. When the basic unit of a package is specifically referred to, I use the term "facility" in this paper to avoid confusion.

The sample selection process is presented in Table 1. I start with the loan data from Dealscan. Some borrowers may enter into multiple debt agreements in a year and thus have the same conservatism measures and control variables. To avoid the problem over-weighting these observations in the sample, I only keep the package with the largest borrowing amount for each borrower in each year. I then merge the loan data with Compustat/CRSP.¹⁵ I require that each firm in the sample have necessary accounting information and stock return data to obtain borrower specific control variables and to estimate accounting conservatism. The final sample to test the spread and collateral hypotheses contains 5,298 packages from 2,758 unique borrowers. When I study financial covenant intensity, I lose observations without data on covenant information, and the sample for these tests includes 3,662 packages from 2,253 firms. Summary statistics for these samples is provided in Table 1.

Table 1: Sample Selection.

Selection Criteria	Spread and Collateral Sample	Intensity Sample
Packages in Dealscan	96,834	13,652
Start year between 1996 and 2003	69,496	12,501
US dollar	48,749	12,328
Matched to Compustat	19,167	9,314
Keep one package per year per gvkey based on the largest package size	15,310	7,946
Matched to CRSP	11,439	6,363
Non-financial firms	9,993	5,676
Non-regulated firms	8,956	5,244
Prior fiscal year financial statement available	8,933	5,227
Assets and sales information available	8,884	5,192
Measures of conservatism available	7,441	4,340
Control variables available	5,298	3,662

3.2 Measuring conditional conservatism:

I use the measure of timely loss recognition developed by Basu to proxy for conditional conservatism. In Basu's market-based model (named as the Basu model in the rest of the paper), stock return is used to proxy for contemporaneous economic gains and losses. Due to the GAAP

requirement for asymmetric verification to recognize bad news versus good news, earnings are expected to be more sensitive to negative returns than positive returns. Specifically, the model is:

$$E_{it}/P_{t-1} = \alpha + \beta Rit + \eta DR_{it} + \gamma Rit DR_{it} + \varepsilon_{it}$$

where E_{it} is annual earnings for firm i in the fiscal year t , P_{t-1} is the market value of equity at the beginning of the year, R_{it} is the 12-month return on firm i ending three months after the end of the fiscal year less the corresponding CRSP equal-weighted market return, and DR_{it} is an indicator variable equal to one if the firm's market-adjusted return R_{it} is negative and zero otherwise. Observations with the deflated earnings or the returns falling to the top and bottom 1% are excluded. In the above regression, $(\beta+\gamma)$ captures timely loss recognition and is the measure of conditional conservatism in this study. The basic intuition of this measure is that firms with high levels of timely loss recognition have earnings that are more sensitive to economic shocks conditional on a bad new shock.

3.3 Measuring unconditional conservatism:

Unconditional conservatism is measured by the market-to-book ratio. The ratio is computed as the market value divided by the book value of shareholders' equity. The observations with negative values of market-to-book ratio are excluded. The market-to-book ratio directly captures the understatement of net asset values to economic values and is a natural way to measure cumulative conservatism. As discussed earlier, there is some measurement error in the variable to the extent that the firm enjoys some rents in its current and future projects.

I also include a set of control variables to proxy for firm-specific and loan-specific risk that are likely to affect debt contracting terms. Firm-specific controls include $lmktcap$ measured as the log of the market capitalization for each firm, which is a proxy for reputation and information asymmetry. roa is return on assets, representing profitability. $leverage$ is the ratio of long-term debt to total assets, controlling for financial risks. $grade$ is an indicator variable that is one if the borrower has an investment grade credit rating and zero otherwise. $rated$ is an indicator variable indicating whether the borrower has a credit rating. std_r is the measure of the volatility of daily returns. Higher volatility is suggestive of higher default risk. The variable $growth$ measures the growth in assets. Because the measure of unconditional conservatism, mbe , is also a good proxy for growth options, I use the asset growth rate to address the concern that the results using the measure mbe is caused by growth rather than conservatism. But how the variable $growth$ affects the contracting terms is ambiguous. Firms with more growth opportunities are expected to generate more future cash flows, which lowers interest rates. But at the same time high growth firms have more information asymmetry and thus are more likely to incur higher borrowing costs and more covenant restrictions. Finally, growth in assets relaxes the extent to which past conservatism is

binding for future loss recognition which enhances contracting efficiency and therefore should result in lower interest. The variable $tangibility$ is the ratio of PPE to assets, which is used to control for the quality of the collateral. Better quality of collateral lowers spreads and reduces the need to use covenants as a monitoring mechanism.

The loan-specific controls include $dealsize$, representing the ratio of the loan amounts to assets. $lmaturity$ is the log of the longest maturity (in months) of facilities in a package, a proxy for the length of the loan. $llenders$ is the log of the number of lenders. These loan characteristics can either convey borrowers' credit risks or represents trade-offs in contracting terms. Therefore, the signs of these control variables can go either way depending on whether debt terms complement or substitute with each other. $secured$ indicates whether any of the facilities in the package is secured with collateral. The use of collateral can reduce interest rates as well as the use of financial covenants. Finally, pp represents performance pricing. Performance pricing ties interest rates to borrowers' performance and thus reduces lenders' risk and lowers initial spreads.

Conclusions:

In this paper, I compare two arguments that explain how timely loss recognition (conditional conservatism) improves debt contracting efficiency. The *IS argument* suggests that it is ongoing timely loss recognition, which ensures *ex post* that a firm's earnings reflect inherent downward risks. In contrast, the *BS argument* contends that it is the cumulative effect of past timely loss recognition, which provides reliable estimates of net asset values at the lower end of the distribution (unconditional conservatism).

To distinguish the two arguments in explaining debt contracting design, I examine the interaction effects of *ex ante* conditional conservatism and unconditional conservatism on loan pricing, covenant intensity, and the use of collateral. I find that *ex ante* conditional conservatism reduces interest costs, particularly for firms with medium or high levels of unconditional conservatism, which is inconsistent with the *IS argument*.

Further I find that lenders demand higher interest rates from borrowers with higher unconditional conservatism that results primarily from applying conservative accounting methods. But this penalty effect is no longer significant when conservative accounting methods are not a dominant contributor to the buildup of accounting slack. The evidence supports the *BS argument* and suggests that lenders care about the source of unconditional conservatism.

In addition, regardless of the source of unconditional conservatism, lenders are more likely to use collateral and less likely to use financial covenants as contracting mechanisms to monitor

borrowers with high levels of unconditional conservatism.

References

1. Ahmed, A., B. Billings, R. Morton and M. Stanford-Harris, 2002. The role of accounting conservatism in mitigating bondholder-shareholder conflicts over dividend policy and in reducing debt costs. *The Accounting Review*, 77: 867-890.
2. Ball, R. and L. Shivakumar, 2005. Earnings quality in U.K. private firms: comparative loss recognition timeliness. *Journal of Accounting and Economics*, 39: 83-128.
3. Ball, R. and L. Shivakumar, 2006. The role of accruals in asymmetrically timely gain and loss recognition. *Journal of Accounting Research*, 44: 204-242.
4. Ball, R. and S. Kothari, 2007. Econometrics of the Basu asymmetric timeliness coefficients and accounting conservatism. Working paper, University of Chicago and MIT.
5. Ball, R., A. Robin and G. Sadka, 2007. Is financial reporting shaped by equity markets or by debt markets? An international study of timeliness and conservatism. *Review of Accounting Studies*, forthcoming.