

Contracting on Mandatory Changes to GAAP: New Practice and Its Determinants

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Abstract: We study the determinants of debt-contracting practices with respect to mandatory accounting changes during the period 1996-2004. Over this period, the syndicated loan market and the secondary market for private debt experienced rapid development that potentially altered contracting needs. We find that the practice of contractually excluding mandatory GAAP changes is being replaced by the new practice of giving parties an option to “freeze” GAAP at any point in time. We argue that this practice reduces renegotiation costs and limits wealth transfers associated with mandatory changes when loan ownership is dispersed and lending relationships are absent. We find evidence that the new practice is explained by multi-lender nature of credit agreements. We also find that contracts anticipate wealth transfers and/or renegotiation costs of frequently forthcoming accounting standards by restricting their impact on covenants.

Keywords: Debt contracting; Accounting change; Syndicated lending market; Private credit agreements.

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1. Introduction

Generally accepted accounting principles (GAAP) serve as a foundation for contracting on accounting information (Leftwich 1983). When contracting and monitoring are costly, even ‘cosmetic’ changes in GAAP can have economic consequences, potentially transferring wealth among the contracting parties (Leftwich 1981; Holthausen and Leftwich 1983; Lys 1984) . To date, however, we know little about how contracts evolved to accommodate GAAP changes and whether contracting costs (e.g., renegotiation costs) and potential wealth transfers affect the choice of contracting practices. We study contracting practices with respect to changes in GAAP and the determinants of these practices in a sample of 500 private credit agreements originated over the period 1996-2004. Knowledge of how contracts anticipate and accommodate accounting changes is important in understanding the economic consequences of an accounting change (Watts and Zimmerman 1986).

We identify three common contracting practices, two of which are in line with prior research: “*frozen*” GAAP practice excludes all mandated accounting changes after the contract is in place; in contrast, “*rolling*” GAAP incorporates all such changes; more importantly, we identify a new and increasingly popular contracting practice, which is a hybrid between *rolling* and *frozen* GAAP. This practice gives the lenders and the borrower a “*mutual-option-to-freeze*” GAAP (or briefly “*mutual option*”) at any point in time. In this case, covenants are evaluated based on GAAP in effect immediately before the option to freeze is exercised.

Our analysis is in part motivated by the changes in private lending markets that took place over the past decades. Early lending arrangements used to involve one lender and one borrower in a relationship-based deal retained by the originating bank. Today, loans commonly involve a syndicate of multiple lenders, are traded in an active secondary market, and are widely held by non-bank financial institutions, such as hedge funds, with little or no relationship with

the borrower (Taylor and Sansone 2007). These changes in the market have increased the similarity between private and public debt markets and thus are likely to alter the needs with respect to contracting on accounting information. Specifically, the increase in dispersion of private debt ownership weakens incentives to monitor the borrower. This coupled with the associated lack of relationships among borrower and lenders makes it costlier to renegotiate accounting covenants and increases the likelihood of one party behaving opportunistically. Renegotiation costs are an important factor considered by the contracting parties (e.g., LSTA Guide, p. 512) and as GAAP changes are relatively frequent, these costs can significantly affect contracting practice *ex ante*.

To the extent future changes in GAAP are unforeseen contingencies, debt contracts can be viewed as incomplete. Specifically, due to difficulties in describing all conceivable future GAAP changes, contracting parties must limit to a contract that does not explicitly mention how specific future changes are treated. The core prediction of the incomplete contracting literature is that writing a contract, *ex ante*, should achieve the right balance of power among the parties to this contract *ex post*, having in mind how these parties enter the renegotiations upon future unforeseen contingencies (Hart 1995). Voluntary changes in accounting principles, for example, can be used opportunistically (Watts and Zimmerman 1986) and thus control over contractual treatment of these changes is almost always allocated to the lenders (see Appendix A). Our analysis, however, focuses on mandatory changes imposed by accounting standard setters. Mandatory changes can improve (or worsen) the contracting environment, lead to technical default and restrictions on managerial actions, or render accounting-based covenants ineffective. The bargaining power over mandatory changes is more balanced among the contracting parties than for voluntary changes but still depends on the *ex ante* choice of contracting practice. Under frozen GAAP and mutual-option-to-freeze, lenders have an advantage in renegotiation as they

can impose costs of double bookkeeping on the borrower. Contrary to this, borrowers generally have more power under rolling GAAP as they have some discretion as to how and when they implement GAAP changes. Moreover, in the absence of relationship lending, borrowers can impose agency costs of loosening covenants on lenders, while the lenders will generally waive technical covenant violations resulting from GAAP changes without asking a lot in exchange.

We find that the use of the mutual-option-to-freeze GAAP increases from minor in the mid-nineties to being the predominant choice within a ten year period, while the opposite is true for frozen GAAP. In contrast, early evidence from debt contracts indicates that rolling GAAP was at that time the prevailing contracting practice (Leftwich 1981). The only recent popularity of mutual option can explain why prior literature does not document the use of mutual-option-to-freeze. It is unlikely to be a mere coincidence that the increase in the application of the mutual-option-to-freeze occurs simultaneously with expansion in the syndicated loan markets. Mutual-option-to-freeze allocates ex post renegotiation power to lenders in a similar way as frozen GAAP but allows both lenders and borrower to avoid a costly renegotiation process when both view changes in GAAP as desirable or when the change in GAAP is immaterial in which case the contract adhere to rolling GAAP. We provide evidence that the dispersion of ownership associated with the lack of close bank-lender relationships explains the use of mutual option in a cross-section of debt contracts.

We also investigate other determinants that potentially affect the choice of contracting practices. We test the hypothesis that anticipated future GAAP changes significantly affect the choice of contracting practice (Fogelson 1978). We find that the number of upcoming changes to accounting standards is positively related to the probability of using mutual option to freeze, which suggests that contracting parties anticipate potential wealth transfers caused by mandatory

changes and allocate renegotiation power ex ante, consistent with the incomplete contracting framework.

Finally, we find that lender-level characteristics, such as portfolio size, average maturity, and the use of covenants are significantly related to the choice of accounting practice, suggesting that banks have preferences for contracting practices. The evidence is consistent with rolling GAAP being particularly costly to lenders because accounting changes potentially impair (or require costly renegotiations for) the majority of loans in their portfolio simultaneously. We also find that lead arrangers that own widely held loans and lack relationships with other borrowers are more likely to use the mutual option or frozen GAAP, consistent with evidence at the contract-level.

Following Beatty et al. (2002) who find the cost of debt is significantly lower when either voluntary or mandatory changes are contractually excluded, we examine whether mutual-option-to-freeze is associated with the cost of debt financing and also re-examine their findings. Since endogeneity in the choice of contracting practice is an important issue in this context, besides relying on OLS regressions, we control for the self-selection problem using a two stage approach based on Heckman (1979), as well as by using instrumental variables approach. The choice of instruments presents the biggest hurdle in this context as firm- and contract-specific factors are endogenous. We identify the effect by exploiting arguably exogenous variation in lead-arranger characteristics. Such characteristics are correlated with the contracting practices but should not directly influence the cost of debt in a competitive debt market beyond the firm-level risk characteristics.

In line with Beatty et al. (2002), we find evidence that exclusion of mandatory changes reduces the cost of debt. The mutual-option-to-freeze and frozen GAAP are associated with credit spreads (fees) that are on average 9 (5) to 88 (19) basis points lower, depending on the

estimation method used, as compared to rolling GAAP. Moreover, mutual-option-to-freeze seems to have a stronger association with the spreads and fees than frozen GAAP. We argue that lower spreads and fees for mutual-option-to-freeze and frozen GAAP take place because these practices limit renegotiation costs (a lender that relies on rolling GAAP in many contracts can face a considerable risk to incur high renegotiation costs) and shift renegotiation power to lenders following a mandatory change (as compared to rolling GAAP). Lower spreads are a way to compensate the borrowers for such outcomes.

We make several contributions to the literature. First, we identify an emerging contracting practice with respect to mandatory changes in accounting principles (viz, the mutual-option-to-freeze GAAP), and provide evidence that this practice originates in response to increased dispersion in private debt ownership. Second, we provide evidence on the determinants of the choice of frozen and mutual-option-to-freeze GAAP over rolling GAAP by documenting that proxies for ownership dispersion are among the strongest determinants of this choice. Third, we extend the earlier contribution by Beatty et al. (2002) who, based on an earlier sample period, document that exclusion of either voluntary or mandatory changes in GAAP from credit agreements lowers the cost of debt. We find a similar result with respect to mutual-option-to-freeze GAAP and also replicate their result with respect to exclusion of mandatory changes (frozen GAAP) despite the recent changes in the private debt market.

Finally, the narrowing gap between syndicated loans and public debt could affect the use of accounting information in this market. Begley and Freedman (2004) find a steady decline in accounting use in a sample of public debt contracts and argue that financial statements are no longer suitable for debt contracting due to changes in accounting standards. There is no existing evidence on whether the practice of contracting on accounting information has evolved in private credit markets. We find that 98% of our credit agreements explicitly include a definition of

GAAP and contract on future accounting changes, which indicates broad use of accounting in private lending agreements originated during the period 1996-2004.

The remainder of the paper is organized as follows: Section 2 describes recent developments in the private credit market, how ex ante contracting practice allocate ex post negotiation power after mandatory accounting changes, and our hypotheses. Section 3 describes the sample selection procedure and provides descriptive statistics. Section 4 describes the contracting practice and investigates its determinants. Section 5 reexamines Beatty et al.'s (2002) results with respect to contracting practices and credit spread. Section 6 concludes our study.

2. Background and hypotheses

In this section, we discuss the recent changes in private debt markets and how they increase the complexity of ex post renegotiation following a GAAP change. Subsequently, we discuss how the choice of contracting practice allows lenders and borrowers to allocate renegotiation power ex ante. Finally, we state our empirical predictions.

2.1 Private debt market developments and the increased ownership complexity

The market for private loans has grown exponentially over the past decades and growth in syndicated loans dominated that of non-syndicated loans (Taylor and Sansone 2007).¹ The successful development of the syndicated loan market has been spurred by transparency, standardization of contracts, and increased liquidity in secondary loan markets, which have attracted financial institutions other than banks (e.g., investment banks, insurance companies, mutual funds) who started to carry loans in their portfolios. Whereas only two decades ago most private loans classified as relationship-based, with both parties investing in development of a close relationship, current syndicated loans are *transaction loans*, i.e., based on arm's length

¹The entire corporate credit market grew over the same period. However, the loan market grew at double the rate of the bond market from 1994 to 2005 (Taylor and Sansone 2007, p. 25).

transactions that are similar in many respects to public debt issuance (Boot and Thakor 2000; Dennis and Mullineaux 1999).

Although, recent developments in the syndicated loan market are beneficial in terms of risk-sharing, liquidity, and providing borrowers access to multiple sources of financing, they also present challenges in terms of contracting. A syndicated loan (by definition) is a loan provided by a group of lenders usually arranged and administered by an agent whose responsibilities include monitoring and the transmission of information to other owners. Such loans are more complex in terms of ownership and voting rights as well as in terms of relationships between the contracting parties, as the deals often involve dozens, and sometimes even hundreds, of lenders as well as multiple credit facilities with different owners. The complexity of the ownership varies with its dispersion and further increases when a syndicated loan or its portion is being sold in the secondary market (which rapidly grew and became established over our sample period).

2.2 Changes in GAAP and the need for future renegotiation

Financial covenants are frequently used in corporate credit agreements to restrict opportunistic actions by the borrower (Jensen and Meckling 1976). Covenants typically rely on accounting information in general purpose financial statements (Leftwich 1983; Smith and Warner 1979; John and Kalay 1982)² and such financial statements must be prepared in compliance with GAAP in effect at the end of the reporting period. Changes in accounting principles can significantly alter the tightness and optimality of accounting-based covenants or can result in wealth transfers between the contracting parties (Holthausen and Leftwich 1983).

Contractual incompleteness with respect to GAAP changes implies that future renegotiations of covenants (taking place as GAAP changes) are likely to make efficiency gains

²General Purpose Financial Statements are prepared to meet the needs of *all* financial statement users as opposed to meeting the needs of only a particular group such as investors, creditors, management, or regulatory bodies.

possible. The total surplus to be gained from a renegotiation is divided between the borrower and the lenders creating economic incentives to renegotiate the contract. Thus, the renegotiations will occur every time there is sufficient surplus, regardless of whether frozen or rolling GAAP was contracted on. The choice of contracting practice, however, is likely to depend on the anticipated complexity of future renegotiations and thus on the ownership structure. The two related considerations are *ex post* renegotiation costs and *ex ante* allocation of renegotiation power, discussed next.

2.2.1 Renegotiation costs

The renegotiation costs are generally incurred by all contracting parties. Borrower's costs include the costs of convincing lenders that a breach associated with a change in GAAP is not indicative of a change in the underlying credit risk, managers' time, fees to lawyers, accountants, and possibly to lenders. Lenders' costs include assessing whether the breach is indeed due to a change in GAAP or indicative of an increased credit risk and, if the loan is syndicated, communicating information and agreeing with other syndicate-members on appropriate actions (e.g., meetings, technical assistance, and legal fees).

When renegotiation costs are high, contracts are expected to use a practice that minimizes the need to renegotiate when GAAP changes. Use of frozen GAAP or the mutual option is expected here as imply lower renegotiation costs than under rolling GAAP because the contract can easily continue without renegotiation (under old GAAP) until a better alternative is agreed on. In contrast, under rolling GAAP a technical breach of covenants will require immediate renegotiation or repayment of the loan. Furthermore, mutual option is associated with lower renegotiation costs than frozen GAAP because formal negotiations and contract amendments are not needed when the borrower and lenders agree that the new practice is desirable or when changes are immaterial.

2.2.2 Renegotiation power

The *ex ante* contractual treatment of accounting changes can alter the negotiation power to prevent wealth transfers following a GAAP change. Specifically, under frozen GAAP, lenders have more *ex post* power to bargain over changes in GAAP as failure to reach an agreement imposes costs of double book-keeping on the borrower. In contrast, rolling GAAP on average allocates more *ex post* bargaining power to the borrower. Consider a change that results in lax covenants and imposes agency costs on lenders (i.e., results in a wealth transfer). The borrower will only agree to renegotiate and tighten covenants if the lenders compensate the borrower in some way. If a mandatory change tightens covenants, however, lenders are less likely to take advantage of this situation and refuse (assuming underlying economics did not change) relaxing covenants.³ Note that lenders prefer to keep customers and will, generally, grant a waiver if a covenant violation is purely due to changes in accounting principles (e.g., Fight 2004). Alternatively, the borrower can always seek to refinance as the costs of repaying private debt before maturity are low (Roberts and Sufi 2008). Given this, under mutual option and frozen GAAP, accounting changes can only (at least weakly) benefit the lenders, while it can be fairly costly under rolling GAAP. This is especially the case when lenders have multiple credit agreements and can explain the widespread claim that lenders prefer frozen to rolling GAAP (e.g., Taylor and Sansone 2007).

³ It is common for banks to receive request to modify covenants in a reasonable way. Failure to do so, or abuse of their power, will harm the bank's competitive position. The maximum penalty that lenders can impose on the borrower, in connection with a technical default caused by a mandatory change in GAAP, is to recall the loan. However, the credibility of this treat is limited by the costs to lenders of recalling the loan and the borrower's ability to obtain a new loan in the market. If the only thing that has changed is the GAAP change, the borrower is able to obtain a similar loan with covenants set under the new GAAP and therefore incurs limited costs whereas lenders would forgo the income from the loan by recalling it.

2.3 Hypotheses

Both renegotiation costs and renegotiation power over potential wealth transfers are dependent on the structures of ownership and the presence of lending relationships. Renegotiation costs are increasing in ownership dispersion because consent of multiple lenders is required and is costly to obtain, particularly lending-relationships with them are absent. These costs can be significant when it is difficult for the lenders to unravel the consequences of an accounting change as free-rider and hold-up problems among lenders can occur.

Similarly, the borrowers' scope for opportunism increases with loan ownership dispersion as they have no valuable relationship with lenders to be protected. When parties value the relationship it is costly to expropriate from the other side, which implies that wealth transfers are more likely to take place in widely held loans. Thus, unlike in widely held loans, concentrated loan ownership and the presence of stronger multi-period lending relationships minimizes the potential for wealth transfers due to an unanticipated effect of GAAP changes on covenants.

Given these arguments, as ownership dispersion (or deal complexity) increases, we expect the likelihood of choosing a contract that minimizes renegotiation costs and allocates greater ex post negotiation power to the lenders to increase. As discussed earlier, such contracting practices are frozen GAAP and the mutual option. Note that the mutual option assumes rolling GAAP until parties disagree and freeze GAAP and thus avoid formal renegotiation when GAAP changes are immaterial. This practice is the most flexible and least likely to lead to costly renegotiation. Rolling GAAP, on the contrary, is expected to be used in relationship-based lending. Our first hypothesis thus is:

H1: *Dispersion of ownership and the associated lack of lending relationships are positively associated with the choice of mutual option and frozen GAAP over rolling GAAP, with the effect being stronger in case of the mutual option.*

Another potentially important determinant of accounting practice is the number of anticipated changes to GAAP. Accounting standards are adopted by FASB through an extensive and time consuming due process. Contracting parties should anticipate upcoming accounting changes prior to the formal adoption but not necessarily the effect of these on the tightness of covenants. Fogelson (1978) argues that in anticipation of GAAP changes companies might seek to limit the effect of these changes contractually to avoid costly contract amendment. We test this prediction more formally. The greater the number of anticipated changes, the harder it is to predict the aggregate consequences. Mutual-option-to-freeze is the most cost effective choice because it avoids formal amendments to the contract when GAAP changes are preferred by both parties (or are immaterial) but at the same time protects against wealth transfers. Frozen GAAP also protects against wealth transfers and is, therefore, preferred to rolling GAAP by lenders, but unlike the mutual option it requires formal contract amendments for desirable changes to GAAP. Our second hypothesis is:

H2: *The frequency of anticipated accounting changes is positively related to the choice of mutual option and frozen GAAP over rolling GAAP.*

Another factor that potentially influences the contracting practice is the credit agreements' reliance on accounting-based covenants. The relationship between the use of covenants and contracting practice on accounting changes is difficult to sign a priori. On the one hand, extensive use of covenants decreases the likelihood that an accounting change will relax *all covenants* and thus will result in a wealth transfer. This implies that the use of rolling GAAP becomes more appealing as the contract contains more covenants. On the other hand, a mutual

option or frozen GAAP would be expected if the complexity of the renegotiation process is increasing with the extent of accounting information use. As the number of features in the credit agreement that rely on accounting information increase the expected *ex post* renegotiation costs may also increase and, therefore, the incentives to apply contracting practices that decrease them, i.e., mutual option or frozen GAAP. Given that the two arguments have opposite predictions, we state our third hypothesis with respect to covenants in the null form:

H3: *The use of covenants has no significant association with the choice of contracting practice.*

3. Sample selection and descriptive statistics

In constructing our dataset, we use hand-collected data from 500 actual private credit agreements originated by financial institutions to U.S. public firms between 1996 and 2004. These credit agreements represent a sub-sample of the 3,720 agreements collected directly from SEC filings by Nini, Smith, and Sufi (2007).⁴ We limit the sample to 500 contracts because of the time involved in coding the data. Given that contracting practices falls into a small number of distinct categories it is unlikely that there are practices in the full dataset that we have not identified. The period 1996-2004 is of particular interest because it essentially covers the period of time over which the secondary market for syndicated debt emerged and developed, as well as the period of time over which loan syndication became a major source of firm financing in the U.S. (see Section 2.1).⁵ We read and review selected sections of all 500 contracts to establish the contracting practice. To increase data quality, all contracts are reviewed by at least two different

⁴The dataset is available on Amir Sufi's website: <http://faculty.chicagobooth.edu/amir.sufi/>. We systematically select the 500 contracts with CIK numbers from 2969-99-000034 to 891554-99-001642 to ensure the study is replicable.

⁵The Loan and Pricing Corporation estimates that trading activity in the secondary market was \$8 billion in 1991 and \$170 billion in 2005 (Taylor and Sansone 2007).

people. Other data used in this study are obtained by merging our hand-collected dataset with the Dealscan and Compustat databases. All the variables are defined in Appendix C.

Table 1 presents descriptive statistics on firm and loan characteristics. There is substantial variation in most characteristics, and means are comparable to those reported in Beatty et al. (2002). For example, the number of lenders participating in loans varies from 1 to 67 with a median of 7; spreads over LIBOR (fees) varies from 100 (0) to 500 (175) with a median of 200 (25); and 82% of credit agreements specify an assignment fee.

[insert Table 1]

4. New contracting practice

Table 2 summarizes the frequencies of contracting practices in our sample. Panel A of Table 2 shows that 98% of the credit agreements in our sample explicitly include a definition of GAAP. This observation is consistent with wide use and continuing importance of accounting information in private credit agreements, and is in contrast to the evidence from Begley and Freedman (2004) that the use of accounting information in public credit agreements is close to its disappearance. Detailed examples of each contracting practice in Table 2, Panel B are provided in Appendix B.

[insert Table 2]

We identify three different practices that are common for mandatory changes: (i) rolling GAAP that determine covenant breaches based on GAAP in effect on the date of determination; (ii) frozen GAAP that determine covenant breaches based on GAAP in effect on the contract date; and (iii) mutual-option-to-freeze GAAP that determines a covenant breach based on GAAP as in effect on the date of determination unless either the lenders or the borrower request frozen GAAP, in which case determination is based on GAAP in effect immediately before such request is made. The latter practice has not been documented in prior studies and is largely emerging

over the period we study, as described next.

Table 2, Panel B presents the distribution of contracting practice on mandatory changes. Rolling GAAP is used in 24% of the credit agreements, which is consistent with the 27% in Beatty et al.'s (2002) mid-nineties sample. Only 38% of agreements in our sample, however, rely on frozen GAAP, which is substantially less than the 73% that Beatty et al. (2002) find. The remaining 39% of agreements in our sample use a mutual-option-to-freeze GAAP.

Figure 1 summarizes contracting practices for each year between 1996 and 2004. The application of the mutual-option-to-freeze increases from 18% to 64% and frozen GAAP declines from 47% to 21%. Rolling GAAP fluctuates around 20% to 30% with a minor negative trend. The trends for the mutual-option-to-freeze and frozen GAAP are statistically significant at the 1% level (not tabulated). The lack of a mutual-option-to-freeze GAAP in prior studies (e.g., Beatty et al. 2002) can be explained by the limited use of this practice in the beginning of our sample. The shift towards the mutual-option-to-freeze GAAP coincides with the developments in the private debt market, i.e., the rise of the secondary market for private debt and the increase in loan ownership dispersion, which potentially explains the emergence of this contracting practice.

[insert Figure 1]

4.1 Determinants of contracting practices on mandatory accounting principle changes

It is rather difficult to separate macroeconomic changes that coincide with the time period in Figure 1 and thus there is a need for cross-sectional analysis (while controlling for the time trend).⁶ We employ three proxies that are likely to be associated with lack of lending relationships/ownership dispersion to study the determinants of contracting practices:

⁶We choose control for linear time trend. This choice is made because the otherwise the effect of upcoming mandatory accounting changes is not well identified. All the main results in the paper are robust to controlling for

(1) *Number of lenders* in the syndicate, a proxy for ownership dispersion and/or the lack of lending relationships, as well as higher renegotiation costs (consider incentives associated with free-riding on other lenders' efforts, potential for hold-up problems (Smith 1993), and simply costs to convey information and solicit votes).⁷

(2) *Required lenders percentage (RLP)*, the percentage votes needed to amend a credit agreement or waive covenant violations. Contracting parties decide on this percentage based on the complexity of renegotiations (Taylor and Sansone 2007 note that borrowers prefer a low percentage) and, the more difficult and costly the process of soliciting lenders' votes is expected to be the lower the *required lenders percentage* will be in the contract. Thus, percentage of required lenders proxies for ownership concentration (inverse of dispersion) and/or the higher likelihood of lending relationships.

(3) *Assignment fee* indicator; the assignment fee is paid by lenders to the administrative agent when loans are sold in the secondary market to cover administrative costs of transferring ownership (they are relatively low, ranging between \$2,000 and \$5,000). The presence of an assignment fee indicates that lenders anticipate sales of (a part of) their ownership. Assignments opens up the possibility that the loan will become widely held by investors without any relationship with the borrower and thus assignment fee proxies for ownership dispersion and/or lack of lending relationships.

time effects using year dummies (which is equivalent to demeaning all variables on annual basis before estimating the models).

⁷Roberts and Sufi (2008) find a negative but insignificant relationship between the number of lenders and renegotiations that lead to a change in maturity, spread, or loan amount. However, it is worth noting that they study very large changes in contracting terms, e.g., the maturity changes by 63% on average in their sample. Although, renegotiation costs may matter little in connection with such major changes of the original contract, they are likely to matter more in changes in accounting principles. Furthermore, Roberts and Sufi do not study which mechanisms are in place to reduce the costs of renegotiations when more lenders participate in a loan. For instance, the *mutual-option-to-freeze* reduces renegotiation costs and is positively related to the number of lenders participating in the agreement. Thus, evidence that the number of lenders does not predict a switch from rolling to frozen GAAP does not constitute evidence that renegotiation costs, ceteris paribus, are not increasing in the number of lenders if the *mutual-option-to-freeze* lowers the costs of the switch.

We construct two proxies to evaluate whether anticipated mandatory changes affect contracting with respect to GAAP. First, we use the past frequency of accounting changes, which is based on accounting changes reported on Compustat, as a proxy for expected GAAP changes. Second, we count the number of forthcoming changes in the accounting standards that become effective within one year after a contract is in place. The dates of forthcoming standards are collected from FASB's website. There are over 20 changes to accounting standards that took place in 1996-2006 and that had quantitative effect on financial statements, indicating that anticipated renegotiation costs in connection with mandatory accounting changes over the life of a loan can be material.

Table 3 presents descriptive statistics partitioned on mutual-option-to-freeze, frozen, and rolling GAAP. Credit agreements that rely on a mutual-option-to-freeze or frozen GAAP have significantly more lenders, significantly lower *RLPs*, and are more likely to specify an assignment fee relative to rolling GAAP. In addition, when compared to frozen GAAP, mutual-option-to-freeze has significantly more lenders, lower *RLPs*, and a higher likelihood of specifying an assignment fee (the assignment fee is not significant). In addition, the mutual-option-to-freeze is significantly positively associated with past as well as future accounting changes and is insignificantly related to financial and negative covenants.

[insert Table 3]

Table 4 examines the renegotiation costs in a *multinomial logit* model where we compare mutual-option-to-freeze and frozen GAAP to rolling GAAP as the latter is the most distinct contracting practice (rolling GAAP as the baseline case). Consistent with the descriptive statistics in Table 3, we find that according to all three proxies (*log(number of lenders)*, *RLP*, and *assignment fees*), ownership dispersion/lack of relationships results in a higher likelihood of choosing mutual-option-to-freeze or frozen GAAP over rolling GAAP. This supports H1 and as

predicted the effect appears to be stronger for mutual-option-to-freeze than frozen GAAP (although the difference between these two groups is statistically significant only in the case of the assignment fee).

While we do not find robust evidence that either financial or negative covenants affect the choice of rolling GAAP over the other alternatives, we find evidence that upcoming accounting changes are significantly positively associated with the use of the mutual-option-to-freeze, as predicted by H2. However, upcoming accounting changes are not significantly associated with frozen GAAP consistent with the mutual option being a more cost efficient way to allocate renegotiation power when GAAP changes are frequent. This result suggests that firms accommodate anticipated changes in GAAP by ex ante contracting in a way that minimizes expected renegotiation costs and potential wealth transfers.

In addition, we find that firms that have a credit rating are more likely to use mutual-option-to-freeze relative to rolling GAAP firms. This is consistent with credit rated loans being easier to sell or transfer to an outside party, which can lead to increased renegotiation costs. Finally, we find that the size of loan participations (loan/lenders) is higher for contracts with a mutual-option-to-freeze and frozen GAAP and that those contracts with frozen GAAP are less likely to be revolving loans or motivated by a takeover.

[insert Table 4]

We only find limited evidence that covenants, firm characteristics, and credit risk affect the contracting practice. The choice, however, could be affected by lender's preferences with respect to contracting practices, investigated next.

4.2 Lender characteristics and the choice of contracting practice

In this section we examine whether lender-level characteristics and contracting practices are related. Lenders design standardized credit agreements, which are further customized during

the negotiation process, and thus have potentially large influence on the choice of contracting practice. No evidence that lenders exhibit preferences with respect to a particular contracting practice exists in the literature. Lenders' preferences can depend, for example, on size of their portfolios, debt maturity, use of accounting based covenants, or whether they maintain a close relationship to the borrowers. While most credit agreements in our sample have multiple lenders, we focus on lead arranger characteristics as the lead arranger has the most influence on contract design. We compute lead arranger-level characteristics by aggregating (averaging or summing) contract-level characteristics *across all Dealscan contracts* that a lead arranger owns. Subsequently, we match each contract in *our sample* with the computed characteristics of its lead arranger. The characteristics of the lead arranger include, for example *lead arranger size* measured by the log of total amount lent (on *Dealscan*); *average maturity* across all contracts that the lead arranger has ownership in; *number of financial* and *negative covenants* that, on average, are used in loans that the lead arranger participates in; and our variables of interest. Specifically, our main variables of interest proxy for the extent to which banks rely on relationship vs. widely held debt are:

(1) *Relationships lack* is a proxy for an extent to which banks maintain active business relationships with other lenders. This proxy is the number of banks with which the lead arranger co-participated in loan ownership divided by the number of loans the lead arranger participated in (owned) in total. Large values of this variable proxy for lack of strong business relationships while low values indicate the opposite. In the presence of such relationships, renegotiation becomes easier which mitigates the impact of dispersed ownership.

(2) *% Institutional loans*. Institutional loans are issued to institutional investors (e.g., Type B loans) and are commonly traded in the secondary debt market. Institutions, such as mutual funds, have little knowledge of the company, and thus high frequency of such loans in

lead arranger's portfolio indicates weaker reliance on relationship lending (commonly involving a closely held loan).

(3) *Ownership concentration* is a Herfindal index that measures how concentrated, on average, the loan ownership is across loans owned by the lead arranger. High ownership concentration indicates that the lead arranger holds loans that on average are controlled by few lenders and is the inverse of dispersed ownership.

(4) *Lead share owned* is average share of ownership that the lead arranger has across all loans organized by a particular lead arranger. A large share implies that a lead arranger largely controls the loan and implies concentration of ownership.

Under hypothesis H1, dispersed ownership and the associated lack of relationships (higher renegotiation costs) should be associated with the use of the mutual option and frozen GAAP rather than rolling GAAP and the effect should be strongest for mutual option. We thus expect *relationships lack* and *% institutional loan* to be positively related to the use of mutual option and frozen GAAP, while, *ownership concentration*, and *lead share owned* to be negatively related to the choice of mutual option and frozen GAAP over rolling GAAP.

As earlier, we use a *multinomial logit* to explain lenders' choice. Rolling GAAP is the baseline case relative to which the other two choices are evaluated. Table 5 presents the results. We find that larger lead arrangers (measured by amount of debt issued), and lead arrangers that hold loans with longer maturities are more likely to use mutual option and frozen GAAP than rolling GAAP (the results are not statistically significant in some specifications). Wealth transfers and renegotiations in connection with mandatory accounting changes are particularly costly for financial institutions that hold a large loan portfolio because mandatory changes occur simultaneously for all firms that comply with GAAP. Thus lenders with more loans and more

dispersed syndicate ownership are more likely to view mandatory accounting changes as problematic and thus should choose frozen GAAP or mutual-option-to-freeze.

[insert Table 5]

In line with hypothesis H1, we find that *relationships lack* and *% institutional loans* are positively associated with the choice of mutual option and frozen GAAP over rolling GAAP. Similarly, *ownership concentration* and *lead share* exhibit the predicted negative associations with mutual option and frozen GAAP. Note, that these effects are generally stronger for the mutual option, which is also in line with our expectations. Overall, the evidence is in line with H1 and with the findings from the previous section and implies that ownership dispersion/lack of relationships is an important consideration in the choice of contracting practice.

Reliance on financial covenants appears to be another significant characteristic that affects lenders' choice. The average number of financial covenants across loans held by the lead arranger is negatively related to the choice of both mutual-option-to-freeze and frozen GAAP over rolling GAAP. Thus we are reject the null hypothesis H3 in favor of its alternative. In particular, the results are consistent with lower likelihood that GAAP changes will result in a wealth transfer when a contract uses an umbrella of covenants and thus rolling GAAP becomes a more appealing practice. Non-financial covenants are generally positively associated with the use of frozen GAAP.

4.3. *Voluntary changes in accounting principles*

We do not perform any statistical analysis of the contractual treatments of voluntary changes because we find that the majority of contracts deny such changes. Indeed, we find that 93% of credit agreements explicitly restrict them and that voluntary changes are rarely used in practice by the firms with credit agreements that do not explicitly deny them (see Appendix A). This is consistent with firms committing against opportunistic voluntary changes either explicitly

in credit agreements or through other commitment mechanisms. This finding is important, however, as it suggests that empirical tests of opportunistic accounting principle changes to meet covenants need to consider that borrowers generally give up control over voluntary changes ex ante.

5. Contracting practice on accounting changes and loan pricing

In this section, we extend the analysis in Beatty et al. (2002). We revisit the relationship between credit spreads and contracting practices on accounting changes in the presence of the new contracting practice, mutual-option-to-freeze GAAP. In addition to credit spreads, loan pricing is done via fees imposed on the borrower which we examine separately.⁸ Fees are measured by the sum of upfront, annual, and initiation fees, all measured in basis points (in case any of these fees are not listed on *Dealscan*, we assume they are zero).

Beatty et al. (2002) show that restricting mandatory changes in private credit agreements reduces the cost of debt by 71 basis points, controlling for self-selection bias (similar effect is found for voluntary changes). They argue that firms trade off adverse selection and moral hazard costs associated with discretion over implementation of mandatory changes (for example, due to timing of adoption of new accounting standards) against expected cost of double book-keeping due to future changes in accounting principles. Our arguments differ in several respects, which potentially helps explaining large economic magnitudes of the effects. As argued in Section 2, borrowers are relatively immune to adverse consequences of mandated changes (i.e., wealth transfers), while lenders are not. With frozen GAAP lenders have more ex post negotiation power as they can only benefit from future renegotiations, while with rolling GAAP they suffer from a change relaxing covenants (and incur higher renegotiation costs) for many loans at the

⁸ Prior literature focuses on spreads when examining the pricing of loans but acknowledge that pricing may happen through other mechanisms (e.g., Asquith et al. 2005). Other mechanisms could be fees, looser covenants, or other contracting terms. We focus on spreads and fees because it is difficult to measure other terms empirically.

same time. Thus lenders should prefer mutual option or frozen to rolling GAAP.

The mutual-option-to-freeze GAAP was not used in Beatty et al.'s sample from the mid-nineties but is now the dominant alternative (see figure 1). We expect that the mutual-option-to-freeze GAAP will behave in a way similar to frozen GAAP but can result in even lower spreads due to lenders' lower anticipated renegotiation costs passed on to the borrowers.

5.1 Identification strategy

An empirical difficulty with estimating the effect of contracting practices on spreads is that the choice of the contracting practice is endogenous. Since firms are likely to optimize with respect to credit spread and fees, OLS is likely to lack results. To establish a causal relationship and address the endogeneity problem, we perform two types of analyses. First, following Beatty et al. (2002) we use Heckman's (1979) two stage procedure to control for self-selection. Second, we use instrumental variables regressions. Both of these approaches, in fact, require a set of valid instruments correlated with the choice variable, the contracting practice, but excluded from the regression of interest (second stage regression). We refrain from using firm- or contract-specific variables as instruments since they are likely to exhibit a high degree of endogeneity. Instead, our strategy is to use innate lead-arranger characteristics which should not affect the spreads in competitive markets. We calculate a broad set of lender-level variables that are correlated with the choice of a contracting practice but at the same time have no theoretical effect on credit spreads after appropriately controlling for firm- and contract-level variables. For example, the extent to which a lead-arranger on average relies on covenants should qualify as an instrument because this variable correlates with the choice of contracting practice (as documented earlier), but at the same time should not have a direct first order effect on the credit spread (credit spread will be affected by contract specific variables but not lead-arranger-level variables). We construct a broad set of lead-arranger-level instruments that include all variables

that are used in sub-section 4.2 (Table 5) as well as an additional set of *Dealscan* variables averaged at the lead-arranger-level to ensure maximum joint explanatory power of the instruments. These contractual features include: frequency a lender is an agent, frequency a lender is a lead arranger, presence of performance pricing (rating or ratio based), lenders' reliance on revolving debt issues, average share of loan retained, average concentration of syndicate ownership, and the use of specific financial and negative covenants. See Appendix C for more complete description of the instruments. Jointly, the explanatory power of the instruments (R-squared from the first stage regression) is between 10% and 20% depending on specification.

5.2 *Loan pricing results*

According to the descriptive statistics in Table 3, the mean spread is 27 basis points lower in contracts that rely on frozen rather than on rolling GAAP and 14 basis points lower when contracts rely on a mutual-option-to-freeze rather than frozen GAAP. Similar patterns are observed for fees charged. As discussed earlier, if exogenously assigned, we expect that credit agreements based on a mutual-option-to-freeze and frozen GAAP will have lower spreads than under rolling GAAP and this effect should be stronger in the case of mutual-option-to-freeze than frozen GAAP.

We examine differences in spreads by regressing them on two indicators for mutual-option-to-freeze and frozen GAAP, respectively. Since these variables are not independent, we include them simultaneously. Further, we include a set of control variables generally found in the literature to be associated with spreads in credit agreements. Table 6, Panel A presents the results for the spreads. The first column reports OLS estimates, and the following two columns contain self-selection corrected and IV-based estimates. Based on OLS we find reliance on mutual-option-to-freeze (frozen GAAP) to be associated with 19 (9) basis points lower credit

spread, statistically significant at 5% (insignificant in case of frozen GAAP). As expected, these estimates become more pronounced and are statistically significant when we use either Heckman's selection correction or instrumental variable analysis. For example, according to IV regression, frozen GAAP reduces cost of borrowing by 53 basis points, while mutual-option-to-freeze does so by 61 basis points. It is worthwhile to note that the estimates are similar across the IV and Heckman approaches. These estimates appear economically very large but are remarkably similar to those of Beatty et al. (2002) (who find that frozen GAAP is associated with 71 basis points lower credit spread). The generally stronger effect for the mutual-option-to-freeze indicates that lenders' lower anticipated renegotiation costs and weaker renegotiation power costs are passed on to the borrowers.

[insert Table 6]

In Table 6, Panel B fees, expressed in basis points, are used as the dependent variable. We find that across all three specifications, both frozen and mutual-option-to-freeze GAAP are negatively related to fees charged. The relationship is significant in the case of the mutual-option-to-freeze and insignificant in the case of frozen GAAP. According to IV regression, the presence of the mutual-option-to-freeze GAAP is on average associated with 19 basis points lower fees.

In unreported results we find that when contracts do not explicitly deny voluntary changes, no significant relationship with the cost of debt is observed. The relationship is insignificantly negative, which is consistent with other disciplining mechanisms restricting opportunistic voluntary changes when they are not explicitly denied in credit agreements (see Appendix A).

6. Summary

We examine debt contracting practices with respect to changes in accounting principles in 500 private credit agreements originated from 1996 to 2004 with a focus on what explains contracting practices. We find that 98% of these credit agreements define GAAP which is consistent with the private credit markets extensively relying on accounting. We identify a new practice, the mutual-option-to-freeze GAAP, which is a hybrid between the already documented rolling and frozen GAAP. Use of the mutual-option-to-freeze practice has increased dramatically over the sample period, coinciding with the rise of the secondary market for private debt as well as the primary syndicated credit market. The use of this practice is mainly explained by the presence of multi-lender loans where lenders and borrowers have limited relationships.

We replicate and extend Beatty et al.'s (2002) finding that spreads depend on contracting practice. We find support for their finding that frozen GAAP is associated with lower spreads than rolling GAAP. We find a similar, but slightly stronger, effect for mutual-option-to-freeze GAAP. Lower spreads can be due to savings on costs to renegotiate or can be a way to compensate borrowers for *ex ante* allocating renegotiation power to lenders subsequent to future mandatory changes.

Our evidence is consistent with contracting parties viewing future changes in GAAP as important events, and with them anticipating future renegotiations. We also show that contracting practice has a quick response to financial market innovations.

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Appendix A: Voluntary changes in accounting principles.

Voluntary changes occur when a firm switches from one accounting treatment to another (e.g., LIFO to FIFO) *within* GAAP. These changes lead to adverse selection and moral hazard problems, as they can be used to avoid breaching covenants upon an adverse event in the future. To control this problem when contracts are incomplete, creditors can give up control over voluntary changes either contractually or through the need to be justified to the auditor and disclosed in the annual report. As can be seen from table A1 below, we find that only the 7% of contracts that do not either explicitly deny voluntary changes, or qualify them in some way that protects creditors. This finding is important because if one is to understand whether companies opportunistically switch between accounting practices to avoid covenant violation, one should take into account that most borrowers give up control over these changes contractually.

Table A1: Contracting practice for future voluntary changes

	no.	%
A.1 No evidence of denying voluntary changes	33	7
A.2 Denies voluntary changes in at least one covenant	7	1
A.3 Lender can request voluntary changes excluded	14	3
Classified as <i>voluntary</i>	54	11
A.4 Denies voluntary changes in GAAP definition	293	60
A.5 Denies voluntary changes in Annual report	51	10
A.6 Denies voluntary changes except if auditor agree	71	15
A.7 Denies voluntary changes unless disclosed to lenders	19	4
Classified as <i>novoluntary</i>	434	89
Contracts with definition of GAAP	488	100

To assess how prevalent voluntary changes are in practice, we examine the frequency of voluntary accounting principle changes after the contract date for the 33 (7%) credit agreements that do not explicitly deny voluntary changes. We identify accounting changes that take place between the contract date and contract maturity in Compustat and then review the annual reports for years in which Compustat indicates that an accounting change occurred. We find that the 33 contracts that do not deny voluntary changes cover 106 firm-years and that there were thirteen accounting changes in this sample (Table A2). We review the annual reports for the years where Compustat identifies a change in accounting. Eleven of these changes are mandatory; one is a change in accounting estimate, and one is a voluntary change in accounting principles.⁹ Thus, voluntary changes in accounting principles are limited even when credit agreements do not explicitly deny them, consistent with other mechanisms restricting them in practice. For

⁹ The voluntary change in accounting principles is a switch to the Percentage-of-Completion-Method which is deemed by management to be more reliable than the previous method. It occurred in the quarter before the contract date of the lending agreement but in the same fiscal year. The change increased earnings but net income would have been positive and higher than the previous year without the switch - The change is therefore unlikely to be opportunistic. The change in estimate is an extension of the service life of some assets (the impact on earnings is 0.7%).

instance, GAAP require consistency (e.g., Accounting Research Study No. 1 of the American Institute of Certified Public Accountants - Postulate C-3) and therefore force management to justify a change to their auditors.

Table A2: Actual changes in accounting principles

Panel A: Descriptive statistics

Credit agreements that do not explicitly deny voluntary changes (see Table A1)	33
Firm-years where contracts are in effect	106
Firm-years with accounting changes according to Compustat	13

Panel B: Classification of accounting changes

Voluntary change in accounting principles	1
Voluntary change in accounting estimates (depreciations)	1
Mandatory change in accounting principles	<u>11</u>
Company-years with accounting changes according to Compustat	13

Appendix B: Examples of contracting practice

This appendix provides examples of contracting practices. Panel A provides examples of contracting practices for voluntary changes in accounting practice. Panel B provides examples of contracting practices for mandatory GAAP changes. Key words used in determining the classification are underlined. The title of each contracting practice is preceded by a letter and number referring to Tables A1 and 2 that summarize the contracting practice in the sample.

Panel A: Voluntary accounting changes

A.1 No evidence of excluding voluntary changes

Firm: Bio-Rad Laboratories Inc. (Contr. 22)

"GAAP" means generally accepted accounting principles in effect from time to time.

A.2 Denies voluntary changes in at least one covenant

Firm: Shesapeake Corporation (Contr. 39)

Unless otherwise specified, all accounting terms used in each Loan Document shall be interpreted, and all accounting determinations and computations thereunder (including under Section 7.2.4 and the definitions used in such calculations) shall be made, in accordance with those generally accepted accounting principles ("GAAP") applied in the preparation of the financial statements of the U.S. Borrower. Unless otherwise expressly provided, all financial covenants and defined financial terms shall be computed on a consolidated basis for the U.S. Borrower and its Subsidiaries, in each case without duplication.

"Net Worth" means, at any time, all amounts which, in accordance with GAAP consistently applied, would be included under shareholders' equity on a consolidated balance sheet of the U.S. Borrower and its Subsidiaries at such time; provided that, in any event, such amounts are to be net of amounts carried on the books of the U.S. Borrower and its Subsidiaries for (a) any treasury stock and (b) any write-up in the book value of any assets of the U.S. Borrower or any of its Subsidiaries resulting from a revaluation thereof.

A.3 Lender can request voluntary changes excluded

Firm: Phillip-Van Heusen Corporation (Contr. 176)

Section 1.04. Accounting Terms; GAAP. Except as otherwise expressly provided herein, all terms of an accounting or financial nature shall be construed in accordance with GAAP, as in effect from time to time; provided that, if the Borrowers notify the Administrative Agent that the Borrowers request 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 Borrowers 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. In calculating compliance with any of the financial covenants (and related definitions), any amounts taken into account in making such calculations that were paid, incurred or accrued in violation of any provision of this Agreement shall be added back or deducted, as applicable, in order to determine compliance with such covenants.

A.4 Denies voluntary changes in definition of GAAP

Firm: Atwood Oceanics Inc. (Contr. 19)

"GAAP" shall mean generally accepted accounting principles, consistently applied in the United States of America.

A.5 Denies voluntary changes in annual report

Firm: Air Products and Chemicals Inc. (Contr. 1)

(a) within 95 days after the end of each fiscal year of the Parent, its audited consolidated balance sheet and related statements of income, cash flows and stockholders' equity as of the end of and for such year, setting forth in each case in comparative form the figures for the previous fiscal year, all reported on by Arthur Andersen LLP or other independent public accountants of recognized national standing (without a "going concern" or like qualification or exception and without any qualification or exception as to the scope of such audit) to the effect that such consolidated financial statements present fairly in all material respects the financial condition and results of operations of the Parent and its consolidated Subsidiaries on a consolidated basis in accordance with GAAP consistently applied;

A.6 Denies voluntary change except if auditor concur

Firm: Applied Materials Inc. (Contr. 13)

"GAAP" means at any time generally accepted accounting principles as then in effect, applied on a basis consistent (except for changes concurred in by the Borrower's independent public accountants) with the most recent audited consolidated financial statements of the Borrower and its Subsidiaries delivered to the Lenders; provided that, if the Borrower notifies the Agent that the Borrower wishes to amend any covenant in Article V or any definition of a term used in any such covenant to eliminate the effect of any change in generally accepted accounting principles on the operation of such covenant (or if the Agent notifies the Borrower that the Required Lenders wish to amend any such covenant or definition for such purpose), then, for purposes of such covenant or definition only, "GAAP" shall mean GAAP as in effect immediately before the relevant change in generally accepted accounting principles became effective, until either such notice is withdrawn or such covenant or definition is amended in a manner satisfactory to the Borrower and the Required Lenders.

A.7 Denies voluntary change except if disclosed to lenders

Firm: Zurn Industries Inc. (Contr. 230)

12.07 Calculations; Computations. (a) The financial statements to be furnished to the Banks pursuant hereto shall be made and prepared in accordance with GAAP consistently applied throughout the periods involved (except as set forth in the notes thereto or as otherwise disclosed in writing by the Company to the Banks), provided that (x) except as otherwise specifically provided herein, all computations determining compliance with Section 8, including definitions used therein, shall utilize accounting principles and policies in effect at the time of the preparation of,

and in conformity with those used to prepare, the March 31, 1996 historical financial statements of the Company delivered to the Banks pursuant to Section 6.10(b) and (y) that if at any time the computations determining compliance with Section 8 utilize accounting principles different from those utilized in the financial statements furnished to the Banks, such financial statements shall be accompanied by reconciliation work-sheets.

Panel B: Mandatory accounting changes

B.1 Rolling GAAP

Firm: Atwood Oceanics Inc. (Contr. 19)

"GAAP" shall mean generally accepted accounting principles, consistently applied in the United States of America.

B.2 Rolling GAAP (Frozen in at least one specific covenant)

Firm: The Black and Decker Corporation (Contr. 24)

(f) Keeping of Books. Keep, and cause each of its Subsidiaries to keep, proper books of record and account, in which full and correct entries shall be made of all financial transactions and the assets and business of such Borrower and each such Subsidiary in accordance with generally accepted accounting principles in effect from time to time.

"Cash Flow Coverage Ratio" means, with respect to the Company and its Subsidiaries at any date of determination, the ratio of (a) EBITDA of the Company and its Subsidiaries for the most recently completed consecutive four fiscal quarter period ending on such date to (b) Consolidated Net Interest Expense for the most recently completed consecutive four fiscal quarter period ending on such date less interest income on cash deposits maintained by Chesapeake Holdings or its Subsidiaries (to the extent not included in Consolidated Net Interest Expense) for that period, in each case calculated on the basis of generally accepted accounting principles consistent with those applied by the Company in the preparation of the 2000 Audited Financial Statements. Calculations of the Cash Flow Coverage Ratio shall exclude all effects of unusual or nonrecurring credits or charges.

B.3 Frozen GAAP

Firm: Arrow Electronics Inc. (Contr. 15)

Unless otherwise specified herein, all accounting determinations for purposes of calculating or determining compliance with the terms found in subsection 1.1 or the standards and covenants found in subsection 9.1 and otherwise to be made under this Agreement shall be made in accordance with GAAP applied on a basis consistent in all material respects with that used in preparing the financial statements referred to in subsection 6.1. If GAAP shall change from the basis used in preparing such financial statements, the certificates required to be delivered pursuant to subsection 8.1 demonstrating compliance with the covenants contained herein shall set forth calculations setting forth the adjustments necessary to demonstrate how the Company is in compliance with the financial covenants based upon GAAP as in effect on the Closing Date.

B.4 Frozen GAAP but with forced renegotiation if changes in GAAP are of essence

Firm: Jack of All Games Inc. (Contr. 497)

Except as otherwise expressly provided herein, all accounting terms not specifically defined or specified herein shall have the meanings generally attributed to such terms under GAAP as in effect on the Closing Date. In the event that changes in GAAP shall be mandated by the Financial Accounting Standards Board, or any similar accounting body of comparable standing, *or shall be recommended by the Company's or the Guarantor's certified public accountants*, to the extent that such changes would modify any accounting terms used herein or in any other Loan Document or the interpretation or computation thereof, such changes shall be followed in defining such accounting terms only from and after the date the Company and the Required Lenders shall have amended this Agreement to the extent necessary to reflect any such changes in the financial covenants and other terms and conditions of this Agreement.

B.5 Mutual option to freeze and renegotiation

Firm: Bairnco Corporation (Contr. 256)

Changes in GAAP. If at any time any change in GAAP would affect the computation of any financial ratio or requirement set forth in any Loan Document, and either the Company or the Required Lenders shall so request, the Administrative Agent, the Lenders and the Company shall negotiate in good faith to amend such ratio or requirement to preserve the original intent thereof in light of such change in GAAP (subject to the approval of the Required Lenders); provided that, until so amended, (i) such ratio or requirement shall continue to be computed in accordance with GAAP prior to such change therein and (ii) the Company shall provide to the Administrative Agent and the Lenders financial statements and other documents required under this Agreement or as reasonably requested hereunder setting forth a reconciliation between calculations of such ratio or requirement made before and after giving effect to such change in GAAP.

B.6 Mutual option to freeze GAAP

Firm: Air Products and Chemicals Inc. (contr. 1)

"GAAP" means generally accepted accounting principles in the United States of America.

SECTION 1.04. Accounting Terms; GAAP. Except as otherwise expressly provided herein, all terms of an accounting or financial nature shall be construed in accordance with GAAP, as in effect from time to time; provided that, if the Parent notifies the Administrative Agent that the Parent 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 Parent 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.

Appendix C: Variable definitions

Contract- and firm-level variables.

frozen = frozen GAAP; a binary variable taking value of 1 when a credit agreement excludes mandatory GAAP changes when verifying covenants compliance; and zero otherwise.

rolling = rolling GAAP; a binary variable taking value of 1 when a credit agreement requires use of current GAAP for covenant compliance verification; and zero otherwise.

option = mutual-option-to-freeze; a binary variable taking value of 1 if a credit agreement provides its parties a mutual option to "freeze" GAAP, i.e., from that date onwards apply GAAP in effect immediately prior to such date; and zero otherwise.

voluntary = a binary variable taking value of 1 when a credit agreement does not explicitly restrict voluntary changes in application of accounting principles.

number lenders = number of lenders, members of the syndicate, that participate in a credit agreement.

required lenders = percentage of votes required to amend a credit agreement; in case of one lender it is set to 100%.

assignment fee = an binary variable taking value of 1 in case credit agreement specifies an assignment fee; and zero otherwise.

financial covenants = number of financial ratios a credit agreement relies on (the pool of such ratios includes coverage ratio, current ratio, quick ratio, leverage ratio, debt-to-EBITDA, net worth, etc.).

negative covenants = number of covenants that restricts certain actions by management (the pool of such covenants includes dividend payout restrictions, restrictions on sale or transfer of assets, restrictions on debt and equity issuances, negative pledge restrictions, etc.).

performance pricing = a binary variable taking value of 1 in case a performance pricing grid is used; and zero otherwise.

security = a binary variable taking value of 1 if debt issue is secured; and zero otherwise.

S&P rating = Standard & Poor's long term credit rating as of the end of the fiscal year preceding the loan.

maturity = number of months before loan matures as of the date of issuance.

loan/lenders = amount borrowed per lender (member of syndicate).

lending freq = logarithm of the number of loans on *Dealscan* issued to the borrower within five years prior the contract date (logarithm is taken to avoid pronounced right skewness).

revolver = a binary variable taking value of 1 if a loan is revolving; and zero otherwise.

past accounting changes = number of accounting changes reported on Compustat over five years preceding the contract date.

upcoming accounting changes = number changes to accounting standards that go in effect within one year after the contract date; constructed based on information provided on FASB website.

leverage = long-term debt divided by total assets.

log(mkt.cap) = logarithm of market capitalization as of the end of the fiscal year preceding the contract date.

book-to-market = book value of shareholders' equity divided by its market value.

leverage = long term debt divided by total assets.

log(loan/assets) = ratio of loan amount principal amount to total assets (log is taken to correct pronounced right skewness).

spread = credit spread in basis point in excess of LIBOR (or another comparable benchmark).

fees = sum of upfront fees, commitment fees, and annual fees, all measured in basis points.

lambda(.) = Heckman's lambda; inverse Mill's ratio constructed on first stage *probit* model, following approach in Heckman (1979).

Lender-level variables.

lead arranger size = logarithm of the total amount lent by a bank (or other lending institution) as recorded on *Dealscan* (logarithm is taken to avoid severe right skewness).

avg. maturity = average maturity across loans that a bank (or other lending institution) has ownership in, out of *Dealscan* population.

avg. # financial covenants = average number of financial ratios present across loans that a bank (or other lending institution) as ownership in.

avg. # negative covenants = average number of negative covenants that limit certain managerial actions present across loans that a bank (or other lending institution) has ownership in, out of *Dealscan* population.

% institutional loans = fraction of Type B, Type C, or Type D loans in the portfolio of lead bank.

relationship lack = number of banks with which lead arranger co-participated in loan ownership divided by the number of loans lead arranger participated in (owned) in total. Large values of this variable proxy for lack of strong business relationships while low values indicate the opposite.

lead share = average share retained by a bank (or other lending institution) when he performs as a lead arranger.

ownership concentration = average Herfindal index of ownership dispersion across loans that a bank (or other lending institution) has ownership in (out of *Dealscan* population); varies between 0 (fully dispersed) and 1 (maximum concentration).

% lead arranger = fraction of credit agreements, out of all credit agreements that a bank (or other lending institution) participates in, where the bank serves as a lead arranger.

% revolving = fraction of credit agreements, out of all credit agreements that a bank (or other lending institution) is a party to (out of *Dealscan* population), that are revolving loans.

% senior = fraction of loans in the portfolio of lead arranger that are senior.

reputable = dummy variable that takes value of 1 is lead arranger is among 10 largest lead arranger (based on the number of loans they arrange).

Instruments used when determining the effect of contracting practices on credit spreads and fees.

We use bank-level variables above as instruments. To increase joint explanatory power of the instruments, we also include the following list of additional lender-level variables:

% a specific covenant = fraction of credit agreements, out of all credit agreements that a bank (or other lending institution) is a party to (out of *Dealscan* population) that includes a specific negative or financial covenants. The pool of financial covenants includes coverage of interest covenant, leverage covenant, net worth covenant, current/quick ratio covenant. The pool of negative covenants includes dividend payout restrictions, restrictions on sale or transfer of assets, restrictions on debt and equity issuances, negative pledge restrictions.

buildup present = fraction of credit agreements, out of all credit agreements that a bank (or other lending institution) is a party to (out of *Dealscan* population), that has a “buildup” feature.

ratio-based pricing = fraction of credit agreements, out of all credit agreements that a bank (or other lending institution) is a party to (out of *Dealscan* population), that specifies a financial-ratio-based performance pricing grid.

avg. lenders count= average number of lenders across loans that a bank (or other lending institution) has ownership in, based on *Dealscan* population.

%agent = fraction of credit agreements, out of all credit agreements that a bank (or other lending institution) is a party to (out of *Dealscan* population), where a bank serves as an agent.

% performance pricing = fraction of credit agreements, out of all credit agreements that a bank (or other lending institution) is a party to (out of *Dealscan* population), that uses performance pricing grid.

avg. share = average share owned by a bank (or other lending institution), across all credit agreements on *Dealscan* that the bank (or other lending institution) has ownership in.

Other variables.

time trend = year in which contract is initiated. The results are robust to including year dummies as separate controls.

Note: Unless otherwise stated, variables are measured as of the end of the latest fiscal year before the contract date.

Figure 1: Contracting practice on mandatory changes from 1996 to 2004

Figure 1 shows the trend in contracting practice with respect to mandatory changes from 1996 to 2004. There are three distinct contracting practices: (i) rolling GAAP that determine covenant breaches based on GAAP in effect on the date of determination; (ii) frozen GAAP that determine covenant breaches based on GAAP in effect on the closing date (or some specific fiscal year end); and (iii) mutual-option-to-freeze GAAP that determine covenant breaches based on GAAP as in effect on the date of determination unless either the lender or the borrower request frozen GAAP - in which case determination is based on GAAP in effect immediately before such request. Information regarding contracting practice is hand-collected from private credit agreements as discussed in connection with Table 2. Table 2 Panel B presents the distribution of contracting practice on mandatory changes. Appendix B provides examples of contracting practices from debt agreements in our sample.

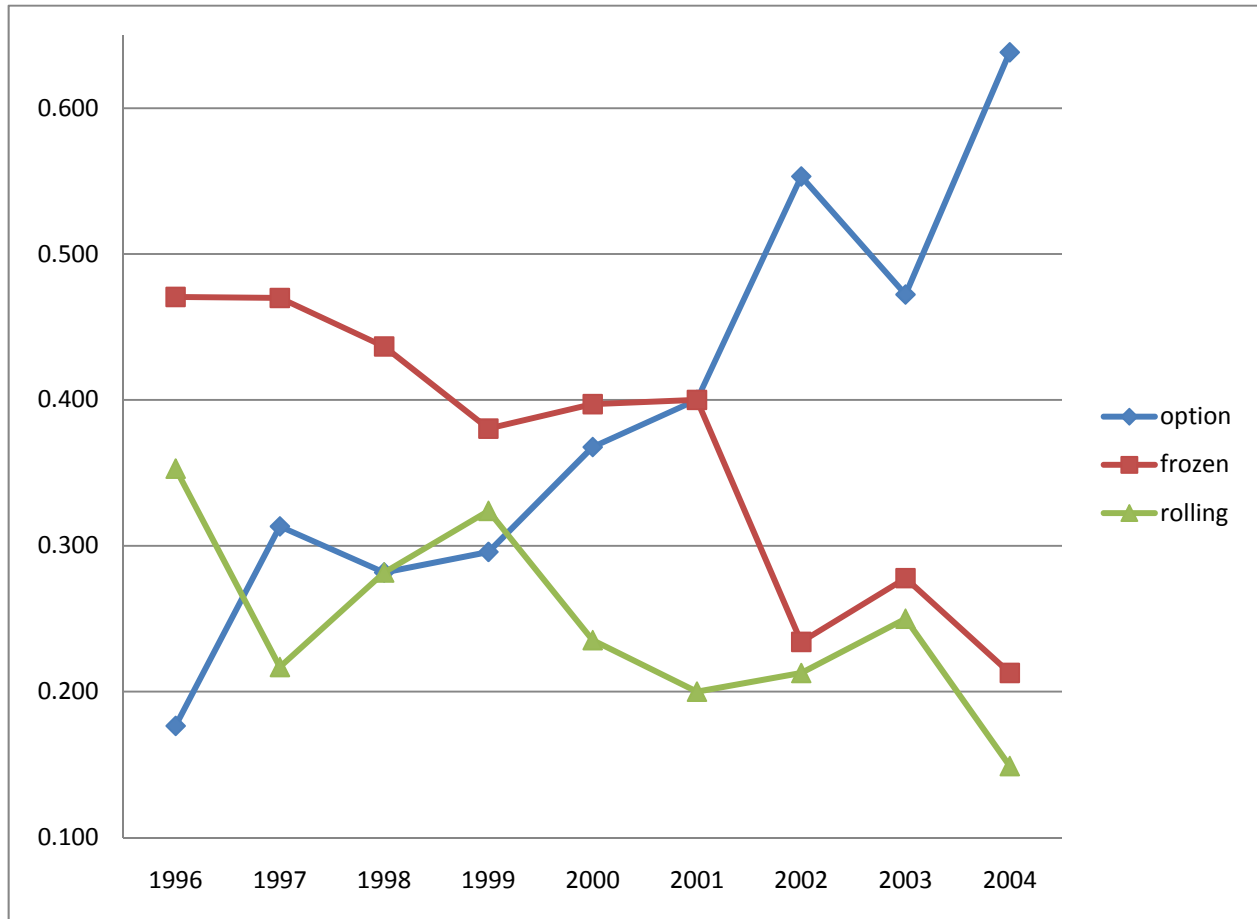


Table 1: Summary statistics

Table 1 presents summary statistics on the variables used in Tables 3, 4, 5 and 6 for the sample discussed in Table 2. All variables are defined in Appendix C. Panels A and B present the number of observations, means, standard deviations (Std.dev.), medians, minimums (Min), and maximums (Max) for each variable for contract and firm characteristics and bank level characteristics, respectively. The data is collected from the Compustat and Dealscan databases. Note that requiring non-missing values for a particular variable often further limits the sample.

Variable	N. Obs.	Mean	Std.dev.	Median	Min	Max
<i>Panel A: Contract and firm characteristics</i>						
<i>Rolling</i>	480	0.244	0.430	0	0	1
<i>Frozen</i>	480	0.373	0.484	0	0	1
<i>Option</i>	480	0.383	0.487	0	0	1
<i>number lenders</i>	480	9.859	9.905	7	1	67
<i>required lenders</i>	475	61.274	15.351	51	50	100
<i>assignment fee</i>	468	0.823	0.382	1	0	1
<i>financial covenants</i>	480	1.885	1.157	2	0	5
<i>performance pricing</i>	480	0.752	0.432	1	0	1
<i>negative covenants</i>	480	2.700	2.501	1	0	6
<i>Security</i>	480	0.435	0.496	0	0	1
<i>Maturity</i>	473	40.542	21.062	36	2	121
<i>loan/lenders</i>	480	47.872	79.651	30.90	1	1285.7
<i>lending freq</i>	480	1.040	0.638	1.099	0	2.639
<i>Revolver</i>	480	0.668	0.397	1	0	1
<i>Takeover</i>	480	0.133	0.340	0	0	1
<i>Spread</i>	454	216.052	63.146	200	100	500
<i>Fees</i>	468	31.859	26.891	25	0	175
<i>log(mkt.cap)</i>	477	6.500	1.944	6.41	0.963	11.99
<i>book-to-market</i>	477	0.577	0.591	0.462	-1.220	3.93
<i>Leverage</i>	480	0.244	0.176	0.233	0	1.09
<i>S&P rating</i>	480	6.958	2.505	9	1	9
<i>past accounting changes</i>	480	0.367	0.664	0	0	4
<i>upcoming accounting changes</i>	480	1.196	1.43	1	0	8
<i>Panel B: Bank level characteristics</i>						
<i>relationship lack</i>	468	0.979	0.996	0.549	0.244	6.561
<i>% institutional loans</i>	468	0.064	0.046	0.056	0	0.353
<i>avg. lead share</i>	449	23.961	10.013	22.514	7.773	100
<i>avg. own concentration</i>	449	0.205	0.104	0.185	0.097	1
<i>lead arranger size</i>	468	27.981	1.881	28.364	16.524	30.024
<i>avg. maturity</i>	449	46.015	6.856	45.246	17	91.167
<i>avg. # financial cov.</i>	449	2.265	0.264	2.259	1.429	4
<i>avg. # negative cov.</i>	449	1.266	0.662	1.080	0.107	6
<i>% revolver</i>	449	0.547	0.098	0.534	0	0.825
<i>Reputable</i>	449	0.508	0.500	1	0	1
<i>% senior</i>	449	0.943	0.058	0.952	0.464	1

Table 2: Sample summary

Table 2 presents the contracting practice in our sample. Panel A presents the proportion of contracts with a definition of GAAP. Panel B presents the contracting practices for mandatory changes in accounting principles. In Panel B the left column refers to Appendix B where an example of each contracting practice is presented. Information regarding contracting practice is hand-collected from private credit agreements available on Amir Sufi's website (<http://faculty.chicagobooth.edu/amir.sufi>) and first used in Nini, Smith, and Sufi (2007). We systematically select the 500 contracts with SIK numbers from 2969-99-000034 to 891554-99-001642 to ensure the study is replicable.

Panel A: Definition of GAAP

	no.	%
500 contracts from Nini, Smith, and Sufi (2007)	500	100
Contracts with no definition of GAAP	-12	-2
Contracts with definition of GAAP	488	98

Panel B: Contracting practice on mandatory changes

	no.	%
B.1 Rolling GAAP	110	23
B.2 Rolling GAAP (Frozen in at least one specific covenant)	6	1
Classified as Rolling GAAP	116	24
B.3 Frozen GAAP	124	25
B.4 Frozen GAAP and forced renegotiations	60	12
Classified as Frozen GAAP	184	38
B.5 Mutual option to freeze and renegotiate	33	7
B.6 Mutual option to freeze	155	32
Classified as <i>mutual option to freeze</i> GAAP	188	39
Contracts with definition of GAAP	488	100

Table 3: Means partitioned by contracting practice for mandatory changes

Table 3 presents means of the variables used in the multinomial regressions in Tables 4 and 5 partitioned by the three contracting practices we identify regarding mandatory changes: mutual-option-to-freeze (option), frozen GAAP (frozen), and rolling GAAP (rolling). All variables are defined in Appendix C. Information regarding contracting practice is hand-collected from private credit agreements as discussed in connection with Table 2. The data is obtained from the Compustat and Dealscan databases. The significance of differences in means between contracting practices are tested by t-statistics based on standard errors adjusted for clustering at the firm level (t-stat). Note that requiring non-missing values for a particular variable further limits the sample compared to Table 2.

VARIABLES	<i>option</i>	<i>frozen</i>	<i>rolling</i>	<i>option-rolling</i> (t-stat)	<i>frozen-rolling</i> (t-stat)	<i>option-frozen</i> (t-stat)	<i>N. Obs.</i>
<i>Panel A: Firm/Contract Level Characteristics</i>							
<i>log(number lenders)</i>	2.114	1.816	1.231	5.99***	3.63***	2.15**	480
<i>required lenders</i>	56.81	60.15	70.11	-5.87***	-4.13***	-2.01**	475
<i>assignment fee</i>	0.911	0.851	0.637	5.26***	3.87***	1.67*	468
<i>log(mkt.cap)</i>	6.985	6.456	5.789	4.69***	2.11**	1.75*	477
<i>book-to-market</i>	0.615	0.601	0.671	-0.79	-0.91	0.22	464
<i>Leverage</i>	0.248	0.261	0.212	1.50	2.02**	-0.58	480
<i>Maturity</i>	40.39	41.25	39.71	0.27	0.61	-0.39	473
<i>Security</i>	0.386	0.425	0.53	-2.13**	-1.51	-0.60	480
<i>loan/lenders</i>	3.491	3.568	3.236	2.24**	2.57***	-0.77	480
<i>lending frequency</i>	1.105	1.068	0.895	2.16**	1.77*	0.42	480
<i>Revolver</i>	0.68	0.628	0.71	-0.60	-1.54	1.02	480
<i>Takeover</i>	0.109	0.14	0.162	-1.25	-0.50	-0.87	480
<i>financial covenants</i>	1.793	2.006	1.846	-0.39	1.16	-1.54	480
<i>negative covenants</i>	2.614	2.883	2.556	0.18	0.99	-0.89	480
<i>performance pricing</i>	0.783	0.804	0.624	2.79***	3.06***	-0.49	480
<i>past acc. changes</i>	0.44	0.341	0.291	1.71*	0.58	1.13	480
<i>upcoming acc. changes</i>	1.50	1.061	0.923	3.34***	0.99	2.53***	480
<i>Spread</i>	201.1	215.3	242.1	-3.66***	-2.18**	-2.50**	454
<i>Fees</i>	28.81	32.57	35.62	-1.87*	-0.76	-1.14	468

Panel B: Bank Level Characteristics

<i>relationship lack</i>	0.909	0.952	1.130	-1.86*	-1.49	-0.42	468
<i>% institutional loans</i>	0.073	0.057	0.059	2.66***	-0.35	3.41***	468
<i>avg. lead share</i>	21.79	23.09	29.06	-6.16***	-4.96***	-1.25	449
<i>avg. own concentration</i>	0.183	0.195	0.258	-6.02***	-4.96***	0.26	449
<i>lead arranger size</i>	28.35	28.07	27.24	5.06***	3.76***	1.45	468
<i>avg. maturity</i>	46.31	46.63	44.05	2.15**	2.25**	-0.44	449
<i>avg. # financial cov.</i>	2.213	2.267	2.351	-4.32***	-2.60***	-1.92*	449
<i>avg. # negative cov.</i>	1.177	1.274	1.403	-2.79***	-1.56	-1.37	449
<i>% revolver</i>	0.548	0.537	0.559	-0.93	-1.77*	0.98	449
<i>Reputable</i>	0.592	0.506	0.365	3.72***	2.28**	1.62	449
<i>% senior</i>	0.951	0.927	0.954	-0.41	-3.84***	4.00***	449

Table 4: Choice of contracting practice for mandatory accounting changes: Loan and firm characteristics

Table 4 presents estimates from the multinomial regression where we compare mutual-option-to-freeze and frozen GAAP to rolling GAAP. We specify rolling GAAP as the base option and thus present two columns of estimates that describe the choice of mutual-option-to-freeze (option) and frozen GAAP over rolling GAAP. The independent variables are loan and firm characteristics. All variables are defined in Appendix C. Information regarding contracting practice is hand-collected from private credit agreements as discussed in connection with Table 2. The data is obtained from the Compustat and Dealscan databases. The sample consists of 488 credit agreements that include a definition of GAAP. Requiring non-missing values for explanatory variables and a maturity above 6 months further limits the sample in some specifications. ***, **, * indicate statistical significance at less than 1, 5, and 10%, respectively. Standard errors are adjusted for clustering at the firm level.

VARIABLES	Sign	option	frozen	option	frozen	option	frozen
<i>log(number lenders)</i>	(+)	0.681***	0.447**				
		[3.178]	[2.069]				
<i>required lenders</i>	(-)			-0.0396***	-0.0288***		
				[-3.222]	[-2.627]		
<i>assignment fee</i>	(+)					1.342***	0.731*
						[2.959]	[1.782]
<i>financial covenants</i>	(+/-)	-0.0209	0.263*	-0.044	0.238	-0.103	0.208
		[-0.148]	[1.807]	[-0.311]	[1.600]	[-0.735]	[1.421]
<i>performance pricing</i>		0.363	0.505	0.391	0.434	0.177	0.432
		[1.033]	[1.410]	[1.038]	[1.178]	[0.459]	[1.159]
<i>negative covenants</i>	(+/-)	0.0967	-0.00414	0.0832	-0.0125	0.0861	-0.00764
		[1.344]	[-0.063]	[1.124]	[-0.184]	[1.190]	[-0.113]
<i>upcoming acc. changes</i>	(+)	0.188*	0.0398	0.216**	0.0731	0.208**	0.0534
		[1.838]	[0.387]	[2.040]	[0.676]	[2.005]	[0.511]
<i>past acc. changes</i>	(+)	0.0402	-0.16	0.0545	-0.145	0.103	-0.104
		[0.159]	[-0.579]	[0.213]	[-0.525]	[0.407]	[-0.377]
<i>time trend</i>		0.128	-0.104	0.0866	-0.13	0.12	-0.101
		[1.622]	[-1.274]	[1.058]	[-1.522]	[1.516]	[-1.236]
<i>Security</i>		-0.155	-0.376	-0.127	-0.338	-0.186	-0.396
		[-0.418]	[-1.016]	[-0.344]	[-0.927]	[-0.498]	[-1.071]
<i>S&P rating</i>		0.196**	0.129	0.160*	0.107	0.154*	0.101
		[2.139]	[1.317]	[1.757]	[1.066]	[1.735]	[1.046]
<i>maturity</i>		-0.00458	0.0018	-0.00338	0.00193	0.00037	0.00427
		[-0.599]	[0.233]	[-0.437]	[0.242]	[0.049]	[0.549]
<i>loan/lenders</i>		0.109	0.31	-0.062	0.195	-0.143	0.143
		[0.520]	[1.476]	[-0.281]	[0.914]	[-0.703]	[0.714]
<i>lending frequency</i>		-0.122	-0.0706	0.0225	0.0588	-0.00536	0.0172
		[-0.412]	[-0.236]	[0.076]	[0.194]	[-0.018]	[0.058]
<i>revolver</i>		-0.0847	-0.659*	-0.00426	-0.629	-0.246	-0.744*
		[-0.221]	[-1.691]	[-0.011]	[-1.547]	[-0.639]	[-1.894]
<i>log(mkt.cap)</i>		0.258	0.186	0.356**	0.216	0.442***	0.301*
		[1.528]	[1.043]	[2.246]	[1.359]	[2.868]	[1.916]
<i>book-to-market</i>		0.269	0.357	0.458	0.371	0.443	0.455
		[0.846]	[0.950]	[1.369]	[0.979]	[1.409]	[1.265]
<i>leverage</i>		1.105	1.209	1.125	1.037	1.337	1.338
		[1.084]	[1.085]	[1.126]	[0.932]	[1.356]	[1.212]
<i>constant</i>		-260.3*	203.5	-174.4	258.9	-243.8	197.4
		[-1.656]	[1.251]	[-1.067]	[1.516]	[-1.549]	[1.213]
<i>N. Obs.</i>		447	447	444	444	447	447
<i>Pseudo R-squared</i>		0.109	0.109	0.112	0.112	0.108	0.108

Table 5: Choice of contracting practice for mandatory accounting changes: Lead arranger characteristics

Table 5 presents estimates from the multinomial regression where we compare mutual-option-to-freeze and frozen GAAP to rolling GAAP. We specify rolling GAAP as the base option and thus present two columns of estimates that describe the choice of mutual-option-to-freeze (option) and frozen GAAP over rolling GAAP. The independent variables are lead-arranger-characteristics constructed by taking the average of all Dealscan contracts that the lead-arranger participates in. All variables are defined in Appendix C. Information regarding contracting practice is hand-collected from private credit agreements as discussed in connection with Table 2. The data is obtained from the Compustat and Dealscan databases. The sample consists of 488 credit agreements that include a definition of GAAP. Requiring non-missing values for explanatory variables and a maturity above 6 months further limits the sample in some specifications. ***, **, * indicate statistical significance at less than 1, 5, and 10%, respectively. Standard errors are adjusted for clustering at the lead arranger level.

VARIABLES	<i>sign</i>	<i>option</i>	<i>frozen</i>	<i>option</i>	<i>frozen</i>	<i>frozen</i>	<i>option</i>	<i>frozen</i>	<i>option</i>
<i>relationships lack</i>	(+)	0.64** [2.14]	0.43* [1.77]						
<i>% institutional loans</i>	(+)			9.17** [1.98]	0.52 [0.12]				
<i>avg. lead share</i>	(-)					-0.05*** [-2.76]	-0.04* [-1.88]		
<i>avg. ownership conc.</i>	(-)							-4.51** [-2.47]	-3.56* [-1.88]
<i>lead arranger size</i>	(+)	0.52*** [2.73]	0.46*** [2.82]	0.24** [2.07]	0.26** [2.33]	0.08 [0.69]	0.14 [1.20]	0.08 [0.65]	0.13 [1.10]
<i>avg. maturity</i>	(+)	0.08*** [2.88]	0.02 [0.83]	0.06* [1.79]	0.03 [0.85]	0.07** [2.33]	0.02 [0.52]	0.07** [2.45]	0.02 [0.56]
<i>avg. # financial cov.</i>	(+/-)	-2.27*** [-3.46]	-1.56** [-2.41]	-2.68*** [-3.86]	-1.52** [-2.32]	-1.95*** [-2.77]	-1.35* [-1.89]	-2.13*** [-3.12]	-1.42** [-2.02]
<i>avg. # negative cov.</i>	(+/-)	0.31 [1.03]	0.51* [1.84]	0.23 [0.84]	0.49* [1.84]	0.41 [1.44]	0.53** [2.00]	0.43 [1.52]	0.54** [2.03]
<i>% revolver</i>		1.41 [0.61]	-2.58 [-1.33]	1.4 [0.66]	-3.25* [-1.66]	1.89 [0.84]	-1.94 [-0.99]	1.22 [0.57]	-2.23 [-1.20]
<i>reputable</i>		0.7 [1.41]	-0.37 [-0.77]	0.66 [1.37]	-0.33 [-0.70]	1.02** [2.03]	-0.13 [-0.27]	0.98** [1.97]	-0.15 [-0.29]
<i>% senior</i>		4.59 [0.84]	-6.34 [-1.18]	0.55 [0.10]	-6.63 [-1.23]	2.84 [0.51]	-7.49 [-1.34]	3.14 [0.56]	-7.33 [-1.31]
<i>time trend</i>		0.16** [2.12]	-0.02 [-0.21]	0.15** [1.99]	0 [0.00]	0.17** [2.23]	-0.01 [-0.17]	0.17** [2.25]	-0.01 [-0.18]
<i>Constant</i>		-343.67** [-2.29]	27.52 [0.19]	-307.77** [-2.05]	2.47 [0.02]	-345.44** [-2.29]	33.07 [0.22]	-345.92** [-2.30]	34.67 [0.23]
<i>Observations</i>		458	458	458	458	458	458	458	458
<i>Pseudo R-squared</i>		0.106	0.106	0.107	0.107	0.11	0.11	0.109	0.109

Table 6: Interest spreads, fees and contracting practice

Table 6 presents estimates from the regression of spreads (fees) on indicators for frozen GAAP, mutual-option-to-freeze GAAP, and voluntary changes not explicitly denied and control variables. Results are presented for OLS regressions (OLS), with controls for self-selection (Heckman), and instrumental variables (IV). All variables and instruments are described in Appendix C. Information regarding contracting practice is hand-collected from private credit agreements as discussed in connection with Table 2. The data is obtained from the Compustat and Dealscan databases. The sample consists of 488 credit agreements that include a definition of GAAP. Requiring non-missing values for explanatory variables and a maturity above 6 months further limits the sample in some specifications. ***, **, * indicate statistical significance at less than 1, 5, and 10%, respectively. Standard errors are adjusted for clustering at the firm level.

Variables	Panel A: <i>spread</i>			Panel B: <i>fees</i>		
	OLS	Heckman	IV	OLS	Heckman	IV
<i>frozen</i>	-9.008 [-0.777]	-74.89*** [-2.753]	-53.11** [-2.377]	-3.251 [-1.051]	-12.34 [-1.259]	-3.048 [-0.291]
<i>option</i>	-18.84* [-1.893]	-88.48*** [-3.646]	-61.34*** [-3.187]	-5.268* [-1.967]	-18.05** [-2.144]	-18.81** [-2.249]
<i>security</i>	20.60*** [2.614]	14.84* [1.956]	3.639 [0.617]	16.15*** [4.609]	17.44*** [5.239]	15.72*** [4.975]
<i>S&P rating</i>	-0.441 [-0.337]	0.865 [0.695]	1.095 [0.942]	0.189 [0.377]	0.382 [0.724]	0.592 [1.109]
<i>maturity</i>	-0.213 [-1.118]	-0.19 [-0.908]	0.0603 [0.382]	0.0373 [0.468]	0.103 [1.173]	0.0841 [1.143]
<i>financial covenants</i>	-3.481 [-0.954]	-1.412 [-0.359]	-3.462 [-1.344]	5.545*** [4.583]	4.596*** [3.192]	4.361*** [3.538]
<i>negative covenants</i>	0.177 [0.145]	1.003 [0.794]	0.53 [0.482]	1.201** [2.205]	1.081** [1.986]	1.573*** [3.465]
<i>loan/lenders</i>	1.562 [0.263]	1.101 [0.201]	1.548 [0.349]	0.77 [0.369]	1.048 [0.476]	0.637 [0.367]
<i>revolver</i>	-4.428 [-0.472]	-6.941 [-0.717]	-18.67** [-2.429]	-3.727 [-1.011]	-4.901 [-1.245]	-2.794 [-0.838]
<i>log(mkt.cap)</i>	-15.18*** [-4.294]	-7.041* [-1.776]	-8.283*** [-2.699]	-0.841 [-0.580]	0.111 [0.068]	0.944 [0.587]
<i>log(loan/assets)</i>	-4.072 [-0.799]	2.753 [0.528]	0.05 [0.012]	0.573 [0.287]	1.09 [0.475]	1.42 [0.760]
<i>book-to-market</i>	-31.90*** [-4.401]	-17.59*** [-2.672]	-11.48** [-1.966]	-0.0183 [-0.006]	1.634 [0.499]	4.391 [1.477]
<i>leverage</i>	-39.24* [-1.902]	-9.239 [-0.415]	-13.04 [-0.710]	20.56*** [2.736]	24.96*** [3.218]	28.84*** [4.070]
<i>time trend</i>	-0.59 [-0.386]	0.213 [0.133]	0.994 [0.810]	0.747 [1.387]	1.014 [1.517]	1.803*** [3.351]
<i>lambda(frozen)</i>		39.26** [2.550]			5.232 [0.871]	
<i>lambda(option)</i>		46.03*** [3.406]			8.195 [1.498]	
<i>Constant</i>	1536 [0.502]	-87.59 [-0.027]	-1665 [-0.678]	-1480 [-1.379]	-2016 [-1.512]	-3607*** [-3.361]
<i>Observations</i>	425	408	408	447	408	429
<i>R-squared</i>	0.228	0.259	0.135	0.325	0.355	0.279