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Private vs. Public Lending: Evidence from Covenants

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### Abstract

This paper compares the terms of 63 privately-placed debt agreements with those found in public bond indentures. The main results of the analysis are as follows: 1) Private agreements more aggressively control the actions of equity holders by setting various covenants more tightly, by contracting on quantities that are volatile and not under the direct control of managers, and by using relatively vague terminology. This finding does not rely on credit quality differences between the public and private debt markets. Furthermore, covenant differences between investment grade and junk issues are less pronounced in the private market than in the public market. 2) Private agreements provide lenders with the means to monitor borrowers more carefully. 3) Private agreements attempt to control *intra-claim conflicts*, i.e. those arising between holders of the same bond issue. 4) Private agreement payment terms are tailored to suit lenders by avoiding embedded interest rate options.

Financial economists have a broad understanding of the relationship between borrowers and lenders in the market for privately placed debt. While public bond indentures are set by the issuer and its investment banker, the terms of private loan agreements are negotiated between the borrower and particular lenders. Private lenders are more involved in borrowers' affairs than public investors, but not as involved as bank loan officers. Private placement covenants are less restrictive than bank loan covenants, but more restrictive than public bond covenants. Finally, privately placed debt agreements are renegotiated more easily and more often than public indentures, but not as often as bank loans.

Much of this common wisdom has been supported by anecdotal evidence. Carey, Prowse, Rea, and Udell (1993a,b) develop a "covenant-monitoring-renegotiation paradigm" of privately placed debt based on extensive interviews with market participants. Brook (1990), also relying on interviews, discusses covenant differences across investment grade public issues, below-investment grade public issues, and private placements. Emerick and White (1992) present several short case studies to show that sophisticated investors create corporate value through their participation in the private debt market. Zinbarg (1975) is often quoted for relating his institutional experience in the private debt market *vis à vis* negative covenants and renegotiation frequency.

Because data on private placements is relatively difficult to obtain, very few empirical studies can be invoked in support of the

common wisdom outlined above. Leftwich (1983) and El-Gazzar and Pastena (1990) have documented that private covenants increase contracting efficiency relative to public issues by using quantities other than those specified by generally accepted accounting principles. DeAngelo, DeAngelo, and Skinner (1990) and Chen and Wei (1991) provided indirect evidence that private debt agreements are stricter than public ones by showing that, given that a firm faces a binding covenant, that binding covenant is most likely to be part of a private debt agreement. Chen and Wei (1991) also document the wide variety of outcomes that result from the renegotiations of these binding covenants. Finally, Lafer (1992) reports the frequency of selected covenants in an exploratory sample of private placement agreements.

This paper fills a gap in the empirical literature by providing a detailed analysis of how covenants in a sample of privately-placed debt differ from those found in public indentures. The analysis reveals in exactly what ways private debt agreements are more restrictive, exactly how they facilitate lender monitoring, and exactly which terms are tailored to suit the investment needs of lenders. In addition, this study unearths a set of covenants not previously recognized in the literature. These covenants, found only in private debt agreements, are designed to control *intra-claim conflicts*, i.e. conflicts that arise between holders of the same bond issue.

Section I describes the data sample and presents some summary statistics. Section II shows that private debt agreements are more

aggressive in controlling equity holder actions than their public counterparts. Section III explains how private debt covenants facilitate lender monitoring. Section IV enumerates the private placement covenants that seek to control intra-claim conflicts. Section V reveals that payment terms of private debt are tailored to suit investors primarily by omitting embedded interest rate options. Section VI summarizes and concludes.

#### I. A Sample of Privately-placed Debt Agreements

A sample of privately-placed debt agreements was collected as follows. Private transactions appearing in the 1986 through 1990 editions of *Investment Dealers' Digest* were collected. Then, those transactions satisfying the following two criteria were selected. First, the transaction had to involve non-secured and non-convertible debt. Second, borrowers had to be SEC filing companies that listed the private debt agreement as an exhibit to their 10-K filings. Note that whenever new borrowing exceeds 10% of assets, SEC filing companies must list the private placement as an exhibit. Smaller transactions are listed at the borrower's discretion.

The decision to exclude secured debt focuses the paper on the protection afforded by covenants, rather than on the protection afforded by assets. While the terms of secured debt concentrate on enumerating and protecting the collateral, non-secured debt agreements rely on more indirect safeguards.

Convertible debt reduces agency costs by allowing debtholders to transform their claims into equity. This mechanism reduces the

need to include some covenants found in non-convertible debt. To avoid this confounding factor, convertible debt was excluded.

Many firms, including SEC filing companies, are extremely reluctant to release private debt agreements. It was necessary, therefore, to restrict the study to agreements that were listed in borrowers' 10-K filings. Of the private placements that satisfied the two criteria, agreements were obtained for 63 transactions.

Restricting the sample to SEC filing companies biases the sample toward larger and more established firms. That very small firms are not represented in the sample qualifies this study's application to the private placement market as a whole.

The requirement that 10-K's list the agreements biases the sample toward firms that raise a significant fraction of their funding through the private market. Since the present study aims at understanding the essence of private loan agreements, it may be useful to focus on these material loans. However, inferences from the sample may not apply to larger companies who finance a relatively small fraction of operations in the private market.

To characterize the resulting sample, table 1 reports selected summary statistics. The average and median loan amounts are well within the often cited range of \$10 to \$100 million. Firm size, as measured by assets and equity, along with average credit quality, falls below that reported by other studies of the private placement market [e.g. Carey, Prowse, and Udell (1993b)]. This divergence is consistent with the discussion of the previous paragraph. The dominance of insurance companies in the private placement market is

reflected in the large fraction of loans bought by insurance companies. Finally, three indexes of concentration all point to extremely high levels of ownership concentration.

Table 1. Summary statistics of the private placement sample. Entries in the first three rows are in millions of dollars.

	Sample	
	mean	median
Issue Size	49.8	27.0
Assets	411.3	210.9
Equity	104.7	59.8
% Investment Grade	34%	--
% of Life Insurance Lenders	93.7%	--
Number of Lenders	3.9	2
% Held by Largest Lender	72.9%	87.5%
HHI Index <sup>†</sup>	.67	.78

<sup>†</sup> This index is the sum of the squared fractional holdings.

## II. The Reduction of Agency Costs

Because of agency problems, equity owners selling debt securities will try to commit not to take actions that would expropriate bondholder wealth. This does not imply, however, that it is optimal to adopt the most restrictive set of covenants imaginable. Jensen and Meckling (1976) argue as follows:

To completely protect the bondholders from the incentive effects, these [covenant] provisions would have to be incredibly detailed and cover most operating aspects of the enterprise including limitations on the riskiness of the projects undertaken. The costs involved in writing such provisions, the costs of enforcing them and the reduced profitability of the firm (induced because the covenants occasionally limit management's ability to take optimal actions on certain issues) would likely be non-trivial. In fact, since management is a continuous decision making process it will be almost impossible to completely specify such conditions without having the bondholders actually perform the management function.



The optimal set of covenants is determined by balancing the incentive achievements against the monitoring, bonding, and renegotiation costs of implementing the debt agreement.

Since private placements are characterized by relatively few, hands-on lenders while public debt issues are characterized by relatively many arm's-length lenders, monitoring, bonding, and renegotiating costs in private issues are low relative to those of public issues. Therefore, private issues do best by setting relatively detailed covenants that may be breached relatively often while public issues do best by setting less detailed covenants that are breached only in the direst of circumstances.

The purpose of this section is to demonstrate that private agreements control agency problems more aggressively than public agreements. The first subsection describes covenants that are found in both private and public issues but appear more often and are set more tightly in private issues. The second subsection shows that private agreements readily contract on volatile quantities that are not under the direct control of management while public indentures refrain from doing so. The third subsection shows that private agreements include vague but useful restrictions.

#### A. Prevalence and Tightness

Table 2 reports covenant frequency in public debt alongside estimates from the private sample. A number of lessons can be drawn from the comparison. First, these covenants are more prevalent in private than in public issues. Second, controlling for credit

quality, the same result holds. In other words, covenant differences between public and private issues reflect differences in lending relationships and not differences in credit quality. Third, covenant differences across credit ratings are much greater in the public market than in the private market. This indicates that when monitoring and bonding costs are small, even high quality borrowers will use covenants to reduce agency problems.

Table 2. The Prevalence of Selected Covenants across Public and Private Debt Issues.

	Public Issues				Privates	
	Smith & Warner (1979)	Malitz (1986)	Lehn and Poulsen (1991)		Sample	
			Inv Grade	Junk	Inv Grade	Junk
Restricted Payments	23%	55%	15%	92%	85%	95%
Limitations on Debt	91%	51%	39%	85%	100%	100%
Limitations on Liens	--	--	50%	46%	100%	95%
Asset Sales <sup>†</sup>	36%	--	--	--	85%	95%
Net Worth	--	--	1%	21%	65%	84%
Affiliated Transactions	--	--	1.5% <sup>‡</sup>	79% <sup>‡</sup>	90%	87%

<sup>†</sup> This row refers only to asset sale covenants that go beyond the "all or substantially all" language.

<sup>‡</sup> These figures comes from the data set used by Lehn and Poulsen (1991), generously provided by them to the authors.

i) Restricted Payments. These covenants restrict the amount of money that a firm can distribute to stockholders through dividends or share repurchases. The most common form of the covenant allows for an initial reservoir of permitted payments that increases with the firm's earnings and equity issues.

Kalay (1982) collected a sample of firms that faced dividend restrictions. His results, along with corresponding numbers for the private placement sample, are given in table 3.

Table 3. Comparison of dividend covenants in the private placement sample with those in public debt issues.

	Kalay (1982)	Sample: All Issues	Sample: Investment Grade
Fraction of earnings available to shareholders	95%	54%	58%
Standard Deviation	10%	27%	32%
Initial Reservoir/Earnings	123.5%	58.5%	58.5%
Initial Reservoir/Book Debt	31.8%	7.5%	11.7%

Table 3 demonstrates that the restricted payments covenant is set more tightly in private issues than in public issues. The third column shows that these results cannot be attributed to the possibility that the Kalay (1982) sample is of better average credit quality than the private sample. In fact, given the Lehn and Poulsen (1991) estimate that 15% of investment grade issues contain restricted payments covenants, the Kalay (1982) sample, selected by its dividend covenants, may very well be of lower credit quality than the private sample of which 34% are investment grade.

ii) Limitations on Indebtedness. This covenant restricts the issuance of new debt. See Smith and Warner (1979) for details. The great variability in the form of this covenant and the lack of data on the appearance of these forms in public issues place a cross-market comparison of tightness beyond the scope of this study.

iii) Limitations on Liens/Negative Pledge. This covenant restricts the creation of secured debt. See Smith and Warner (1979) for a detailed description.<sup>1</sup>

iv) Asset Sales. All debt agreements prevent a firm from selling "all or substantially all" of its assets unless the purchaser of those assets assumes the obligations of the debt contract. Some agreements, however, impose tighter restrictions, e.g. by preventing asset sales except if sold in the ordinary course of business, by preventing sales beyond a fixed dollar amount, or by preventing sales of more than 10-15% of assets. The percentages in table 2 indicate that asset sales covenants are more restrictive in private than in public debt issues.

v) Net Worth. In public indentures, the net worth covenant requires that net worth remain above some fixed floor.

The net worth covenant in private issues differs from its public counterpart in that the floor is not fixed. In about 39% of the private agreements with net worth covenants, the floor increases by, on average, 45% of earnings. Since public indentures do not provide for these escalating floors, the private net worth covenant is set more tightly.

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<sup>1</sup> Table 2 reports that this covenant is slightly more prevalent in investment grade than in junk issues. This may be due to the simple fact that assets are so far from the reach of junk bonds that limitations on liens would be of little avail. In fact, all private junk bonds without limitations on liens were subordinated or senior subordinated issues.

Although there are no comparable figures available for the public market, a measure of the initial tightness of the private net worth covenants can be computed. Across issues that included a net worth covenant, the average initial floor was 81% of net worth at the time of the debt agreement.

vi) Affiliated Transactions. This covenant prevents the company from entering into a transaction with an affiliate unless the terms of the transaction are at least as favorable to the company as might be obtained in an arm's-length transaction. Table 2 indicates, perhaps surprisingly, that this covenant is more prevalent in investment grade privates than in junk privates. The difference, however, is not statistically significant.

vii) Cure period (featured in table 4). If a company fails to comply with any provision of the debt agreement, it must rectify the situation during the cure period. If it does not, an "event of default" is deemed to have occurred and bondholders may accelerate the payment of their principal.

In public indentures, the cure period is usually 30 days for non-payment of interest and at least 30 days for covenant violations. In the sample of private agreements, however, the cure period is often less than 30 days and depends on the particular covenant that was breached. Table 4 gives the details.

Shorter cure periods, and, consequently, more frequent events of default, can be optimal so long as the gains from alleviating

bondholder concerns at the time of issue outweigh the renegotiation costs at the time of default. Evidently, shorter cure periods are optimal for private but not for public issues. Also, since both investment grade and junk private agreements have shorter cure periods than public indentures, credit rating differences between the two markets cannot explain the differences in cure periods.

Table 4. Cure Periods in Private Placements. All entries are in days. Negative covenants include, for example, restricted payments, financial ratios, and net worth. Affirmative covenants include, for example, information, records, and maintenance of properties. A value of 0 indicates that there is no cure period, i.e. a violation immediately triggers an event of default.

	non-payment of interest		breach of negative covenants		breach of affirmative covenants	
	avg	median	avg	median	avg	median
Investment Grade	6.2	5	0	0	30.8	30
Junk	6.6	5	6.4	0	29.3	30

#### B. Contracting on Quantities that are Volatile and Not Directly Controllable

The relatively high costs of renegotiating public debt agreements will lead to the inclusion of covenants that are breached only in dire circumstances. Therefore, public debt agreements will shy away from contracting on quantities that can fluctuate without necessarily implying that debtholder claims are imperiled or that managers are attempting to expropriate bondholder wealth. Private debt agreements, however, will be willing to contract on such quantities because lenders can easily, and relatively costlessly, waive harmless and innocent violations.

The covenant provisions featured in this subsection depend on quantities that can be expected to vary substantially during the normal course of business. And, to the authors' best knowledge, these provisions are not found in public debt indentures. Table 5 begins the presentation with the prevalence and tightness of two financial ratio covenants. Note that rating has little effect on the required thresholds, but higher quality borrowers are, at the time of the agreements, more comfortably above these thresholds.

Table 5. Financial Ratio Covenants.

Covenant	Prevalence		Average Required Threshold		Ratio Value at Time of Issue	
	Inv Grade	Junk	Inv Grade	Junk	Inv Grade	Junk
Current Ratio	50%	50%	139%	142%	255%	212%
Interest Coverage	20%	39%	169%	173%	286%	205%

i) Current Ratio. A current ratio covenant requires that the ratio of short-term assets to short-term liabilities exceed a particular quantity. The minimum threshold may increase over time according to some pre-determined schedule.

ii) Fixed Charge/Interest Coverage Ratio. This covenant requires that the issuer maintain a minimum ratio of earnings to interest payments that may increase over time.

Juxtaposing the interest coverage ratio covenant and the limitations on indebtedness covenant further supports the notion that public agreements avoid contracting on volatile quantities

that are not under direct managerial control. While both covenants constrain debt financing, public indentures only include restrictions on debt issuance, i.e. covenants that can be breached only by managerial action. They omit covenants that depend on fluctuating earnings, namely interest coverage tests. Private agreements, on the other hand, include both types of covenants.

iii) Net Worth. The previous subsection reported that net worth restrictions are more prevalent and tighter in private issues than in public ones. But there is another difference. In the public case, falling below the threshold triggers a requirement that the issuer purchase some number of bonds, over some period, for as long as net worth is below the floor and there are still bonds outstanding. Only failure to purchase the required number of bonds constitutes a default. In the private case, however, falling below the threshold immediately triggers a default.

Since net worth is a volatile quantity that can fluctuate in the absence of managerial action, one might conclude that public issues would shy away from net worth covenants. Instead, public issues include the covenant but incorporate a mechanism by which premature default and renegotiation can be avoided. Healthy firms suffering a temporary drop in net worth will avoid default through the repurchase provision. Firms with more serious problems will not be able to sustain repurchases nor restore net worth to appropriate levels. These firms will need to negotiate terms or default.

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### C. Vagueness

Since, as noted by Jensen and Meckling (1976), it is extremely difficult to specify all the ways in which equity holders might appropriate bondholder wealth, agency costs can be reduced by writing vague covenants that broadly protect bondholder interests. Such covenants can be effective in private placements due to the ability of lenders to monitor and renegotiate at relatively low cost. Issuers and public lenders, on the other hand, will find that the costs of monitoring adherence to vague covenants and settling disputes arising from alleged violations will outweigh any advantages gained from controlling managerial incentives.

i) Nature of Business. This covenant prohibits companies from engaging in businesses not related to those it engaged in when the debt was incurred. While this prohibition is not found in public agreements, it is found in 75% of the private contracts.

The nature of business covenant is particularly vague. Which businesses are "related" to a firm's original business? How would public bondholders detect relatively small forays into prohibited businesses? The covenant's vagueness disqualifies it from public indentures but not from private contracts.

ii) Maintenance of Properties. Public indentures often include a covenant requiring the maintenance of properties in good condition and the making of all necessary repairs. But, what constitutes "good condition" and "necessary repairs" is left to

management discretion. Because of this vagueness, the American Bar Foundation (1971) concludes that this "covenant is not likely to have any play except under very adverse business conditions ... "

Only 8% of the private agreements leave the interpretation of proper maintenance to managerial discretion. In 74.5% of the agreements, proper maintenance remains vague, but is written as an objective standard that can be enforced by bondholders. In 8% of the agreements, some aspects of proper maintenance are treated as a standard while others are left to managerial discretion. Finally, 9.5% omitted the covenant.

### III. Facilitating Lender Monitoring

The previous section argued that private debt agreements aggressively control agency problems. This presupposes that lenders are able to monitor violations of the more restrictive and more vaguely-worded covenants and that they are sufficiently knowledgeable about the borrower's situation to effectively negotiate in the case of a breach. The purpose of this section is to discuss the covenants found in private debt agreements that facilitate monitoring activities by lenders.

i) Periodic Financial Statements. Public indentures generally require the company to furnish to the trustee, and sometimes to holders as well, copies of the company's consolidated quarterly and annual financial statements. Private placement agreements contain more extensive disclosure requirements. Of the agreements in the

sample, 51% also required consolidating financial statements, i.e. unconsolidated financial statements for the company and for each subsidiary along with a statement showing all consolidation adjustments. In 13% of the agreements, separate statements were required for particular subsidiaries or operating divisions. Finally, 6% of the agreements required supplemental information, e.g. sales reports, pricing information, and projections.

ii) Compliance and Default. In public indentures, companies generally have to provide the trustee with an annual compliance certificate stating whether the company is aware of default and, if so, describing such default. The trustee, in turn, has to notify the holders of any default unless the trustee determines that withholding notice is in the interest of the holders.

Private agreements contain much stricter requirements. First, 98% of the agreements require that compliance certificates be provided quarterly. Second, 97% of the agreements require that compliance certificates contain detailed calculations showing whether or not the company has violated various financial covenants. Third, 97% of the agreements require the company to notify holders within a few days of any default. Fourth, 75% of the agreements require the company to notify all holders if any one holder claims that the company is in default.

iii) Other Written Information. In addition to consolidated financial statements, public indentures require that companies

furnish bondholders with copies of quarterly (10-Q), annual (10-K), and current (8-K) reports filed with the SEC. As shown in table 6, private placements require more. That 97% of the agreements require issuers to provide whatever information bondholders may reasonably request evinces the monitoring potential of private lenders.

Table 6. Information provision requirements in private debt agreements.

Type of Information	% of agreements
Any reports filed with the SEC (e.g. registration statements, proxy statements, and annual shareholder reports)	100%
Reports submitted by independent accountants	81%
Reports relating to the company pension plan	40%
Reports on pending litigation or regulatory proceedings	27%
All Press Releases	8%
Information on material adverse developments	6%
Other specific information (e.g. F.C.C. reports, minutes of board meetings, and insurance coverage)	14%
Any additional information that bondholders may reasonably request	97%

iv) Inspection. In 98% of the private agreements, holders have the right, as often as is reasonable, to inspect the company's property, to examine its books, and to discuss its affairs with its officers and independent public accountants. No equivalent covenant is present in public indentures.

#### IV. Intra-claim Conflicts

Private debt agreements include a group of covenants that do not appear in public issues. This section argues that these covenants address conflicts of interest between bondholders of the

same debt issue. Such conflicts range from differences of opinion to side deals made between the issuer and large lenders.

i) Acquisition of Notes. Public indentures place no restrictions on an issuer's purchase of its own bonds. In 62% of the private agreements, however, any proposed purchases must be preceded by a *pro rata* offer made to all investors. In 13% of the contracts, purchases are prohibited outright.

Restrictions on the acquisition of notes prevent an issuer from treating one bondholder differently from another. For example, an issuer might want to buy out the position of a particularly knowledgeable or troublesome bondholder, to the detriment of small holders. Private placements are particularly susceptible to such behavior because of lead lenders, i.e. lenders who are most familiar with the issuer, who bring other investors into the transaction, who purchase a large share of the offering, and who are expected to play a major role in monitoring the borrower. [See, for example, Emerick and White (1992).]

ii) Prohibiting Consent Payments Unless Paid to All Bondholders. Issuers of public debt may ask bondholders to change particular covenants in exchange for consent payments. If the requisite number of bondholders agree to the issuer's proposal,

these consent payments are made only to those who consent even though the changes affect all bondholders.<sup>2</sup>

In the private placement sample, 60% of the agreements prohibit consent payments unless they are paid to all bondholders. Intra-claim conflicts can explain this prohibition for, without the prohibition, an issuer can reach an agreement with a few large lenders and pay only them for consenting. All non-participating lenders, while bound by the covenant changes, would receive no compensation. Agency theory teaches that firms might want to commit not to play bondholders off against each other in this way.

iii) Notification of Proposed Covenant Changes. When proposing changes to public debt indentures, an issuer need not notify all bondholders of its intentions. It can solicit support from a few large bondholders, so as to obtain the support of the required majority or 2/3 of face value, and then inform other bondholders that the changes have been made. In the sample of private loans, 54% of the agreements required that all lenders be notified about the proposed changes and given the chance to muster opposition.

iv) Accelerating Individual Claims upon Payment Default. In the case of a payment default, public indentures provide for the acceleration of the entire issue upon the request of the trustee or

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<sup>2</sup> See Kahan and Tuckman (1993) for the argument that this rule may lead bondholders with small positions to approve covenant modifications that are not in their best collective interest. But, because private placement holdings are highly concentrated, prohibiting payments made only to consenting holders cannot be explained as a means of protecting bondholders from this form of coercion.

of holders of 25% of the issue. In 46% of the private placements, however, an individual lender may accelerate his own loan. This empowerment of individual lenders represent one solution to any intra-claim conflicts that might arise.

The proposition that the covenants in this section serve to alleviate intra-claim conflicts has an empirical implication. Since these covenants are needed to protect lenders with small positions, the greater the presence of these small lenders, or, similarly, the lower the concentration of holdings, the more prevalent these covenants should be.<sup>3</sup>

Testing this hypothesis requires a measure of the danger to small lenders. The measure used in table 7 is the maximum number of lenders that can oppose a covenant change without dooming its passage. While somewhat unconventional, this measure most accurately captures the predicament of lenders with small positions. The appendix, repeating the tests using more traditional measures of concentration, produces nearly identical results.

Table 7 provides empirically supports the proposition that the covenants of this section are designed to control intra-claim conflicts. The average measure of the small lender predicament for issues that contain these covenants always exceeds the average for issues that do not contain these covenants. Also, results for two of these four covenants are statistically significant.

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<sup>3</sup> This conclusion applies only in the range of ownership concentration typical of the private market. In the case of atomistic holdings, for example, no bondholder could credibly threaten any other. \*

Table 7. An analysis of the claim that selected covenants are included more often when small lenders are present, i.e. when concentration is relatively low. The measure of small lender presence used here is the maximum number of lenders that can oppose a covenant change without dooming its passage.

Covenant	average w/o covenant	average with covenant	t-statistic for difference
Acquisition of Notes	.4	1.6	-2.2 <sup>†</sup>
Restricting Consent Payments	1.1	1.2	-.12
Notification of Proposed Covenant Changes	1.1	1.2	-.3
Accelerating Individual Claims Upon Payment Default	.7	1.8	-3.0 <sup>†</sup>

<sup>†</sup> Significant at the 5% level.

#### V. Payment Terms

Borrowers and lenders in the private market negotiate payment terms to suit each others' needs. An important example of this is the case of a life insurance company that collects funds by assuming a set of liabilities and seeks to purchase assets that match the duration and convexity of these liabilities. Given the call and sinking fund provisions commonly found in publicly-issued corporate debt, the insurer might not be able to find enough bonds that meet its criteria or might be reluctant to bear the costs of trading derivative products to correct any risk mismatches. Therefore, the insurer and a corporation looking for funds might both benefit from arranging a private placement with suitably tailored payment terms, i.e. without embedded options.

i) Yield Maintenance Call Provisions. After some initial waiting period, long-term, public issues often allow the borrower



to call all or part of the issue. An exercise price schedule, set in advance, starts at some premium above par and declines to par.

In the private placement sample, 95% of the issues are callable. Of these, 85% contain a "yield maintenance" provision that sets the call price at the maximum of par and the value of the bonds were their yields-to-maturity equal to those of equivalent maturity treasuries plus a premium. On average, this premium was 33 basis points for both investment grade and junk issues.

Over the sample period, however, public securities of AAA companies yielded 59 basis points above treasuries, those of BBB companies yielded 169 basis points above treasuries, and those of B companies yielded 496 basis points above treasuries.<sup>4</sup> Therefore, the yield maintenance call price in the sample, based on a 33 basis point spread, will exceed the fair value of the bonds. In other words, call provisions of private placements impose substantial prepayment penalties. The weakness of this call option, relative to that found in publicly traded debt, demonstrates how private borrowers tailor payment terms to satisfy lender needs.

Risk management needs alone, however, cannot explain the yield maintenance provision as found in the sample of private agreements. If the premia were set to match the credit spread of the borrowers, the call price would approximately equal the value of an otherwise identical non-callable bond and the interest rate sensitivity of the loan would very much resemble that of non-callable bonds. The

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<sup>4</sup> These numbers were constructed using data provided by Edward Altman and obtained from investment banking sources.

setting of substantial prepayment penalties through the yield maintenance premia reveal the lenders shun prepayments even when properly compensated. This can be explained by the fixed costs associated with becoming informed about a borrower in the private market. After bearing these expenses lenders will try to avoid prepayments that force it to negotiate new loans earlier and more frequently than originally planned.

Given the engineering of a call price schedule that depends on the level of interest rates, there seems to be a way to increase issuer flexibility without disenchanting lenders. Allow an issuer to call its bonds for less than face value after a rise in interest rates. And, if desired, include a prepayment penalty. The problem with this proposal is that it ignores the aversion of insurance companies to capital losses; realized capital losses lower their surplus and, consequently, their ability to write insurance contracts. This sacrifice of issuer flexibility for the investment interests of a particular class of investors further supports the hypothesis of payment term tailoring in the private market.

ii) Yield Maintenance Acceleration Premiums. In public issues, accelerated principal is paid off at face value. In 87% of the private agreements, however, the redemption price includes a yield maintenance premium. As in the case of yield maintenance for optional prepayments, this premium averaged 33 basis points.

As in the case of optional prepayments, this yield maintenance premium can be explained as a tailoring of payment terms to suit

the risk management needs of investors. Furthermore, in the case of acceleration, these premia might prevent an issuer from using covenant violations as an indirect call option.

Since private placement covenants may be breached even by healthy firms, yield maintenance acceleration premia might allow lenders to use their acceleration power as an indirect put option. Presumably, however, lenders will avoid ruining their reputations for fair dealing in the renegotiation process.

iii) Sinking Fund Provisions. In public issues, borrowers can satisfy sinking fund requirements by purchasing the required number of bonds in the market or by calling them at par. Furthermore, the vast majority of sinking fund provisions grant the right to call twice that number of bonds at par on any sinking fund date. [See Kalotay and Tuckman (1992).]

In the sample of private agreements, 84% had sinking fund requirements. In all but one case, these requirements cannot be satisfied by market purchases. Furthermore, less than 10% of those with sinking funds granted the option to double mandatory payments.

In public debt, the sinking fund provision provides the issuer with a set of interest rate options. When rates are relatively high the issuer purchases bonds at market. When rates are relatively low, the issuer calls bonds par or, if it has the option to do so, calls twice the required number at par. By eliminating the market purchase and "double-up" features of sinking fund provisions, private agreements remove these embedded interest rate options.

iv) Odd-lot Restrictions. Public issuers granted a call option can call all or any part of an issue. Private borrowers, however, face restrictions on the minimum number of bonds that can be called and on the minimum lot by which they can increase that amount.

In 90% of the private agreements, borrowers had to call more than some minimum face amount. The average minimum is about \$927,000 and the median is \$250,000. As a fraction of loan size, the average is 19.6% and the median is 12.5%. In another 5% of the issues, borrowers cannot call less than the entire issue. The remaining 5% of the agreements contained no such restrictions.

In 86% of the private agreements, borrowers can only call in round-lots. The average round-lot is about \$840,000 and the median is \$250,000. As a fraction of loan size, the average is 16.8% and the median is 10%. Another 5% of the issuers required that calls retire the entire issue. Only 9% imposed no odd-lot restrictions.

Institutional investors will almost certainly roll over called principal into new loans. Odd sums of money will be more difficult to invest than round-lots. The odd-lot restrictions, therefore, provide another example of payment term tailoring.

## VI. Conclusion

Lending in the private placement market differs in character from lending in the public bond market. This paper shows how the covenants in the two markets reflect these differences. Because private issues are held by relatively few, knowledgeable investors, agency problems are minimized by setting covenants relatively

tightly and by renegotiating their restrictions should the need arise. Because the ownership of private issues is particularly concentrated, covenants protect smaller bondholders from larger ones. Finally, because the terms of private issues are negotiated, payment terms reflect the investment needs of lenders.

While this paper explains how covenant differences reflect differences across the public and private markets, no effort has been made to explain cross-sectional covenant differences within each market. This remains an area for future research.

Finally, an expanded empirical understanding of a relatively unexplored set of contracts, namely those in the private placement market, should be of some use to researchers studying the theory of contracts and optimal security design.

Appendix

The tests reported below use three measures of the presence of small lenders and of concentration to test the claims of section IV. The measures are 1) the number of lenders, 2) the percentage of the issue bought by the largest lender, and 3) the HHI index (i.e. the sum of the squared holding fractions).

Panel I: Number of Lenders. Covenants designed to alleviate intra-claim conflict should be associated with relatively large numbers of lenders.

Covenant	average w/o covenant	average with covenant	t-statistic for difference
Acquisition of Notes	2.1	4.5	-1.7
Restricting Consent Payments	3.1	4.3	-1.0
Notification of Proposed Covenant Changes	3.0	4.6	-1.3
Accelerating Individual Claims Upon Payment Default	2.4	5.5	-2.5 <sup>†</sup>

Panel II: Percentage Bought by the Largest Lender. Covenants designed to alleviate intra-claim conflict should be associated with relatively low percentages bought by the largest lender.

Covenant	average w/o covenant	average with covenant	t-statistic for difference
Acquisition of Notes	91.3%	66.5%	2.9 <sup>†</sup>
Restricting Consent Payments	73.8%	72.3%	.2
Notification of Proposed Covenant Changes	74.1%	71.7%	.3
Accelerating Individual Claims Upon Payment Default	81.4%	61.5%	2.6 <sup>†</sup>

Panel III: HHI Index. Covenants designed to alleviate intra-claim conflict should be associated with relatively low values of the HHI index.

Covenant	average w/o covenant	average with covenant	t-statistic for difference
Acquisition of Notes	.87	.60	2.7 <sup>†</sup>
Restricting Consent Payments	.69	.66	.21
Notification of Proposed Covenant Changes	.69	.66	.27
Accelerating Individual Claims Upon Payment Default	.78	.53	2.9 <sup>†</sup>

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