Accounting flexibility in private debt contracts: the role of auditors

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Abstract

This study investigates whether borrowers' commitments to engage nationally recognized auditors and allow lenders to consult their auditors are associated with accounting flexibility in private debt contracts. Debt contracts vary in the extent to which they allow borrowers' accounting changes to affect financial covenant compliance calculations. Accounting flexibility in debt contracts allows the borrower to use accounting changes to avoid debt covenant violation, and borrowers are prepared to pay higher interest rates to retain accounting flexibility (Beatty, Ramesh and Weber 2002). Little is known about how borrowers' commitments to engage nationally recognized auditors and to allow lenders the right to consult borrowers' auditors are related to borrowers' flexibility to make accounting policy changes and implement regulators' changes to accounting standards when calculating covenant compliance. Borrowers' auditing commitments increase the level of assurance about their financial statements' quality and, thereby, the lenders' ability to judge the appropriateness of accounting changes. However, committing to engage auditors with reputations for higher quality is also costly. The logistic regression results show that private debt contracts contain clauses allowing accounting changes to be included in covenant compliance calculations on conditions when the contracts also include borrowers' commitments to engage nationally recognized auditors and to allow lenders to consult the borrowers' auditors. The results suggest that contractual commitments to auditor quality are necessary to retain accounting flexibility even when the borrower is using a Big 6 auditor at the date of the debt contract.

Accounting flexibility in private debt contracts: the role of auditors

1. Introduction

Prior research shows that debt contracts vary in the extent to which they allow borrowers' accounting changes to affect calculations of financial covenant compliance (Beatty, Ramesh and Weber 2002; Mohrman 1996, Beatty and Weber 2003)[1]. Beatty *et al* (2002) show that borrowers pay substantially higher interest rates to retain flexibility to make accounting changes that may help them avoid covenant violations and to avoid duplicate record-keeping costs. These studies provide evidence that is consistent with the importance of accounting in debt contracting. However, the prior research does not consider other features of the debt contracting process that potentially affect whether borrowers have the flexibility to make accounting changes. Specifically, the role of the borrower's auditor in debt contracting has not been considered in studies examining accounting flexibility despite the auditor's influence on its client's accounting methods. Evidence of a negative association between the cost of capital and higher quality auditing (Blackwell, Noland and Winters 1998; Mansi, Maxwell and Miller 2003; Clarkson and Simunic 1994; Teoh and Wong 1993; Krishnan 2003) suggests borrowers benefit from their commitments to high quality auditing. This study uses a sample of private debt contracts to investigate whether greater accounting flexibility in debt contracts is associated with borrowers' commitments to high quality auditing.

Accounting flexibility is valued by borrowers because it potentially enables them to avoid debt covenant violation and the resulting costs of default.[2] Lenders anticipate the potential costs of borrowers' use of accounting changes to avoid default and price protect themselves against the costs of these potential actions (Jensen and Meckling 1976). However, borrowers also value accounting flexibility because it allows them to make accounting changes for non-debt-contract related purposes without incurring additional bookkeeping costs in order to meet their reporting

[1] Mohrman (1996) classifies 90 of her 174 sample debt contracts which contain financial covenants as 'fixed GAAP contracts' and Beatty *et al* (2002) report that 122 (150) of their 206 contracts exclude voluntary (mandatory) accounting changes. Voluntary accounting changes are changes in accounting policies within generally accepted accounting principles (GAAP) and mandatory accounting changes are regulators' changes to accounting standards.

[2] Beneish and Press (1993) estimate the cost of breach of a financial covenant as between 1.2 per cent and 3 per cent of the market value of the firm's equity.

obligations to lenders. In addition, accounting flexibility allows borrowers to make accounting changes to avoid technical breaches of debt covenants that do not harm lenders, avoiding costs of investigating and waiving the breaches. Contracting techniques that resolve the tension between protecting the lender from adverse effects of accounting changes on debt covenant compliance calculation and allowing the borrower to retain accounting flexibility are likely to have value.

Auditors add credibility to financial statements, which are the basis of financial covenant calculations (Blackwell *et al* 1998, Watts and Zimmerman 1986, Healy and Palepu 2001). DeAngelo (1981) explains that borrowers commit in debt contracts to engage nationally recognized auditors because they are higher quality monitors. Larger auditors with reputations for higher quality are less likely than smaller auditors to compromise their standards to ensure retention of clients. They are more likely to object to accounting changes that attempt to hide going concern issues or produce misleading financial statements. This study examines whether commitments to engage nationally recognized auditors and other auditing related commitments by borrowers are related to the degree of accounting flexibility retained by borrowers.

This study contributes to the literature on the hypothesis that borrowers use changes in accounting policies and methods to avoid violating debt covenants; the debt covenant hypothesis. The prior literature contains mixed results (Fields, Lys and Vincent 2001), although recent evidence suggests that the incidence of income increasing accounting changes by borrowing firms is related to the degree of accounting flexibility in their debt contracts (Beatty and Weber 2003). This study extends the literature to show that accounting flexibility can be conditional on lender or auditor approval of the change or contract renegotiation, and that the auditor has a role in determining the degree of accounting flexibility in private debt contracts. The study also contributes to the debate on the desirable degree of flexibility in accounting standards at a time when accounting standards are becoming more international (Schipper 2003). The evidence of the role of auditing in accounting flexibility in this study is obtained directly from debt contracts, avoiding the need to make inferences about the benefits of engaging auditors with reputations for high quality from correlations between auditor choice and firm leverage. This study does not investigate the interest rate effects of borrowers' auditing commitments or accounting flexibility in debt contracts, nor does it attempt to explain the borrowing firm characteristics associated with auditing commitments and accounting flexibility. However, the results of this study will contribute to better models of interest rates and debt contracting in future research.

The results from binary and multinomial multivariate logistic regression support the main proposition in this study; that there is a relation between the degree of accounting flexibility borrowers retain in their private debt contracts and their auditing commitments on those contracts. Specifically, detailed contract specification of the conditions under which accounting changes affect debt covenant compliance calculations is more likely than simply excluding or including all accounting changes when the borrower commits to engage a nationally recognized auditor. This result is strongest for changes in accounting methods imposed by regulators' standard setting activity. Detailed contract specification of the conditions under which accounting changes affect debt covenant compliance calculations is more likely than simply excluding or including all accounting changes when the borrower allows the lender to consult the borrower's auditor.

The remainder of this study is structured as follows. Section 2 explains the background to the study and develops the hypotheses. Section 3 outlines the research design. Section 4 presents the results, whilst section 5 presents results of further analysis and sensitivity tests. Conclusions are provided in section 6.

2. Background and hypothesis development

Prior research investigates both voluntary and mandatory accounting changes and whether they are excluded from debt covenant compliance calculations in debt contracts (Mohrman 1996, Beatty *et al* 2002). Voluntary accounting changes are changes in accounting policies within generally accepted accounting principles (GAAP) and mandatory accounting changes are regulators' changes to accounting standards. Borrowers can use voluntary accounting changes to avoid violating financial covenants if the change in accounting policy is not excluded from financial covenant compliance calculations. Beatty *et al* (2002) report that lenders charge an additional 84 basis points for contracts that do not exclude voluntary accounting changes from financial covenant compliance calculations. Mandatory accounting changes are imposed by regulators and could increase or decrease the restrictiveness of financial covenants. The cost of investigating and resolving inadvertent covenant breaches and the risk of delaying covenant violations also provide incentives for lenders to price protect themselves through higher interest rates when mandatory accounting changes are not excluded from financial covenant compliance

calculations. The interest rate for contracts that do not exclude mandatory accounting changes is reported by Beatty *et al* (2002) to be 71 basis points higher.

The evidence on whether borrowers use their accounting flexibility to avoid debt covenant violation, or the effects of changes in GAAP on borrowers (the debt covenant hypothesis), is mixed. Fields *et al* (2001) review this literature and note that interpretation of the results is hampered by the difficulty of attributing observed accounting choices to attempts to avoid debt covenant violation because it is known that accounting method choice is also likely associated with the same firm characteristics that determine leverage (see also Skinner 1993; Smith and Watts 1992; Godfrey 1994; Bradbury, Godfrey and Koh 2003). Fields *et al* also argue that studies focusing on firms actually violating debt covenants, or approaching violation suffer from sample selection issues (e.g., Sweeney 1994; DeAngelo, DeAngelo and Skinner 1994) and therefore also require caution in interpretation.

Dichev and Skinner (2002) and Beatty and Weber (2003) provide direct evidence from debt contracts in an attempt to clarify the conflicting results on the debt covenant hypothesis. Dichev and Skinner (2002) use the histogram approach developed in Burgstahler and Dichev (1997) to detect unusual patterns in current ratio and net worth covenant slack (where slack is the difference between actual accounting data and the prescribed levels in financial covenants). Although their results are consistent with the debt covenant hypothesis, they do not distinguish between firms with accounting flexibility and other firms. This potentially affects their conclusions because firms with accounting flexibility are more likely to be using accounting choices to avoid debt covenant violation, and therefore should have more observations that are just avoiding covenant violation.

Beatty and Weber (2003) provide direct evidence of the relation between accounting flexibility in debt contracts and income increasing voluntary accounting changes. Using a sample of firms that make voluntary accounting changes and have bank debt, they find a positive relation between accounting changes being allowed to affect covenant calculations and the likelihood that borrowers' accounting changes are income increasing. The effect is reduced if there is a single lender because the cost of violation is likely to be lower, and therefore the incentive to make an accounting change is lower. Although firms with accounting flexibility are more likely to make

income increasing accounting changes than income decreasing accounting changes and this tendency is higher if the borrower has dividend payment restrictions or interest rates based on accounting performance in its bank debt, the study does not directly test whether the accounting changes benefit the borrowers or harm the lenders. It is possible that the borrowers' accounting changes are permitted by the lenders because they do not suffer adverse effects.

Beatty *et al* (2002) and Beatty and Weber (2003) classify their sample debt contracts by whether they include or exclude accounting changes from financial covenant compliance calculations. Neither study discusses the existence of statements in debt contracts that allow borrowers to make voluntary accounting changes on conditions that provide protection for lenders, or that give protection to both borrowers and lenders from potential adverse effects of mandatory accounting changes. For example, a statement that the borrower can change its accounting policies unless the lender objects to the accounting change, or that borrowers can made accounting policy changes after the financial covenants in the contract are renegotiated, would give the borrower limited accounting flexibility and protect the lender from potential adverse effects of voluntary accounting changes. A statement in the debt contract allowing borrowers or lenders to object to implementation of regulators' changes in accounting standards and require the changes to be excluded or the contract to be renegotiated would protect both parties from adverse effects of mandatory accounting changes. It is not known if such statements exist in the Beatty *et al* (2002) and Beatty and Weber (2003) sample contracts, nor if they do exist, how they are classified. However, the treatment of such statements potentially affects the studies' results. Contractual statements that protect lenders are likely to be associated with smaller increases in interest rates, and are also less likely to be associated with income increasing accounting changes that allow borrowers to avoid financial covenant violations that predict loan default.

Beatty *et al* (2002) and Beatty and Weber (2003) also do not control for borrowers' auditor choice or commitments in the debt contracts to engage auditors with reputations for high quality. Borrowers' commitments in debt contracts to engage nationally recognized auditors have been documented since the 1970s.[3] DeAngelo (1981) suggests that borrowers commit to engage large

[3] The Metcalf Staff Report (US Senate 1976) stated that clauses in debt contracts requiring borrowing firms to appoint nationally recognized auditors were anti-competitive. The Cohen Commission Report (AICPA 1978) concluded that there was little or no product differentiation in the audit profession, such that a clean audit report from any firm was worth the same as from any other (DeAngelo 1981).

auditors because of the effect of their reputations for higher quality on loan availability and pricing. However, loan amount and pricing are negotiated outcomes and it is possible that borrowers use commitments to engage nationally recognized auditors to gain benefits other than, or in addition to, lower interest rates. For example, if lenders believe that commitments to nationally recognized auditors increase the likelihood of high quality financial statements, borrowers who commit to engage nationally recognized auditors and allow lenders to discuss the borrower's affairs with the auditor could retain flexibility to make voluntary accounting changes and control over the effects of mandatory accounting changes with a lower interest rate penalty. The costs for the borrower of such commitments include the higher fees charged by larger auditors (Craswell, Francis and Taylor 1995) and the risk that the borrower's circumstances in the future preclude it from using a larger auditor (Francis, Maydew and Sparks 1999).

There is a stream of research which supports the argument that committing to engage nationally recognized auditors is likely to increase the quality of the financial statements which are the basis of debt covenants. Purchase of an audit by private or closely held firms reduces interest rates significantly (Blackwell *et al* 1998) and larger firms that are required to purchase audits can reduce the rate of return on their public bonds by using a Big 6 auditor (Mansi *et al* 2003), particularly if they are noninvestment grade firms. Use of a Big 6 auditor also allows promoters of publicly listed firms to reduce the level of retained ownership required to ensure the success of the offering (Clarkson and Simunic 1994; Lee *et al* 2003), although this result is mixed across countries (see also Simunic and Stein 1987, Beatty 1989, Feltham, Hughes and Simunic 1991). The cost of capital savings from appointment of a Big 6 auditor are likely due to their ability to constrain aggressive and opportunistic earnings management (Krishnan 2003; Becker *et al* 1998; Krishnan and Schauer 2000; Francis *et al* 1999; Gul, Tsui and Chen 1998; Wah 2002; Reynolds and Francis 2001; Clarkson 2000).

Financial statements' quality determines their value in monitoring both borrowers' compliance with debt covenants and their financial performance and position in general. Higher quality financial statements make it easier for lenders to detect accounting changes and assess their effects on debt covenants. Higher quality auditors are more likely to have the competence to assess the appropriateness of voluntary accounting changes and the method of implementing mandatory accounting changes, and have the independence to refuse to allow the change or to qualify the audit report if they disagree with the borrowers' accounting decisions (DeAngelo

1981). It is known that borrowers typically commit to provide audited financial statements to lenders (Smith and Warner 1979) and in some contracts borrowers also give lenders permission to consult their auditors (Kahan and Tuckman 1993), but there is no known evidence of the relation between commitments about auditor quality and the degree of accounting flexibility in debt contracts. Because commitments to engage nationally recognized auditors, to allow lenders to consult the borrower's auditor, and clauses affecting the degree of accounting flexibility are typically contained in separate clauses in different parts of the debt contracts, it is not obvious that these clauses are related.[4]

If borrowers could credibly commit to use accounting flexibility only for non-debt-contract related purposes or for avoiding technical breaches of debt covenants that do not harm lenders, then they could retain their ability to make voluntary accounting changes without paying higher interest rates. Including accounting changes in debt covenant compliance calculations allows borrowers to avoid bearing additional bookkeeping costs in order to meet their reporting obligations to lenders. Similarly, borrowers could use accounting flexibility to avoid technical breaches of debt covenants that do not harm lenders, thereby avoiding costs of investigating and waiving the breaches. Borrowers contractually limit their ability to take actions to avoid breaching debt covenants when the costs thus incurred are offset by the increase in firm value due a lower incidence of suboptimal investment decisions or other agency costs (Myers 1977). They use contracts to rule out options to take actions which might seem rational in the future, such as making accounting changes to avoid breaching debt covenants.

Borrowers have three options when writing debt contract clauses which affect their ability to make voluntary accounting changes or to implement mandatory accounting changes. They can include all changes in debt covenant compliance calculations, they can exclude all changes from debt covenant compliance calculation, or they can include accounting changes in debt covenant compliance calculations on conditions designed to protect lenders and borrowers from the adverse effects of the accounting changes. The third option, detailed contract specification of the

[4] See Appendix 1 for examples of the clauses. Restrictions over accounting flexibility are determined by definitions of GAAP (in the introductory chapter of the debt contract), clauses affecting accounting changes (usually either in the introductory chapter or financial covenant chapter) , and wording of financial covenants. Commitments to engage nationally recognized auditors are typically made in the covenant to provide annual audited financial statements to the lenders. Permission for the lender to consult the auditor is usually contained in another clause in the financial covenant or other covenant chapter of the debt contract.

conditions under which accounting changes affect debt covenant compliance calculations, is likely to increase contract negotiation and enforcement costs. Therefore, it is more likely as the costs of simply excluding or including all accounting changes increase. This study does not investigate the borrowing firm characteristics associated with detailed contract specification or its interest rate pricing effects. The focus of this study is limited to explaining the relation between detailed contract specification of accounting flexibility and commitments to engage nationally recognized auditors and allow lenders to consult the borrowers' auditors.

The potential effects of voluntary and mandatory accounting changes differ, so the decisions to include, exclude or include the change on conditions are likely to differ for the two types of accounting change. Therefore, the relations between borrowers auditing commitments and voluntary and mandatory accounting changes are discussed separately.

If all voluntary accounting changes are included in debt covenant compliance calculations, lenders price protect themselves from the risk of accounting policy changes which avoid debt covenant violation and to compensate them for additional monitoring. If all voluntary accounting changes are excluded from debt covenant compliance calculations, borrowers are unable to use accounting policy changes for non-debt-contract related purposes without incurring additional bookkeeping costs, or for avoiding technical breaches of debt covenants and the resulting costs of investing and waiving the breach. Allowing voluntary accounting changes on conditions, such as lender or borrower approval of the change or after contract renegotiation to reflect the effects of the change, requires greater information and monitoring of the borrower's financial performance and position than excluding or including all changes. Conditional voluntary accounting change clauses specify the conditions under which the accounting changes are permitted to affect debt covenant compliance calculations.

Borrowers' commitments to engage nationally recognized auditors are likely to increase the quality of their financial statements because larger auditors are more likely to qualify the accounts for inappropriate accounting policy changes. Lenders are more likely to accept voluntary accounting changes approved by nationally recognized auditors. Lenders are also more likely to accept disclosures of voluntary accounting changes and their effects in financial statements audited by nationally recognized auditors. Such disclosures allow lenders to judge whether to

object to the voluntary accounting change and to renegotiate appropriate changes to debt covenants to accommodate the effects of the voluntary accounting change. These arguments lead to the first hypothesis:

H1: Conditional voluntary accounting change clauses and borrowers' commitments to engage nationally recognized occur together in private debt contracts.

Clauses placing conditions on voluntary accounting changes are more likely than all other clauses governing the effect of voluntary accounting changes on debt covenant compliance calculations to be associated with borrowers' commitments to nationally recognized auditors. Detailed contract specification of accounting flexibility is an alternative to simply excluding or including all changes and requires greater commitments to provide high quality information.

Mandatory accounting changes are made by regulators and borrowers have discretion only over the appropriate method and timing of their implementation. Therefore, and unlike voluntary accounting changes, mandatory accounting changes are not made purposefully by borrowers to allow them to take suboptimal decisions in the future. The smaller expected impact of mandatory accounting changes on firm value due to suboptimal decisions means that borrowers have lower incentives to restrict their ability to make mandatory accounting changes in the future relative to their incentives to restrict their ability to make voluntary accounting changes. In addition, excluding the effects of mandatory accounting changes increases borrowers' bookkeeping costs, and requires lenders to monitor the statements reconciling borrowers' external financial statements to debt covenant compliance calculations. This suggests that mandatory accounting changes are less likely than voluntary accounting changes to be excluded from debt covenant calculation compliance.[5]

However, mandatory accounting changes could increase or decrease the restrictiveness of debt covenants. This suggests that borrowers have incentives to avoid the cost of inadvertent covenant

[5] Figure 1 in Beatty *et al* (2002) shows that mandatory accounting changes are included in 56 cases, excluded in 150 cases, and that voluntary accounting changes are included in 84 cases and excluded in 122 cases, suggesting that excluding mandatory accounting changes is more likely than excluding voluntary accounting changes. However, as discussed in the text above, it is not known how accounting changes on conditions are classified by Beatty *et al*.

breaches caused by mandatory accounting changes and limit lenders' price protection against the risk that covenant breaches are delayed by mandatory accounting changes. Borrowers can restrict the effect of mandatory accounting changes on debt covenant compliance calculations by using conditional accounting change clauses, which specify either that the change is excluded if either contracting party objects to the change or until the contract is renegotiated to allow for the effects of the change. A commitment to engage a nationally recognized auditor increases the assurance that the financial statements appropriately disclose the effects of the mandatory accounting change and therefore provide a better basis for lenders to assess whether they need to object to the change or to calculate the necessary adjustment to the debt covenants. In addition, higher quality financial statements provide a better basis for reconciliation of the external financial statements which must incorporate the mandatory accounting change and statements provided to lenders to show the borrower's compliance with the debt covenants. These arguments lead to the second hypothesis:

H2: Conditional mandatory accounting change clauses and borrowers' commitments to engage nationally recognized occur together in private debt contracts.

As discussed above, conditional accounting change clauses are more likely than all other clauses governing the effect of accounting changes on debt covenant compliance calculations to be associated with borrowers' commitments to nationally recognized auditors. Detailed contract specification of accounting flexibility is an alternative to simply excluding or including all changes and requires greater commitments to provide high quality information. However, the differing nature of voluntary and mandatory accounting changes are expected to affect the relation between clauses excluding all accounting changes and commitments to nationally recognized auditors. Voluntary accounting changes are likely to be excluded when borrowers have not made a commitment to engage nationally recognized auditors because there are no additional monitoring requirements. However, mandatory accounting changes are likely to be excluded when borrowers do make a commitment to engage nationally recognized auditors because of the monitoring required by the reconciliation statements when accounting changes are made in the external financial statements.

Allowing lenders to object to voluntary or mandatory accounting changes or to renegotiate the contract so that their position is not adversely affected by the accounting changes provides protection for lenders but increases their demand for assurance about the borrowers' accounting methods and systems. Giving the lender the right to consult the borrower's auditor partially meets the lender's demands. Therefore the third hypothesis predicts the relation between conditional accounting change clauses and allowing lenders to consult the borrower's auditor.

H3: Conditional accounting change clauses and clauses giving lenders the right to consult the borrower's auditor occur together in private debt contracts.

The lender's access to the borrower's auditor is more likely to appear with detailed contract specification about accounting changes than with simple clauses excluding or including all accounting change in debt covenant compliance calculations.

3. Research Design

All tests use a sample of private debt contracts because covenants in private debt contracts are more likely than those in public debt contracts to be tailored to the borrower's circumstances (Beatty *et al* 2002; El-Gazzar and Pastena 1991; Denis and Mihov 2002; Kahan and Tuckman 1993). As such, the greater specificity in private debt covenants provides a powerful setting for testing the association between accounting flexibility and borrowers' commitments with respect to their auditors.

3.1 Model

The hypotheses predict a positive relation between conditional accounting change clauses and borrowers' commitments to engage nationally recognized auditors and allow lender to consult the borrowers' auditors. In order to examine the association between these clauses it is necessary to control for other debt contract characteristics which are likely to affect the use of conditional accounting change clauses and auditing commitments. However, predictions of the direction of the relations between the debt contract characteristics are problematic because they are likely to

be jointly and simultaneously determined with the accounting and auditing clauses during the negotiation process.

Prior research does not model the presence of detailed contract specification of accounting flexibility. Beatty *et al* (2002) model the exclusion of accounting changes from the covenant compliance calculation as a function of contract and borrower characteristics. Their model is of accounting flexibility rather than contract specification. In addition, several of their variables are not available (the firm's S&P bond rating and the number of book-to-tax differences). However, this study adopts a similar approach to Beatty *et al*, where controls for both debt contract and borrower characteristics are included.

Syndicated loans are likely to have different contracting costs than other loans because of the additional time and effort involved in communicating between the contracting parties and reaching agreement on appropriate responses to changes in the borrowers' financial condition. There is also the risk that the agent will not act in the best interests of all lenders. The syndication process is likely to result in greater standardization of contracts, and greater differences between syndicated and unsyndicated contracts. Secured loans are likely to rely less on accounting based debt covenants than unsecured loans to protect lenders' interests. Longer term loans are more likely to contained detailed clauses specifying the effects of accounting changes because as the contract term lengthens borrowers are more likely to change their accounting methods and regulators are more likely to make changes to GAAP. In addition, contracts for large loans are more likely to contain detailed and highly specified accounting and auditing restrictions and be more precise in specifying methods for resolving disputes and procedures for renegotiation in the event of changes in borrowers' circumstances.

Borrower size is included as a control because large borrowers are more likely to have high quality accounting systems (because of the large fixed cost component of such systems) and be more likely to continue to use large auditors. Leverage is also included as a control because default risk potentially impacts on the degree of contract specification.

The model is as follows:

$$COND_i = \beta_0 + \beta_1 NATRECOG_i + \beta_2\ CONSULT_i + \beta_3 SYN_i + \beta_4 UNSEC_i + \beta_5 LONGTERM_i + \beta_6 LARGESIZE_i + \beta_7 SIZE_i + \beta_8 LEV_i + \varepsilon_i \quad (1)$$

where *COND* is various measures of conditional accounting change clauses. Binary logistic regression is used when *COND* is a dichotomous variable (contract contains conditional accounting change clause or not) and multinomial logistic regression is used when *COND* has three categories (as explained further below). Independent variable measures are also explained below.

3.2 Variables

Voluntary accounting change clauses

There are five types of private debt contract clauses stating the effect, if any, of the borrower's voluntary accounting changes on debt covenant compliance calculations. These are, in order from least flexible to most flexible:

All voluntary accounting changes excluded

Voluntary accounting changes included after the debt contract is renegotiated

Voluntary accounting changes included unless the lender objects to the change

Voluntary accounting changes included if the borrower's auditor concurs with the change

All voluntary accounting changes included[6]

VOLAC = 1 if the voluntary accounting change is included after contract renegotiation, unless the lender objects, or if the auditor concurs with the change, 0 otherwise.

Mandatory accounting change clauses

There are four types of private debt contract clauses stating the effect, if any, of the borrower's mandatory accounting changes on debt covenant compliance calculations. These are, in order from least flexible to most flexible:

All mandatory accounting changes excluded

Mandatory accounting changes included after the debt contract is renegotiated

[6] See Appendix 1 for examples of each type of clause.

Mandatory accounting changes included unless the borrower or lender objects to the change

All mandatory accounting changes included[7]

MANDAC = 1 if the mandatory accounting change is included after contract renegotiation or unless the borrower or lender objects, 0 otherwise.

Voluntary and mandatory accounting changes

CONDAC1 = 1 if both *VOLAC* = 1 and *MANDAC* = 1, 0 otherwise

CONDAC2 = 1 if either *VOLAC* =1 or *MANDAC* =1, 2 if both *VOLAC* =1 and *MANDAC* =1, 0 otherwise

Commitments to engage nationally recognized auditors

A commitment to a nationally recognized auditor exists where there is a covenant in the private debt contract requiring the appointment of an auditor, or the provision of audited financial statements, where the borrowing firm's auditor must be 'nationally recognized' or 'internationally recognized', or a 'Big 6 auditor'.[8] A commitment to an auditor of unspecified quality, or a 'CPA', is not measured as a commitment to a nationally recognized auditor.

NATRECOG is an indicator variable equal to 1 if there is a commitment to a nationally recognized auditor, 0 otherwise.

Lender's right to consult borrower's auditor

CONSULT is an indicator variable equal to 1 if the contract specifically gives the lender the right to consult the borrower's auditor for any purpose (with or without the borrower's representatives having the right to be present), 0 otherwise.

[7] See Appendix 1 for examples of each type of clause.

[8] Prior to 1997, there were 6 audit firms in the top tier (the Big 6), after 1997 a merger between 2 top tier auditors created the Big 5. All sample contracts are dated between 1994 and 1999. In 2002 Andersen (formerly Arthur Andersen) ceased operating in the US. The Big 4 are currently Deloitte Touche Tohmatsu (formerly Deloitte & Touche), Ernst & Young, KPMG, PricewaterhouseCoopers (created in 1997 from the merger of Price Waterhouse and Coopers & Lybrand).

Control variables

Syndicated loans are likely to have higher renegotiation costs and greater reliance on financial statements for monitoring borrowers than information gathered from a close relationship between a borrower and its major banker. *SYN* = 1 if the contract has more than one lender, 0 otherwise.

Security over assets is likely to be associated with lower reliance on financial covenants and financial statements for monitoring borrowers. For ease of interpretation, this variable is measured as absence of security over assets. *UNSEC* = 1 if there is no security over assets, 0 otherwise.

Long term loans are more likely to include provisions to deal with accounting changes because the likelihood of both voluntary and mandatory accounting changes increases over time. *TERM* = period between contract date and maturity (in years).

Loan size is likely to be correlated with both borrower size and the likelihood of detailed contracting around borrowers' accounting flexibility and commitments with respect to their auditors because any fixed cost element of contracting increases the relative cost of tailoring small contracts to borrowers' circumstances. *LOANSIZE* = loan amount (in $m).

Large firms are more likely to have debt contracts that are tailored to their circumstances. *SIZE* = natural log of total assets at the end of the financial period prior to the contract date.

Leverage is an indicator of firm risk and is likely to be related to the borrower's closeness to covenant violation, and thus related to incentives to control the effects of accounting changes on debt covenant compliance calculations. *LEV* = total liabilities / total assets at the end of the financial period prior to the contract date.

Both *SIZE* and *LEV* are winsorized to plus or minus three standard deviations of the mean to reduce the effects of outliers. The sensitivity of the results to winsorising these variables are discussed below.

Sensitivity tests are reported after the main results. These tests examine the effects of two additional contract characteristics, whether the loan is new or renewed (*NEW)*, and whether the contract is written by one of the three lenders with the greatest frequency in the sample (*TOP3LEND*).

3.3 Sample

Companies must lodge copies of their private debt contracts with the SEC if the loan amount exceeds 10% of the firm's total assets.[9] In order to identify firms with private debt, *Moody's Industrial Manual* is compared with COMPUSTAT, from which financial data are extracted.[10] A random sample of (non-bank) US companies appearing in both records is taken and their disclosures with the SEC are searched for copies of private debt contracts.[11] If the company does not have any private debt contracts listed in the exhibits in the most recent 10-K return lodged with the SEC it is dropped from the sample. If the most recent 10-K return contains a reference to a private debt contract, the most recent debt contract is copied for the sample.[12] If there are several private debt contracts, the largest is chosen for the sample.[13] There is a bias in *Moody's* towards larger companies, which are more likely than smaller companies to use Big 6 auditors. Observations are dropped from the sample if the debt contract does not contain financial covenants or is incomplete (e.g. relevant sections omitted from the copy lodged with the SEC). The final number of debt contracts is 171, and the sample selection process is summarized in Table 1.

Insert table 1 about here

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[9] Rule 601.b(4) of disclosure regulation S-K requires that a firm files as part of the public record 'all contracts, including indentures, involving debt issued in amounts which exceed 10% of its total assets'. Firms disclose material private contracts as attachments to registration statements or Forms 10-K (annual returns), 8-K (special disclosures), and 10-Q (quarterly returns). The annual return (10-K) contains a list of exhibits with information about all current material contracts and the date and type of return to which the contract is attached. For most companies, 10-K and other returns required by the SEC are available from January 1 1994 from the SEC website.

[10] *Moody's Industrial Manual* contains information about public and private debt for companies on the New York and American Stock Exchanges. The information in *Moody's* is drawn for the most part from information obtained directly from the corporations or from stockholders' reports and SEC reports and registrations, and includes information about debt covenants for current debt. Begley (1990a) finds that the debt covenant information in *Moody's* is reliable for public debt issues, but less so for private debt. Therefore, this study uses *Moody's* as a method of identifying firms that are likely to have private debt, but uses actual debt contracts to gather information about private debt contract characteristics.

[11] El-Gazzar and Pastena (1990) have a sample of 74 private lending agreements and Begley (1990b) has a sample of 130 public lending agreements. Initial investigations reveal that around 50 per cent of companies in *Moody's* have a private debt contract appended to their filings with the SEC.

[12] The most recent 10-K return may refer to a debt contract included as an exhibit in a previous filing with the SEC. The previous filing could be a 10-K, or it could be another type of return such as a 10-Q (quarterly return) or 8-K (a return of a significant event, such as refinancing).

[13] While the most recent 10-K is chosen because it contains information about current debt, making this study more contemporary, the disadvantage is that the company may have had private debt in past periods, which does not appear in the most recent 10-K return because the debt has been discharged. However, as the SEC website allows access to returns for years commencing January 1994, accessing earlier 10-K returns increases the risk that the debt contract was lodged as an exhibit in periods prior to 1994.

3.4 Descriptive statistics

Table 2 reports the frequencies of the voluntary and mandatory accounting change clauses and clauses committing the borrower to engage a nationally recognized auditor and to allow the lender to consult the borrower's auditor. Nearly 56 per cent (55.6%) of contracts have unconditional restrictions on accounting policy changes, approximately 39 per cent (38.6%) of contracts have conditions on accounting policy changes, and only around 6 per cent (5.8%) of contracts allow changes to accounting policies without restriction. Mandatory accounting change clauses have a different type of distribution from voluntary accounting change clauses. Almost 40 per cent (39.8%) of contracts allow mandatory accounting changes to affect the calculations of compliance with financial covenants. Only approximately 15 per cent (14.6%) of contracts fix GAAP as at the date of the contract, and the remaining 45.6 per cent have conditions on mandatory accounting changes. The distribution of voluntary and mandatory accounting change clause types support the expectation that mandatory accounting changes are less likely than voluntary accounting changes to be excluded from debt covenant calculation compliance because of their differing costs.

Insert table 2 about here

Table 2 also shows that 62.6 per cent of the contracts require the appointment of a nationally recognized auditor and 63.2 per cent give the lender the right to consult the borrower's auditor.

Table 3 reports descriptive statistics for the sample. It shows the means and medians for the combined measures for conditional accounting change clauses, *CONDAC1* and *CONDAC2* (0.28 and 0.00, and 0.84 and 1.00 respectively). These values suggest that conditional accounting change clauses for voluntary and mandatory accounting change clauses are not perfectly correlated.

Insert table 3 about here

Most contracts are syndicated (151 of the 171 contracts are syndicated) and two-thirds are not secured by assets. The mean contract term is 4.26 years (median 5 years) and mean loan size is $413.54 million (median $140m) with a range from $1m to $7500m. Sixty-two per cent of the contracts are for new loans (not renewed or renegotiated) and 44 per cent of the contracts are with the three most frequently occurring lenders. [14]

Mean total assets for the sample firms is $1,669.91m with a minimum of $0m and a maximum of $35,064m.[15] The data indicate a very wide distribution in firm size, supporting the use of the *SIZE* variable which is measured as the natural log of total assets and winsorized to plus or minus three standard deviations of the mean. On average, leverage is 61 per cent (*LEV*), with maximum leverage of 195 per cent, even after winsorizing the data.[16]

Panel B of Table 3 presents Spearman correlation coefficients (and two-tail p values). Panel B shows that there are significant positive correlations between the conditional voluntary and mandatory accounting change clauses (*VOLAC* and *MANDAC)*, and, as expected, between these clauses and commitments to nationally recognized auditors (*NATRECOG*), and the lender's right to consult the borrower's auditor *(CONSULT)*. However, *CONSULT* and *NATRECOG* are not significantly correlated despite almost identical proportions of the contracts containing these two clauses. This suggests that they are substitutes rather than complements.

Syndication (*SYN*) and loan size (*LOANSIZE*) are significantly positively correlated with all private debt contract characteristics except the clause giving the lender the right to consult the borrower's auditor and new loans (*NEW*). The new loan variable is significantly correlated only with absence of security over assets. The indicator variable for the three most frequent lenders in the sample (*TOP3LEND)* is positively correlated with *SYN* and *LOANSIZE*, confirming that these lenders are dominant in the market. *TOP3LEND* is also positively correlated with *NATRECOG*

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[14] In this sample the 3 most frequent lenders are Bank of America (agent or lender on 38 contracts), Chase Manhattan Bank (29) and Nationsbank (29). There are 76 contracts where at least one of these banks is an agent or lender.

[15] The financial data are for the year end prior to the debt contract date. The observation with zero total assets had no assets on that date. Results are not sensitivity to the inclusion of this observation.

[16] Maximum leverage before winsorizing the data is 500 per cent, indicating several firms were technically insolvent prior to writing their new debt contracts.

and *UNSEC*, suggesting that the commitment to engage a nationally recognized auditor is typically used by these major lenders and the contracts are unsecured. Absence of security over assets is also negatively related to leverage (*LEV*), indicating that higher borrowing quality firms tend not to secure loans against their assets. Contract term (*TERM*) is significantly and positively related to mandatory conditional accounting change clauses, syndication, loan size and borrower size (*SIZE*). It is also related to commitments to nationally recognized auditors. This suggests that as the loan contract term increases, it becomes more important to ensure the engagement of an auditor with a reputation for high quality, and thus the quality of the audited financial statements.

4. Results

The results for the binary logistic model appear in Table 4. Panel A is for the full sample (n=171) and Panel B is for syndicated contracts (n=151). In each table there are three dependent variables and for each dependent variable there are results for three versions of the model. The binary logistic model contrasts the presence of the conditional accounting change clause (voluntary, mandatory or both voluntary and mandatory) with clauses that either exclude or include all accounting changes. This comparison is consistent with the arguments and hypotheses that the detailed contract specification is related to the independent variables. The models have variables for both *NATRECOG* and *CONSULT* (first column), *NATRECOG* only (second column), and *CONSULT* only (third column). These model specifications identify the separate effects of both types of auditing commitments.

Insert table 4 about here

All models in Panel A of Table 4 are significant ($p<0.004$), and all models except the second model for *CONDAC1* show a greater percentage correct classification than the base model (which does not include the independent variables). The tables report the coefficients and one-tail significant values for each independent variable. Commitments to engage nationally recognized auditors are significantly and positively related to conditional mandatory accounting change clauses and the use of both conditional voluntary and mandatory accounting change clauses, but not conditional voluntary accounting change clauses. The clause giving lenders the right to

consult the borrower's auditor is positively related to all dependent variables. These results support Hypotheses 2 and 3.

Syndication is significant for all conditional mandatory accounting change clause models and the conditional voluntary accounting change model that does not include *NATRECOG*. Borrower size (*SIZE*) is also significant in all conditional voluntary accounting change clause models and the first two versions of the model predicting both conditional accounting change clauses. These results suggest that syndication is an important factor influencing the detailed contract specification of mandatory accounting changes, an issue addressed further in Panel B. However, it appears to be borrower size that has a major influence on the level of detailed contract specification of voluntary accounting changes. *SYN* and *SIZE* have a positive correlation of 0.358 (p=0.000), so the influence of each in the multivariate regression is difficult to untangle.

Panel B of Table 4 presents the results of the binary logistic regression for the syndicated contracts. All models except the *NATRECOG* only model for conditional mandatory accounting change clauses are significant at $p<0.05$, and most models have greater percentage correct predictions than the base models. Panel B results provide support for Hypotheses 2 and 3, and unlike Panel A, some support for Hypothesis 1. *NATRECOG* is significantly positive in the second model predicting conditional voluntary accounting change clauses. Also consistent with Panel A, borrower size remains significant in models predicting conditional voluntary accounting change clauses and both voluntary and mandatory conditional accounting change clauses. The results confirm that even within the subsample of syndicated contracts, where lower variation would be expected, borrowers' commitments to engage nationally recognized auditors and to allow lenders to consult the borrowers' auditors are more likely to occur in contracts with conditional accounting change clauses than in other contracts.

The second version of the measure for the combination of conditional voluntary and mandatory accounting change clauses is *CONDAC2*. *CONDAC2* is equal to 1 if the contract contains either a voluntary or mandatory conditional accounting change clause, equal to 2 if the contract contains both voluntary and mandatory conditional accounting change clauses, and equal to 0 otherwise. Multinomial logistic regression is required to test the multivariate model where the dependent

variable has three possible values. Table 5 presents the results for the multinomial logistic regression for *CONDAC2* for all observations in Panel A and syndicated contracts in Panel B.

Insert table 5 about here

The results in Panel A of Table 5 support the hypotheses. *NATRECOG* and *CONSULT* are significant in the three versions of the model, and the parameter estimates show that these variables contribute in the expected direction when distinguishing between contracts that have no conditional accounting change clauses or one conditional accounting change clause and contracts that have both conditional accounting change clauses. Syndication is also a significant variable in the model. Panel B confirms that the hypothesized relations remain significant within the subsample of syndicated contracts.

The results in Tables 4 and 5 compare contracts with a conditional accounting change clause with both contracts with clauses that exclude all accounting changes and contracts with clauses that include all accounting changes in debt covenant compliance calculation. Multinomial logistic regression is used to investigate whether the borrower's commitments to engage a nationally recognized auditor and to allow lenders to consult the borrower's auditor have more power in discriminating between conditional accounting change clauses and clauses that exclude all accounting changes or between conditional accounting change clauses and clauses that include all accounting changes. Multinomial logistic regression is also used to contrast the effects of the two auditing commitments. The frequencies of commitments to engage nationally recognized auditors and to allow lenders to consult the borrower's auditor are almost identical (62.6% and 63.2%), but they are not correlated (p=0.149).

Table 6 presents multinomial logistic regression results for voluntary accounting change clauses where the dependent variable has three levels: it is equal to 1 if all voluntary accounting changes are excluded, equal to 2 if there is a conditional voluntary accounting change clause, and equal to 3 if all voluntary accounting changes are included in debt covenant compliance calculations. The models are significant and *CONSULT* is a significant variable. Although *NATRECOG* does not have a significant Chi-square statistic, the parameter estimates show that it contributes in the

expected direction when distinguishing between contracts that have conditional voluntary accounting change clauses and those contracts that include all voluntary accounting changes in debt covenant compliance calculations. *CONSULT* does not contribute in distinguishing between contracts that exclude all voluntary accounting changes and those that include all voluntary accounting changes, but does contribute in distinguishing between contracts that have conditional voluntary accounting change clauses and the other contracts.

Insert table 6 about here

Borrower size is a significant variable in the model and the parameter estimates show that it contributes to distinguishing between contracts with conditional voluntary accounting changes and those that exclude all voluntary accounting changes. Borrower size makes no contribution to distinguishing between contracts with conditional voluntary accounting changes and those that include all accounting changes. This suggests that larger borrowers are able to retain greater voluntary accounting flexibility. Leverage is significant in the model with *NATRECOG* but not *CONSULT*. The parameter estimates show that contracts for firms with higher leverage are more likely to exclude all voluntary accounting changes than include all voluntary accounting changes, and have conditional voluntary accounting change clauses than to include all voluntary accounting changes. This is consistent with lower quality borrowers having lower accounting flexibility.

The results in Panel B of Table 6 for syndicated contracts are generally consistent with those reported in Panel A, although slightly weaker. Differences in Panel B include the lower significance for leverage and *NATRECOG* is not significant in any model and has no significant parameter estimates.

Table 7 presents the results for an analysis of mandatory accounting change clauses equivalent to that presented in Table 6. In Panel A, *NATRECOG* and *CONSULT* are significant in the model and both contribute to distinguishing between contracts with conditional mandatory accounting change clauses and contracts that include all mandatory accounting changes in debt covenant compliance calculations. Additionally, the parameter estimates for *NATRECOG* show that

commitments to engage nationally recognized auditors contribute to distinguishing between contracts that exclude all mandatory accounting changes and contracts that include all mandatory accounting changes in debt covenant compliance calculations. Neither *NATRECOG* or *CONSULT* contribute to distinguishing between contracts with conditional mandatory accounting change clauses and those that exclude all mandatory accounting changes. This is consistent with arguments presented above that high quality auditing plays an important role when mandatory accounting changes are excluded because of need to monitor the reconciliation statements.

Insert table 7 about here

Panel B of Table 7 shows that the model is significant at $p<0.05$ for syndicated contracts only when both *NATRECOG* and *CONSULT* are included. Both variables have parameter estimates that are significant in the predicted direction for this model. Commitments to engage nationally recognized auditors and allow lenders the right to consult the borrower’s auditor distinguish contracts that exclude all mandatory accounting changes and contracts that have conditional mandatory accounting change clauses from contracts that include all mandatory accounting changes.

The binary and multinomial logistic regressions provide support for the hypotheses, although that support is stronger for mandatory than voluntary accounting changes. Detailed contract specification of accounting change clauses is more likely when the borrower also commits in the private debt contract to engage nationally recognized auditors and to allow the lender to consult the auditor. The results are slightly weaker, but still generally supportive of the hypotheses, in a subsample of syndicated contracts. The multinomial logistic regressions show that commitments to engage nationally recognized auditors are more likely to be associated with conditional accounting change clauses than clauses that include all accounting changes. Giving the lender the right to consult the borrower’s auditor is more likely associated with conditional voluntary accounting changes than clauses excluding voluntary accounting changes, and with conditional mandatory accounting change clauses than clauses including all mandatory accounting changes. These differences between voluntary and mandatory accounting changes are consistent with greater monitoring being required when voluntary accounting changes are included and when mandatory accounting changes are excluded.

5. Sensitivity tests

New vs other loans

There are 106 new loans and 65 renegotiated, restated or amended loans in the sample.[17] It is possible that private debt contracts for new loans differ from private debt contracts for renegotiated or renewed loans. Where the lender and borrower have an existing borrowing relationship it is possible that the contract contains fewer and less specific restrictions reflecting the lender's greater knowledge and trust of the borrower. However, renegotiated loans are also possible in circumstances where the borrowing firm has encountered financial difficulties and sought relief from contractual restrictions. Without knowledge of the circumstances surrounding the contract renegotiation, it is difficult to form directional predictions of the differences between the two types of contracts.

The binary logistic regression results reported in Table 4 are not qualitatively affected by the addition of the new loan variable (*NEW*) to the model. However, the new loan variable is significant in the conditional mandatory accounting change regression when both *NATRECOG* and *CONSULT* are in the model. The new loan variable is also significant when added to the multinomial logistic regression model for either or both conditional accounting change clauses (see Table 5). Renewed or renegotiated loans are more likely than new loans to have conditional accounting change clauses than no conditional accounting change clauses. This result is consistent with conditional accounting change clauses being used when borrowers and lenders have more established relationships. The new loan variable is not significant in the multinomial logistic regression models for voluntary and mandatory accounting change flexibility, for which results are reported in Tables 6 and 7.

Largest lenders

Prior studies of accounting changes in private debt (Beatty *et al* 2002) include an indicator variable in the multivariate models to identify contracts where an agent to the contract is one of the three most frequent lenders or agents in the sample. Beatty *et al* report that this variable is

[17] It is not possible to unambiguously distinguish between renegotiated, restated or amended loans from the information in the 10K filing or contract.

insignificant in explaining the presence of a clause excluding either mandatory or voluntary accounting changes from calculations of debt covenant compliance. Despite the lack of significance in the prior study, the approach of identifying the three most common lenders or agents in the sample is also adopted in this study to ensure that the results are not being driven by specific lenders.

The indicator variable for the three most frequent lenders in the sample (*TOP3LEND*) is not significant in the binary logistic regression models or the multinomial logistic regression models for the combined measure of voluntary and mandatory accounting change clauses or the model for the mandatory accounting change clauses. *TOP3LEND* is significant in the multinomial logistic regression model for voluntary accounting change clauses (see Table 6), although the results for *NATRECOG* and *CONSULT* do not change qualitatively. The parameter estimates show that *TOP3LEND* significantly contributes to distinguishing between contracts with clauses excluding all voluntary accounting changes from contracts with clauses that include all voluntary accounting change clauses, and between contracts with conditional voluntary accounting change clauses from contracts with clauses excluding all voluntary accounting changes from debt covenant compliance calculations. Contracts written by the three most frequent lenders are more likely to exclude voluntary accounting changes than to include all voluntary accounting changes or include voluntary accounting changes on conditions. This suggests that results supporting Hypothesis 1 are likely to be stronger in samples of contracts with smaller lenders.

6. Conclusion

The results show that borrowers' commitments to nationally recognized auditors and to allow the lender to consult the borrowers' auditors are positively associated with detailed contract clauses including voluntary and mandatory accounting changes in debt covenant compliance calculations on conditions. These conditions are that lenders have the right to object to voluntary accounting changes, lenders or borrowers have the right to object to mandatory accounting changes, the contract must be renegotiated before any accounting change becomes effective, and that the borrower's auditor must approve the voluntary accounting change. The positive relation between borrowers' commitments to nationally recognized auditors results and conditional accounting change clauses is stronger for mandatory accounting changes than for voluntary accounting

changes. The clause giving lenders the right to consult the borrower's auditor is strongly positively related to both voluntary and mandatory conditional accounting change clauses.

The results are generally robust to sensitivity tests. However, renewed or renegotiated loans are more likely than new loans to have conditional accounting change clauses than no conditional accounting change clauses, and contracts written by the three most frequent lenders are more likely to exclude voluntary accounting changes than to include all voluntary accounting changes or include voluntary accounting changes on conditions.

In summary, the results support the main proposition in this study; that there is a relation between the degree of accounting flexibility borrowers retain in their private debt contracts and their auditing commitments on those contracts. Detailed contract specification of the conditions under which accounting changes affect debt covenant compliance calculations is more likely than simply excluding or including all accounting changes when the borrower commits to engage a nationally recognized auditor and to allow the lender to consult the borrower's auditor. Detailed contract specification of accounting changes allows borrowers to retain accounting flexibility that is unlikely to be used to avoid debt covenant violation or that will cause inadvertent or delayed breach of debt covenants when regulators make changes to GAAP.

Accounting and auditing restrictions are complementary controls in debt contracts. Conditional accounting change clauses require greater monitoring than clauses permitting or prohibiting all accounting changes, and the results show that they are likely to be accompanied in private debt contracts by borrowers' commitments to engage auditors with reputations for being high quality and to allow lenders to discuss the borrowers' affairs with their auditors. The auditing restrictions facilitate monitoring of the borrower's actions and financial performance and position when greater monitoring is required by the use of conditional accounting change clauses.

The results show that future research on the debt covenant hypothesis will benefit from considering the role of the auditor on accounting flexibility in debt contracts. In addition, the results will help inform better modeling of debt contracts and subsequent tests of the relation between accounting and auditing restrictions in debt contracts and interest rates.

Table 1.

Sample Selection

	Observations
Random sample of companies appearing in both *Moody's 1998 Industrial Manual* and on *Compustat* 1998	339
Less companies with no private debt contract listed as an exhibit on most recent 10-K return available on SEC website	*199*
Less companies where private debt contract is not accessible or is incomplete	*69*
Final sample of private debt contracts	**171**

Table 2. Accounting change clauses and auditing commitments frequencies

Voluntary accounting change clause types	Frequency	Percentage
Exclude all voluntary accounting changes	95	55.6
Include voluntary accounting changes if contract renegotiated (conditional voluntary accounting change clause)	20	11.7
Include voluntary accounting changes unless lender objects (conditional voluntary accounting change clause)	7	4.1
Include voluntary accounting changes if borrower's auditor concurs (conditional voluntary accounting change clause)	39	22.8
Include all voluntary accounting changes	10	5.8
Total	*171*	*100.0*

Mandatory accounting change clause types	Frequency	Percentage
Exclude all mandatory accounting changes	25	14.6
Include mandatory accounting changes if contract renegotiated (conditional mandatory accounting change clause)	65	38.0
Include mandatory accounting changes unless borrower or lender objects (conditional mandatory accounting change clause)	13	7.6
Include all mandatory accounting changes	68	39.8
Total	*171*	*100.0*

Commitment to engage nationally recognized auditor	Frequency	Percentage
Commitment	107	62.6
No commitment	64	37.4
Total	*171*	*100.0*

Lender has right to consult borrower's auditor	Frequency	Percentage
Right to consult	108	63.2
No right to consult	63	36.8
Total	*171*	*100.0*

Table 3: Private debt contract and firm descriptive statistics (n = 171)

Panel A: Measures of central tendency and dispersion for dependent and independent variables

Private debt contract characteristics	mean	median	st. dev	min	max
Dependent variables:					
VOLAC	0.39	0.00	0.49	0.00	1.00
MANDAC	0.46	0.00	0.50	0.00	1.00
CONDAC1	0.28	0.00	0.45	0.00	1.00
CONDAC2	0.84	1.00	0.84	0.00	2.00
Hypothesis variables:					
NATRECOG	0.63	1.00	0.48	0.00	1.00
CONSULT	0.63	1.00	0.48	0.00	1.00
Contract control variables:					
SYN	0.88	1.00	0.32	0.00	1.00
UNSEC	0.67	1.00	0.47	0.00	1.00
TERM	4.26	5.00	1.53	1.00	10.00
LOANSIZE	413.54	140.00	890.98	1.00	7500.00
NEW	0.62	1.00	0.49	0.00	1.00
TOP3LEND	0.44	0.00	0.50	0.00	1.00
Borrowing firm control variables:					
TOTAL ASSETS	1660.91	562.15	3633.99	0.00	35064
SIZE[a]	6.24	6.33	1.57	0.74	10.46
LEV[a]	0.61	0.58	0.26	0.10	1.95

[a]Data winsorized to +/- 3 standard deviations of mean

where

VOLAC = 1 if voluntary accounting changes are permitted on specified conditions

MANDAC = 1 if mandatory accounting changes are permitted on specified conditions

CONDAC1 = 1 if both VOLAC = 1 and MANDAC = 1, 0 otherwise

CONDAC2 = 1 if either VOLAC = 1 or MANDAC = 1, 2 if both VOLAC =1 and MANDAC =1, 0 otherwise

NATRECOG = 1 if the debt contract contains a commitment to use a nationally recognized auditor, 0 otherwise

CONSULT = 1 if lender has right to consult borrower's auditor, 0 otherwise

SYN = 1 if more than one lender, 0 otherwise

UNSEC = 1 if loan not secured by assets, 0 otherwise

TERM = contract term in years

LOANSIZE = loan amount in $m

NEW = 1 if new loan, 0 otherwise (e.g., renegotiated, renewed)

TOP3LEND = 1 if lender one of 3 most frequent in sample, 0 otherwise

SIZE = log n total assets

LEV = total liabilities / total assets

Panel B: Spearman correlations (n=171). First value in each cell is the correlation coefficient; the second value (italicised) is the p-value (two-tail significance).

	VOLAC	MANDAC	CONDAC1	CONDAC2	NATRECOG	CONSULT	SYN	UNSEC	TERM	LOANSIZE	NEW	TOP3LEND	SIZE
MANDAC	0.432												
	0.000												
CONDAC1	0.788	0.682											
	0.000	*0.000*											
CONDAC2	0.833	0.855	0.834										
	0.000	*0.000*	*0.000*										
NATRECOG	0.166	0.247	0.241	0.241									
	0.030	*0.001*	*0.001*	*0.002*									
CONSULT	0.232	0.261	0.288	0.287	0.111								
	0.002	*0.001*	*0.000*	*0.000*	*0.149*								
SYN	0.214	0.260	0.187	0.287	0.283	0.024							
	0.005	*0.001*	*0.014*	*0.000*	*0.003*	*0.757*							
UNSEC	0.010	0.036	0.008	0.029	0.288	-0.112	0.277						
	0.899	*0.639*	*0.920*	*0.703*	*0.000*	*0.145*	*0.000*						
TERM	0.054	0.190	0.082	0.151	0.165	0.014	0.336	0.137					
	0.487	*0.013*	*0.284*	*0.049*	*0.031*	*0.860*	*0.000*	*0.073*					
LOANSIZE	0.220	0.150	0.221	0.214	0.170	0.054	0.447	0.398	0.392				
	0.004	*0.050*	*0.004*	*0.005*	*0.026*	*0.485*	*0.000*	*0.000*	*0.000*				
NEW	-0.047	-0.081	0.007	-0.085	0.091	0.076	0.090	0.177	0.058	0.000			
	0.539	*0.292*	*0.932*	*0.266*	*0.234*	*0.322*	*0.242*	*0.021*	*0.452*	*0.995*			
TOP3LEND	-0.008	-0.016	0.017	-0.018	0.205	0.000	0.252	0.342	0.126	0.467	0.070		
	0.917	*0.838*	*0.821*	*0.815*	*0.007*	*1.000*	*0.001*	*0.000*	*0.102*	*0.000*	*0.363*		
SIZE	0.203	0.077	0.194	0.158	0.151	0.002	0.358	0.402	0.263	0.824	0.011	0.471	
	0.008	*0.315*	*0.011*	*0.039*	*0.049*	*0.982*	*0.000*	*0.000*	*0.001*	*0.000*	*0.889*	*0.000*	
LEV	0.077	0.047	0.097	0.068	-0.053	0.137	0.131	-0.226	0.060	0.222	0.003	0.065	0.225
	0.318	*0.545*	*0.209*	*0.376*	*0.487*	*0.074*	*0.088*	*0.003*	*0.437*	*0.003*	*0.972*	*0.396*	*0.003*

Table 4. Binary logistic regression for commitments to nationally recognized auditors, lender's right to consult auditor, and conditional accounting change clauses

Panel A: All contracts (n = 171)

Coefficient (one tail significance)

	Dependent Variable:								
Independent variable (predicted sign):	Voluntary accounting changes permitted unless lender objects or if contract renegotiated or auditor approves (VOLAC)			Mandatory accounting changes permitted unless lender or borrower objects or if contract renegotiated (MANDAC)			Voluntary AND mandatory conditional accounting change clauses (CONDAC1)		
Constant	-5.525	-3.843	-4.434	-3.429	-2.736	-3.275	-6.119	-4.887	-5.757
	(.000)	(.001)	(.000)	(.004)	(.014)	(.005)	(.000)	(.001)	(.000)
NATRECOG	0.544	0.684		0.785	0.903		1.150	1.264	
(+)	(.164)	(.072)		(.038)	(.014)		(.014)	(.005)	
CONSULT (+)	1.065		1.135	1.164		1.238	1.557		1.651
	(.005)		(.003)	(.001)		(.001)	(.001)		(.000)
SYN (+)	1.581	1.594	1.730	2.091	1.937	2.291	1.528	1.514	1.832
	(.059)	(.056)	(.037)	(.012)	(.018)	(.005)	(.170)	(.170)	(.094)
UNSEC (+)	-0.629	-0.751	-0.490	0.019	-0.188	0.222	-0.491	-0.705	-0.266
	(.173)	(.092)	(.270)	(.967)	(.664)	(.607)	(.332)	(.143)	(.580)
TERM (+)	-0.110	-0.107	-0.093	0.112	0.109	0.128	-0.053	-0.046	-0.008
	(.368)	(.375)	(.440)	(.364)	(.362)	(.283)	(.687)	(.722)	(.952)
LOANSIZE (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(.089)	(.127)	(.080)	(.429)	(.466)	(.395)	(.247)	(.315)	(.213)
SIZE (+)	0.448	0.419	0.444	-0.083	-0.055	-0.090	0.359	0.334	0.349
	(.007)	(.006)	(.007)	(.581)	(.710)	(.542)	(.049)	(.041)	(.053)
LEV (+)	-0.344	-0.072	-0.431	0.304	0.471	0.249	0.373	0.505	0.077
	(.692)	(.930)	(.616)	(.706)	(.552)	(.755)	(.699)	(.574)	(.933)
Base % correct[a]	61.4	61.4	61.4	54.4	54.4	54.4	71.9	71.9	71.9
Model % correct	73.1	67.3	70.2	66.1	60.8	67.3	76.0	70.8	73.1
Model significance	.000	.003	.000	.000	.002	.000	.000	.003	.000
Nagelkerke R Square	21.5%	15.8%	20.2%	23.7%	16.7%	20.9%	26.3%	17.0%	21.7%

a. Base % correct is the prediction before including the independent variables.

Panel B: Syndicated contracts (n = 151)
Coefficient (one tail significance)

Independent variable (predicted sign):	Dependent Variable: Voluntary accounting changes permitted unless lender objects or if contract renegotiated or auditor approves (VOLAC)			Mandatory accounting changes permitted unless lender or borrower objects or if contract renegotiated (MANDAC)			Voluntary AND mandatory conditional accounting change clauses (CONDAC1)		
Constant	-2.670	-2.011	-2.366	-1.179	-0.632	-0.856	-4.472	-3.274	-3.715
	(.032)	(.086)	(.049)	(.307)	(.568)	(.443)	(.003)	(.013)	(.007)
NATRECOG (+)	0.722	0.841		0.782	0.890		1.137	1.405	
	(.078)	(.035)		(.043)	(.017)		(.007)	(.003)	
CONSULT (+)	0.993		1.076	1.117		1.187	1.517		1.607
	(.012)		(.006)	(.003)		(.001)	(.001)		(.001)
UNSEC (+)	-0.832	-0.966	-0.650	-0.039	-0.262	0.160	-0.677	-0.903	-0.423
	(.090)	(.043)	(.165)	(.933)	(.556)	(.720)	(.195)	(.070)	(.389)
TERM (+)	-0.221	-0.218	-0.195	0.086	0.081	0.107	-0.098	-0.088	-0.042
	(.088)	(.089)	(.124)	(.490)	(.507)	(.381)	(.467)	(.505)	(.744)
LOANSIZE (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(.074)	(.106)	(.062)	(.435)	(.475)	(.399)	(.254)	(.320)	(.211)
SIZE (+)	0.508	0.485	0.504	-0.075	-0.044	-0.082	0.380	0.361	0.369
	(.003)	(.003)	(.004)	(.623)	(.769)	(.582)	(.040)	(.031)	(.044)
LEV (+)	-0.499	-0.280	-0.616	0.259	0.383	0.232	0.327	0.401	-0.002
	(.589)	(.749)	(.501)	(.757)	(.641)	(.780)	(.743)	(.666)	(.999)
Base % correct[a]	57.6	57.6	57.6	50.3	50.3	50.3	68.9	68.9	68.9
Model % correct	69.5	67.3	67.5	62.9	57.0	64.2	74.2	68.2	69.5
Model significance	.002	.012	.003	.012	.207	.033	.000	.014	.003
Nagelkerke R Square	19.0%	13.8%	16.6%	23.7%	7.3%	11.6%	23.7%	14.1%	17.2%

a. Base % correct is the prediction before including the independent variables.

Where:

VOLAC = 1 if voluntary accounting changes are permitted on specified conditions

MANDAC = 1 if mandatory accounting changes are permitted on specified conditions

CONDAC1 = 1 if both VOLAC = 1 and MANDAC = 1, 0 otherwise

SYN = 1 if more than one lender, 0 otherwise

UNSEC = 1 if loan not secured by assets, 0 otherwise

TERM = contract term in years

LOANSIZE = loan amount in $m

NATRECOG = 1 if the debt contract contains a commitment to use a nationally recognized auditor, 0 otherwise

CONSULT = 1 if lender has the right to consult borrower's auditor, 0 otherwise

SIZE = natural log of total assets

LEV = total liabilities / total assets

Table 5. Multinomial logistic regression for commitments to nationally recognized auditors, lender's right to consult auditor, and conditional accounting change clauses

Panel A: All contracts (n = 171)

	Dependent Variable: Voluntary OR mandatory conditional accounting change clauses (CONDAC2)											
Independent variable (predicted sign):	Likelihood ratio tests: Chi-square statistic (one tail significance)			Parameter estimates: Beta (one tail significance)								
				Neither conditional accounting change clause vs both conditional accounting change clauses			Either conditional accounting change clause vs both conditional accounting change clauses			Either conditional accounting change clause vs neither conditional accounting change clauses		
Constant	19.595	13.496	18.085	5.940	4.572	5.550	3.725	2.534	3.381	-2.215	-1.938	-2.169
	(.000)	(.001)	(.000)	(.000)	(.002)	(.000)	(.039)	(.119)	(.054)	(.075)	(.116)	(.079)
NATRECOG (+)	6.715	9.041		-1.150	-1.280		-1.158	-1.242		-0.007	-0.039	
	(.035)	(.011)		(.022)	(.008)		(.027)	(.015)		(.986)	(.926)	
CONSULT (+)	14.784		17.110	-1.776		-1.868	-1.260		-1.353	0.517		0.515
	(.001)		(.000)	(.000)		(.000)	(.017)		(.009)	(.198)		(.198)
SYN (+)	10.902	10.502	12.764	-2.152	-2.062	-2.453	-0.031	0.004	-0.326	2.122	2.066	2.128
	(.004)	(.005)	(.002)	(.058)	(.066)	(.028)	(.981)	(.997)	(.802)	(.012)	(.015)	(.011)
UNSEC (+)	1.048	2.234	0.379	0.457	0.702	0.231	0.563	0.738	0.333	2.122	0.037	0.012
	(.592)	(.327)	(.827)	(.416)	(.188)	(.666)	(.330)	(.188)	(.543)	(.012)	(.943)	(.838)
TERM (+)	0.520	0.494	0.335	0.021	0.015	-0.024	0.101	0.096	0.055	0.107	0.081	0.079
	(.771)	(.781)	(.846)	(.885)	(.917)	(.868)	(.509)	(.526)	(.710)	(.838)	(.560)	(.569)
LOANSIZE (+)	3.388	2.784	3.630	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000
	(.184)	(.249)	(.163)	(.157)	(.219)	(0.136)	(.851)	(.814)	(.921)	(.297)	(.321)	(.304)
SIZE (+)	3.689	3.967	3.563	-0.306	-0.285	-0.293	-0.380	-0.368	-0.375	-0.074	-0.075	-0.082
	(.158)	(.138)	(.168)	(.120)	(.112)	(.132)	(.074)	(.069)	(.075)	(.671)	(.674)	(.636)
LEV (+)	0.230	0.314	0.123	-0.205	-0.398	0.099	-0.501	-0.573	-0.217	-0.296	-0.175	-0.316
	(.891)	(.855)	(.940)	(.845)	(.685)	(.922)	(.644)	(.579)	(.837)	(.744)	(.847)	(.728)
Model significance	.000	.002	.000									
Nagelkerke R Square	28.5%	20.8%	25.1%									

Panel B: Syndicated contracts (n=151)

	Dependent Variable: Voluntary OR mandatory conditional accounting change clauses (CONDAC2)											
Independent variable (predicted sign):	Likelihood ratio tests: Chi-square statistic (one tail significance)			Parameter estimates: Beta (one tail significance)								
				Neither conditional accounting change clause vs both conditional accounting change clauses			Either conditional accounting change clause vs both conditional accounting change clauses			Either conditional accounting change clause vs neither conditional accounting change clauses		
Constant	6.829 (.033)	3.853 (.146)	4.841 (.089)	3.505 (.028)	2.237 (.118)	2.738 (.063)	3.796 (.024)	2.756 (.073)	3.054 (.052)	0.291 (.826)	0.519 (.698)	0.316 (.809)
NATRECOG (+)	8.296 (.016)	10.540 (.005)		-1.306 (.013)	-1.408 (.005)		-1.343 (.014)	-1.411 (.008)		-0.037 (.931)	-0.003 (.994)	
CONSULT (+)	13.061 (.001)		15.305 (.000)	-1.702 (.001)		-1.789 (.000)	-1.277 (.016)		-1.369 (.009)	0.425 (.303)		0.419 (.307)
UNSEC (+)	1.798 (.407)	3.415 (.181)	0.806 (.668)	0.629 (.281)	0.897 (.107)	0.380 (.491)	0.751 (.209)	0.935 (.108)	0.484 (.390)	0.123 (.824)	0.038 (.994)	0.104 (.844)
TERM (+)	0.610 (.737)	0.526 (.769)	0.154 (.926)	0.113 (.453)	0.103 (.482)	0.057 (.696)	0.03 (.552)	0.081 (.601)	0.037 (.808)	-0.020 (.888)	-0.023 (.875)	-0.020 (.889)
LOANSIZE (+)	3.511 (.173)	2.930 (.231)	3.792 (.150)	0.000 (.151)	0.000 (.212)	0.000 (.124)	0.000 (.828)	0.000 (.796)	0.000 (.911)	-0.001 (.279)	0.000 (.302)	0.000 (.285)
SIZE (+)	4.031 (.133)	4.441 (.109)	3.858 (.145)	-0.341 (.088)	-0.326 (.076)	-0.328 (.098)	-0.385 (.073)	-0.368 (.066)	-0.378 (.076)	-0.044 (.806)	-0.042 (.819)	-0.050 (.778)
LEV (+)	0.276 (.871)	0.298 (.861)	0.194 (.908)	-0.108 (.921)	-0.210 (.838)	0.223 (.832)	-0.521 (.642)	-0.568 (.596)	-0.200 (.854)	-0.413 (.668)	-0.0358 (.710)	-0.424 (.661)
Model significance	.003	.069	.016									
Nagelkerke R Square	22.1%	13.9%	17.0%									

Where:

VOLAC = 1 if voluntary accounting changes are permitted on specified conditions

MANDAC = 1 if mandatory accounting changes are permitted on specified conditions

CONDAC1 = 1 if both VOLAC = 1 and MANDAC = 1, 0 otherwise

SYN = 1 if more than one lender, 0 otherwise

UNSEC = 1 if loan not secured by assets, 0 otherwise

TERM = contract term in years

LOANSIZE = loan amount in $m

NATRECOG = 1 if the debt contract contains a commitment to use a nationally recognized auditor, 0 otherwise

CONSULT = 1 if lender has the right to consult borrower's auditor, 0 otherwise

SIZE = natural log of total assets

LEV = total liabilities / total assets

Table 6. Multinomial logistic regression for commitments to nationally recognized auditors, lender's right to consult auditor, and voluntary accounting change flexibility
Panel A: All contracts (n = 171)

	Dependent Variable: Level of flexibility over voluntary accounting changes (1 = all changes excluded, 2 = changes on conditions, 3 = all changes included)											
Independent variable (predicted sign):	Likelihood ratio tests: Chi-square statistic (one tail significance)			Parameter estimates: Beta (one tail significance)								
				Exclude all voluntary accounting changes vs include all voluntary accounting changes			Conditional voluntary accounting changes vs include all voluntary accounting changes			Conditional voluntary accounting changes vs exclude all voluntary accounting changes		
Constant	16.813	14.087	16.672	2.742	3.044	2.934	-1.634	-0.685	-1.362	-4.376	-3.729	-4.296
	(.000)	(.001)	(.000)	(.131)	(.083)	(.108)	(.428)	(.728)	(.508)	(.000)	(.001)	(.000)
NATRECOG (+)	3.372	5.232		0.940	1.061		1.400	1.642		0.460	0.581	
	(.185)	(.073)		(.231)	(.167)		(.087)	(.039)		(.248)	(.134)	
CONSULT (+)	8.021		9.882	0.267		0.475	1.287		1.553	1.020		1.078
	(.018)		(.007)	(.734)		(.527)	(.114)		(.046)	(.008)		(.005)
SYN (+)	4.943	5.120	6.337	0.838	0.871	1.033	2.359	2.389	2.679	1.521	1.518	1.646
	(.084)	(.077)	(.042)	(.484)	(.462)	(.385)	(.089)	(.080)	(.052)	(.072)	(.072)	(.049)
UNSEC (+)	2.088	3.051	1.318	-0.394	-0.374	-0.036	-1.017	-1.109	-0.543	-0.622	-0.735	-0.507
	(.352)	(.218)	(.517)	(.723)	(.733)	(.974)	(.380)	(.328)	(.626)	(.181)	(.102)	(.259)
TERM (+)	0.910	0.937	0.692	-0.056	-0.075	-0.040	-0.165	-0.181	-0.136	-0.110	-0.105	-0.095
	(.635)	(.626)	(.707)	(.839)	(.778)	(.886)	(.559)	(.512)	(.637)	(.376)	(.389)	(.433)
LOANSIZE (+)	3.443	2.782	3.780	0.000	0.000	0.000	-0.001	0.000	-0.001	0.000	0.000	0.000
	(.179)	(.249)	(.151)	(.758)	(.873)	(.733)	(.156)	(.216)	(.135)	(.144)	(.176)	(.132)
SIZE (+)	11.254	12.024	11.329	-0.638	-0.694	-0.670	-0.157	-0.235	-0.190	0.481	0.458	0.480
	(.004)	(.002)	(.003)	(.063)	(.037)	(.057)	(.662)	(.494)	(.603)	(.005)	(.004)	(.005)
LEV (+)	5.544	6.155	5.421	5.603	5.861	5.426	5.019	5.534	4.749	-0.584	-0.327	-0.677
	(.063)	(.046)	(.066)	(.036)	(.025)	(.039)	(.065)	(.037)	(.075)	(.510)	(.699)	(.441)
Model significance	.000	.002	.000									
Nagelkerke R Square	26.7%	22.1%	24.8%									

Panel B: Syndicated contracts (n=151)

	Dependent Variable: Level of flexibility over voluntary accounting changes (1 = all changes excluded, 2 = changes on conditions, 3 = all changes included)											
Independent variable (predicted sign):	Likelihood ratio tests: Chi-square statistic (one tail significance)			Parameter estimates: Beta (one tail significance)								
				Exclude all voluntary accounting changes vs include all voluntary accounting changes			Conditional voluntary accounting changes vs include all voluntary accounting changes			Conditional voluntary accounting changes vs exclude all voluntary accounting changes		
Constant	5.119	3.717	4.473	3.208	3.231	3.276	0.694	1.363	1.044	-2.514	-1.868	-2.232
	(.077)	(.156)	(.107)	(.203)	(.190)	(.198)	(.793)	(.595)	(.692)	(.047)	(.118)	(.068)
NATRECOG (+)	4.033	5.627		0.760	0.803		1.423	1.574		0.663	0.771	
	(.133)	(.060)		(.361)	(.320)		(.102)	(.061)		(.112)	(.058)	
CONSULT (+)	6.546		8.140	-0.082		0.131	0.906		1.192	0.988		1.061
	(.038)		(.017)	(.922)		(.870)	(.298)		(.149)	(.013)		(.007)
UNSEC (+)	3.121	4.403	2.041	-0.364	-0.356	-0.011	-1.188	-1.309	-0.674	-0.825	-0.954	-0.663
	(.210)	(.111)	(.360)	(.789)	(.792)	(.993)	(.390)	(.340)	(.606)	(.096)	(.047)	(.162)
TERM (+)	3.734	3.726	3.139	-0.233	-0.236	-0.223	-0.445	-0.444	-0.411	-0.213	-0.209	-0.188
	(.155)	(.155)	(.208)	(.471)	(.462)	(.490)	(.180)	(.177)	(.212)	(.104)	(.109)	(.143)
LOANSIZE (+)	4.265	3.743	4.868	0.000	0.000	0.000	-0.001	-0.001	-0.001	0.000	0.000	0.000
	(.119)	(.154)	(.088)	(.476)	(.478)	(.438)	(.083)	(.102)	(.064)	(.147)	(.182)	(.124)
SIZE (+)	10.111	10.445	9.972	-0.417	-0.434	-0.422	0.101	0.063	-0.001	0.518	0.497	0.518
	(.006)	(.005)	(.007)	(.298)	(.271)	(.296)	(.806)	(.876)	(.064)	(.003)	(.003)	(.003)
LEV (+)	4.703	4.671	4.965	5.633	5.676	5.563	4.877	5.141	4.676	-0.756	-0.534	-0.887
	(.095)	(.097)	(.084)	(.052)	(.047)	(.050)	(.097)	(.075)	(.103)	(.423)	(.553)	(.343)
Model significance	.005	.015	.006									
Nagelkerke R Square	23.0%	18.6%	20.3%									

Where:

NATRECOG = 1 if the debt contract contains a commitment to use a nationally recognized auditor, 0 otherwise

CONSULT = 1 if lender has the right to consult borrower's auditor, 0 otherwise

SYN = 1 if more than one lender, 0 otherwise

UNSEC = 1 if loan not secured by assets, 0 otherwise

TERM = contract term in years

LOANSIZE = loan amount in $m

SIZE = natural log of total assets

LEV = total liabilities / total assets

Table 7. Multinomial logistic regression for commitments to nationally recognized auditors, lender's right to consult auditor, and mandatory accounting change flexibility
Panel A: All contracts (n = 171)

	Dependent Variable: Level of flexibility over mandatory accounting changes (1 = all changes excluded, 2 = changes on conditions, 3 = all changes included)											
Independent variable (predicted sign):	Likelihood ratio tests: Chi-square statistic (one tail significance)			Parameter estimates: Beta (one tail significance)								
				Exclude all mandatory accounting changes vs include all mandatory accounting changes			Conditional mandatory accounting changes vs include all mandatory accounting changes			Conditional mandatory accounting changes vs exclude all mandatory accounting changes		
Constant	11.278	7.570	9.813	-3.473	-2.949	-3.042	-3.546	-2.647	-3.266	-0.073	0.301	-0.225
	(.004)	(.023)	(.007)	(.030)	(.057)	(.050)	(.005)	(.024)	(.008)	(.966)	(.856)	(.895)
NATRECOG	13.895	16.783		1.756	1.813		1.305	1.397		-0.451	-0.417	
(+)	(.001)	(.000)		(.004)	(.003)		(.002)	(.001)		(.457)	(.490)	
CONSULT	13.663		16.551	0.927		1.006	1.462		1.539	0.536		0.533
(+)	(.001)		(.000)	(.084)		(.052)	(.000)		(.000)	(.304)		(.305)
SYN (+)	12.752	11.253	17.150	2.065	1.936	2.342	2.543	2.307	2.762	0.479	0.371	0.419
	(.002)	(.004)	(.000)	(.079)	(.099)	(.041)	(.003)	(.006)	(.001)	(.717)	(.779)	(.749)
UNSEC (+)	1.044	1.583	0.322	-0.700	-0.787	-0.167	-0.269	-0.464	0.161	0.431	0.324	0.329
	(.593)	(.453)	(.851)	(.306)	(.239)	(.793)	(.609)	(.352)	(.739)	(.484)	(.594)	(.585)
TERM (+)	1.461	1.524	1.385	-0.132	-0.145	-0.081	0.068	0.060	0.098	0.200	0.205	0.179
	(.482)	(.467)	(.505)	(.466)	(.420)	(.638)	(.625)	(.655)	(.463)	(.233)	(.222)	(.275)
LOANSIZE	1.299	1.431	1.139	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(+)	(.522)	(.489)	(.566)	(.467)	(.376)	(.569)	(.711)	(.773)	(.631)	(.280)	(.275)	(.308)
SIZE (+)	0.270	0.158	0.390	0.013	0.010	-0.011	-0.073	-0.054	0.000	0.000	-0.064	-0.085
	(.874)	(.924)	(.823)	(.953)	(.963)	(.960)	(.666)	(.746)	(.631)	(.280)	(.750)	(.682)
LEV (+)	0.135	0.375	0.138	-0.234	0.083	-0.257	0.172	0.509	0.156	0.406	0.425	0.413
	(.935)	(.829)	(.933)	(.847)	(.946)	(.828)	(.850)	(.569)	(.860)	(.721)	(.707)	(.715)
Model significance	.000	.000	.000									
Nagelkerke R Square	31.6%	24.6%	24.5%									

Panel B: Syndicated contracts (n=151)

	Dependent Variable: Level of flexibility over mandatory accounting changes (1 = all changes excluded, 2 = changes on conditions, 3 = all changes included)											
Independent variable (predicted sign):	Likelihood ratio tests: Chi-square statistic (one tail significance)			Parameter estimates: Beta (one tail significance)								
				Exclude all mandatory accounting changes vs include all mandatory accounting changes			Conditional mandatory accounting changes vs include all mandatory accounting changes			Conditional mandatory accounting changes vs exclude all mandatory accounting changes		
Constant	1.159	0.515	0.495	-1.718	-1.133	-1.108	-0.934	-0.208	-0.494	0.783	0.925	0.614
	(.560)	(.773)	(.781)	(.308)	(.486)	(.490)	(.467)	(.865)	(.690)	(.629)	(.555)	(.693)
NATRECOG	11.401	14.028		1.575	1.628		1.274	1.357		-0.301	-0.271	
(+)	(.003)	(.001)		(.012)	(.008)		(.003)	(.001)		(.618)	(.653)	
CONSULT	13.737		16.364	1.147		1.198	1.484		1.550	0.337		0.351
(+)	(.001)		(.000)	(.040)		(.027)	(.000)		(.000)	(.531)		(.513)
UNSEC (+)	0.392	1.172	0.122	-0.440	-0.628	0.008	-0.236	-0.492	0.158	0.204	0.136	0.0150
	(.822)	(.557)	(.941)	(.540)	(.369)	(.991)	(.666)	(.341)	(.755)	(.748)	(.828)	(.810)
TERM (+)	1.232	1.325	1.070	-0.151	-0.168	-0.099	0.034	0.022	0.068	0.185	0.191	0.168
	(.540)	(.516)	(.586)	(.413)	(.356)	(.579)	(.815)	(.871)	(.622)	(.272)	(.259)	(.312)
LOANSIZE	1.099	1.231	1.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(+)	(.577)	(.540)	(.598)	(542)	(.427)	(.628)	(.690)	(.766)	(.618)	(.315)	(.304)	(.332)
SIZE (+)	0.224	0.123	0.320	0.009	0.019	-0.013	-0.068	-0.044	-0.088	-0.078	-0.062	-0.075
	(.894)	(.940)	(.852)	(.967)	(.933)	(.951)	(.693)	(.800)	(.592)	(.708)	(.759)	(.719)
LEV (+)	0.064	0.310	0.096	0.164	0.420	0.190	0.242	0.520	0.292	0.078	0.099	0.103
	(.969)	(.857)	(.953)	(.898)	(.742)	(.880)	(.801)	(.584)	(.757)	(.946)	(.931)	(.929)
Model significance	.004	.116	.061									
Nagelkerke R Square	21.9%	13.0%	14.5%									

Where:

VOLAC = 1 if voluntary accounting changes are permitted on specified conditions

MANDAC = 1 if mandatory accounting changes are permitted on specified conditions

CONDAC1 = 1 if both VOLAC = 1 and MANDAC = 1, 0 otherwise

SYN = 1 if more than one lender, 0 otherwise

UNSEC = 1 if loan not secured by assets, 0 otherwise

TERM = contract term in years

LOANSIZE = loan amount in $m

NATRECOG = 1 if the debt contract contains a commitment to use a nationally recognized auditor, 0 otherwise

CONSULT = 1 if lender has the right to consult borrower's auditor, 0 otherwise

SIZE = natural log of total assets

LEV = total liabilities / total assets

Appendix 1

Examples of clauses restricting accounting and auditing in private debt contracts

Clauses restricting accounting and auditing can occur in the ‘Definitions’ section or the covenants section.

Contracts typically contain more than one clause. The contract is classified according to the most restrictive clause.

No voluntary accounting changes allowed

Mandatory accounting changes allowed after lender /borrower approval

"GAAP" shall mean gaap applied on a basis consistent with those which, in accordance with section 1.02(a) hereof, are to be used in making the calculations for purposes of determining compliance with this agreement. Section 1.02(a): Except as otherwise expressly provided herein, (i) all accounting terms used herein shall be interpreted, (ii) all financial statements and certificates and reports as to financial matters required to be delivered to the lenders hereunder shall (unless otherwise disclosed to the lenders in writing at the time of delivery thereof in the manner described in subsection (b) below) be prepared and (iii) all calculations made for the purposes of determining compliance with this agreement shall (except as otherwise expressly provided herein) be made in accordance with or by application of gaap applied on a basis consistent with those used in the preparation of the most recent financial statements furnished to the lenders hereunder (or, prior to the delivery of the first financial statements under section 9.01 hereof, the audited financial statements of February 1, 1997, referred to in section 8.02 hereof) unless (x) the company shall notify the lenders of its objection thereto at the time of delivery of any financial statements pursuant to section 9.01 hereof or (y) the majority lenders shall notify the company (through the administrative agent) of their objection within 30 days after the delivery of such financial statements, in either of which events such interpretations, statements, certificates, reports and calculations shall be made in accordance with, or by application of, gaap on a basis consistent with those used in the preparation of the most recent financial statements as to which no such objection shall have been made (or, prior to the delivery of the first financial statements under section 9.01 hereof, the audited financial statements as at February 1 1997, referred to in section 8.02 hereof). Section 1.02(b): the company shall deliver to the lenders at the same time as the delivery of any annual or quarterly financial statement under section 9.01 hereof (i) a description in reasonable detail of any material variation between the application of accounting principles employed in the preparation of such statement and the application of accounting principles employed in the preparation of the next preceding annual or quarterly annual financial statements as to which no objection has been made in accordance with the last section of paragraph (a) above and (ii) reasonable estimates of the difference between such statements arising as a consequence thereof.

Voluntary accounting changes allowed without conditions

Mandatory accounting changes allowed after lender/borrower approval

Unless otherwise specified herein, all accounting terms used herein shall be interpreted, all determinations with respect to accounting matters hereunder shall be made, and all financial statements and certificates and reports as to financial matters required to be delivered hereunder shall be prepared, in accordance with GAAP; provided that if any change in GAAP in itself materially affects the calculation of any financial covenant in this agreement, the borrowers may by notice to the

banks, or the banks may by notice to the borrower, require that such covenant thereafter be calculated in accordance with GAAP as in effect, and applied by the borrowers, immediately before such change in GAAP occurs. If such notice is given, the compliance certificates delivered pursuant to section 7.4(c) after such change occurs shall be accompanied by reconciliations of the difference between the calculation set forth therein and a calculation made in accordance with GAAP as in effect from time to time after such change occurs.

Voluntary accounting changes allowed after lender approval

Mandatory accounting changes allowed after contract renegotiation

The company shall deliver to the lenders at the same time as the delivery of any annual or quarterly financial statement under section 9.1 hereof (i) a description in reasonable detail of any material variation between the application of accounting principles employed in the preparation of the next preceding annual or quarterly financial statements as to which no objection has been made in accordance with the last sentence of subsection (a) above and (ii) reasonable estimates of the difference between such statements arising as a consequence thereof.,... If after the date of this agreement, there shall occur any change in GAAP and such change shall result in a change in the method of calculation of any financial covenant, standard or term found in this agreement, either the company or the required lenders may by notice to the other lenders and the company, respectively, require that the lenders and the borrower negotiate in good faith to amend such covenant, standard or term so as equitably to reflect such change in GAAP, with the desired result being that the criteria for evaluating the financial condition of the obligors shall be the same as if such change had not been made.

Voluntary accounting changes allowed after contract renegotiation

Mandatory accounting changes allowed after contract renegotiation

Except as otherwise expressly provided herein, all items of an accounting or financial nature shall be construed in accordance with GAAP, as in effect from time to time; provided that, if the company notifies the administrative agent that the company requests an amendment to any provision hereof to eliminate the effect of any change occurring after the date hereof in GAAP or in the application thereof on the operation of such provision (or if the Administrative agent notifies the company that the required lenders request an amendment to any provision hereof for such purpose), regardless of whether any such notice is given before or after such change in GAAP or in the application thereof, then such provision shall be interpreted on the basis of GAAP as in effect and applied immediately before such change shall have become effective until such notice shall have been withdrawn or such provision amended in accordance herewith.

No voluntary accounting changes allowed

Mandatory accounting changes allowed without conditions

The company shall not, and shall not suffer or permit any subsidiary to, make any significant change in accounting treatment or reporting practices, except as required by GAAP, or change the fiscal year of the company or of any subsidiary.

Voluntary accounting changes allowed without conditions

Mandatory accounting changes allowed without conditions

"GAAP" means generally accepted accounting principles set forth from time to time in the opinions and pronouncements of the Accounting Principles Board and the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board

(or agencies with similar functions of comparable stature and authority within the US accounting profession), which are applicable to the circumstances as of the date of determination.

Voluntary accounting changes allowed without conditions

No mandatory accounting changes allowed

"GAAP" gaap set forth in the opinions and pronouncements of the APB of the AICPA and statements and pronouncements of the FASB or in such other statements by such other entity as may be approved by a significant segment of the accounting profession, which are applicable to the circumstances as of the signing date.

No commitment to nationally recognized auditor

(annual reports) prepared by certified public accountant acceptable to the lenders with such accountant giving an unqualified opinion as to all consolidated statements together with the management letter delivered by the cpa.

Commitment to nationally recognized auditor

Voluntary accounting changes allowed after approval by borrower’s auditor

(annual reports) reported on without a 'going concern' or like qualification or exception, or qualification indicating that the scope of the audit was inadequate to permit such independent cpas to certify such financial statements without such qualification by Arthur Andersen & Co. or another firm of independent cpas of nationally recognized standing....all such financial statements to be complete and correct in all material respects and to be prepared in reasonable detail and in accordance with GAAP applied consistently throughout the periods reflected therein (except as approved by such accountants.. and disclosed therein).

Lender has right to consult the borrower’s auditor

.. To discuss the borrower's financial matters with its officer and independent public accountant (and the borrower hereby authorizes such independent public accountant to discuss the borrower's financial matters with each managing agent or its representatives whether or not any representative of the borrower is present) and to examine (and at the borrower's expense, photocopy extracts from) any of its books or other corporate records. The borrower shall pay any fees of such independent public accountant incurred in connection with any managing agent's exercise of its rights pursuant to this section

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