

RESTRICTIVE LOAN COVENANTS AND RISK ADJUSTMENT IN SMALL BUSINESS LENDING

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Small businesses rely very heavily on short- and intermediate-term debt for their financial needs. Unlike large businesses (typically corporations), small firms have fundamental difficulties accessing long-term debt and equity markets. Typically, their non-corporate form, higher business and financial risks, and related factors limit the availability of capital sources. Commercial banks represent the most significant source of debt financing for small firms and channel to them about half of all commercial and industrial loans (U.S. Small Business Administration 1989). These loans not only serve to sustain the operating needs of recipient firms, but also represent a large portion of the initial financing of new small businesses (Van Auken and Carter 1989).

This article is based on research into the use of restrictive loan covenants, a major mechanism by which banks are said to adjust for risk in small business lending. The purpose is to investigate whether this mechanism facilitates or impedes the flow of bank credit to the small business sector. The lending relationships between small firms and

banks will be explored and will provide the rationale for the use of restrictive loan covenants. The hypotheses to be tested deal with possible relationships between firm characteristics (age, size), loan characteristics (size, interest cost), bank characteristics (size, charter, and affiliation), and loan covenants. Results indicate that: more loan covenants are used with smaller firms and larger loans; large, independent state-chartered banks use loan covenants more than their industry counterparts; and, even though there is a slight inverse sensitivity in some banks between loan interest rates and the number of loan covenants, small firms may be paying unwarranted risk premiums.

SMALL BUSINESS/ BANK LENDING RELATIONSHIPS

Agency Problems and Small Business Risk

Banks encounter a series of risks when they lend to any client, and these risks are viewed as particularly acute with small firms. Many of these risks arise from agency problems present in the relationship between small companies and banks. When applied to the small business sector, agency theory describes the condition where owner-managers act as "agents" for the suppliers of capital (see Jensen and Meckling 1976). This condition, when left unmonitored, can lead to owners pursuing personal risk/return prefer-

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ences different from those of debt providers. Thus, the latter may have to incur costs to ensure that their preferences are given attention.

According to Pettit and Singer (1985), three agency problems are of particular concern to bankers in their lending to small firms: asymmetric information, wealth transfers, and "in kind" compensation. Small business owner-managers have more data on their company, which creates the possibility of an information vacuum existing between the parties. In addition, smaller firms have considerable operational flexibility, particularly in reacting to changes in technology or business conditions. This flexibility makes it easier for small firms to transfer assets (wealth) to other uses in response to a changing business environment; and this can alter, perhaps adversely for creditor banks, the company's risk-return posture. Finally, owner-managers can increase "in kind" compensation by manipulating perquisites, thereby diminishing even further the funds available to creditors. These problems can be seen as reflections of moral hazard, which lenders strive to offset with restrictive covenants.

Other studies lend support to the view of Pettit and Singer. Haugen and Senbet (1979) found that the cost of debt was related to the manager's incentive to transfer wealth from bondholders to stockholders by increasing the risk of the firm or decreasing investment opportunities. Lenders responded with higher interest rates. Cooley and Edwards (1982) state that owners of small firms prefer salary to dividends to avoid extra taxes and to circumvent restrictions on dividends made by most banks.

In addition to external agency problems faced by banks in lending to small firms, lending officers must be cognizant of their internal responsibilities

and not expose the bank and its owners to unwarranted risk. To ensure the financial strength of the bank, certain procedures and strategies are often adopted that may have an adverse effect on the availability or cost of funds to small firms. These procedures can easily be viewed by borrowers as banker recalcitrance or stubbornness. Small business borrowers must recognize this circumstance and work to ameliorate its effects, just as bankers must work to reduce the effects of the three agency problems highlighted by Pettit and Singer.

There has been some effort to identify the risks that banks face with small firms. Churchill and Lewis (1985) documented the higher risks of small business lending, but then investigated the added compensation in terms of fees, interest rates, and deposit balances held in the banks. They concluded that banks are adequately compensated and may be overcompensated. Fertuck (1982) found that rejection rates for loans are directly related to size, with smaller firms having the higher rejection rate. The reason bankers gave for rejection was that the perceived or real risks were just too great (i.e., competence of the borrower was not acceptable). Jankowicz and Hisrich (1987) paid particular attention to the areas perceived by bankers to bring the greatest risks. They concluded that, in the final analysis, bankers are often forced to use their intuition in making lending decisions. Leeth and Scott (1989) document the effort of lenders to collateralize debt in order to reduce the risks of lending. They especially point to the impact of this banking strategy on small, young firms. When economic conditions worsen, banks often move swiftly to implement new stiffer restrictions on small business lending. Gupta (1990) documented several such limits being

imposed as a result of the slowdown of 1989-1990, including greater collateral, higher fees, more restrictive covenants, and higher interest rates.

The lending decision is basically an application of portfolio theory, where a loan is evaluated on the basis of its risk-return contribution to a bank's asset portfolio. When banks are already reaching, or perhaps a bit beyond, the desired loan to deposit mix, they are forced to look carefully at their loan composition to see if the risk is complementary. If it is not, the loan is not approved. The strength and ability of the bank, then, is almost as important as the strength and ability of the borrower.

Loan Covenants

Financial markets have been unable to provide complete and costless solutions to agency problems. Accordingly, it follows that lenders may require certain guarantees against possible expropriation of their wealth by owner-managers (Barnea, Haugen, and Senbet 1981). These guarantees often come in the form of complex contracts that help to reduce the agency problems and risks outlined above. Loan covenants place contractual limits on the actions of owner-managers and serve to reduce the risk exposure of the lender. Myers (1977), in explaining the use of restrictive covenants in lending agreements, suggests that stockholders accept these added costs as part of the price of getting the needed funds to continue operations. Covenants, says Myers, are rational from the viewpoint of both borrower and lender. Smith and Warner (1979) state that the added costs of borrowing due to restrictive covenants are economically significant for the bank and the company. These added costs may be partially offset by the increased value of the firm due to the higher investment possibilities made available with the added funds.

In an important study that described the financial differences between large and small firms, Walker and Petty (1978) highlighted four major areas that are almost always addressed in loan covenants: dividend policy, liquidity, profitability, and financial leverage. Differences between large and small firms in these four areas suggest to bankers that there are either real or perceived risks in lending to small businesses, which in turn lead to the use of restrictive covenants. Black and Cox (1976) state that safety covenants that call for the subordination of other debt and restricting dividend payments increase the value of the firm. With dividend restrictions, the firms will be forced to look for more investment opportunities that will, in turn, increase the value of the firm. Cooley and Edwards (1982), however, have shown that because owners prefer salary to dividends, restrictions on the payment of dividends may not really address this agency problem.

Covenants are used by banks to address agency problems and their own portfolio risks. Their use has become a standard feature of lending to both large and small companies, but the higher risks (real or perceived) of small firms would argue that the use of restrictive covenants should be even more prevalent among this group. Because the bank is vitally interested in the borrower's ability to pay back the loan, covenants will be designed to strengthen collateral and ensure availability of cash to make loan payments.

HYPOTHESES AND METHODOLOGY

This study proposes two hypotheses:

H_1 : The number of loan covenants will vary depending on the age and size of the firms, the size of the loan, and the size, character, and affiliation of the bank.

If risks are greater for small firms and restrictive covenants are used to

address these risks, then there will be a greater number of covenants, and they will accordingly result in more restrictiveness for smaller firms. Because there is less historical information, younger firms are expected to have more covenants than older firms. In addition, since larger loans are usually granted to somewhat larger, more established companies (Elliehausen and Wolken 1990), larger loans are expected to have fewer covenants. The issue of bank size poses an interesting problem. Because large banks have more diversified loan portfolios and are more capable of assessing default risk than small banks (Gardner and Mills 1988), it is reasonable to assume that they would require fewer covenants. However, small banks are more likely to be local banks (Amel and Jacowski 1989) and may not have as great a problem with information asymmetry as larger, nonlocal banks. Therefore, since asymmetrical information appears to be such an important agency problem, we expect larger, nonlocal banks to require more restrictive covenants. On average, national banks are larger than state chartered banks, so national banks would be expected to require more covenants than state banks. The lending practices of banks affiliated in a holding company arrangement are usually dictated by the lead bank, typically a large, national bank. Therefore, it is expected that affiliated banks will want more covenants than independent banks.

H_2 : The greater the number of restrictive covenants, the lower the interest rate will be on the loan, regardless of the size or type of bank.

If banks really use covenants to reduce risk, then the price of the loan should be lower as the number of covenants is increased. If rates are not lower with an increased number of

covenants, either small businesses are paying interest premiums that are not fully warranted by risk, or covenants are not viewed by bankers as a means of reducing risk.

Twenty-nine specific loan covenants were examined in this study. They are divided into the five categories listed in table 1. The "Production and Investment Policy" category generally restricts investments, mergers and acquisitions, and use of assets; it also requires the maintenance of certain operating ratios. The "Dividends/Stock/Cash Conservation" category attempts to maintain the financial position of the company by restricting or prohibiting certain unapproved cash outlays. In the "Financing" category, the lender protects its position in the debt structure of the borrower by restricting additional debt and prescribing payments on current debt. The "Reporting Requirements" category aims to monitor the borrower's performance with regard to the covenants by requiring numerous documents. The "Other" category incorporates covenants not directly assignable to the previously delineated categories. For the purpose of analysis, all covenants are considered to be of equal importance to borrower and lender.

To determine the use of loan covenants, a stratified sample of 65 banks in the Dallas/Fort Worth metroplex was developed. The sample was based on charter (state or national), type (affiliated or independent), and size (large, more than \$50 million in deposits; or small, less than \$50 million in deposits). A letter was sent to the president or CEO of each of these banks inviting participation in the study. Personal contact followed, and 23 banks (34.4 percent) agreed to participate. Personal interviews were held with loan officers designated by the banks. Copies of actual loan agree-

Table 1
CATEGORIES AND TYPES OF LOAN COVENANTS

Category 1: Production and Investment Policy

1. Prohibit purchase of common stocks of other firms.
2. Prohibit/limit loans to others (especially subsidiaries).
3. Limit extension of credit to others.
4. Prohibit/limit salary or wage advances.
5. Prohibit sale/leasing of assets used in production.
6. Limit use of secured debt.
7. Prohibit mergers/acquisitions/restructuring.
8. Maintain certain levels in selected operating ratios.

Category 2: Dividends/Stock/Cash Conservation

9. Restrict dividends to specified levels.
10. Prohibit purchase of treasury stock.
11. Restrict salaries to certain levels.
12. Prohibit partial liquidations.

Category 3: Financing

13. No additional debt of either parent or subsidiary.
14. No new debt to take a priority position.
15. Limits on discretionary payments on subordinated debt.
16. Maintain certain levels in selected debt ratios.
17. Free from debt for specified period.
18. Prevent/limit sale-leaseback arrangements.
19. Restrict new leases and lease payments.
20. Capitalize leases into debt structure for analysis.

Category 4: Reporting Requirements

21. Periodic financial statements (balance sheet, income statement).
22. State and federal government reports (tax, SEC, etc.).
23. Use of generally accepted accounting principles.
24. Certificate of compliance from management that covenants and other agreements are being met.
25. Verification of insurance (especially on collateral).
26. Bank inspection of premises at any time.

Category 5: Other

27. Repayment schedule (specific).
28. Use of equity participation or warrants on stock.
29. Prepayment stipulations.

ments were requested for a sample of both large and small loans, along with information on the size of the company, in terms of sales and assets, and the age of the firm. A total of 204 loan agreements (123 small firms and 81 large firms) was obtained. Small firms were identified as those having less than \$15 million in sales. All of the loans were active through 1988, and none had been initiated prior to 1982.

Table 2 lists the general characteristics of the banks and the banking

origin of the loan agreements. For example, there were 12 small banks evenly divided between affiliated and independent, with seven being nationally chartered and five having state charters. The small banks accounted for 80 loan agreements divided as follows: 51 affiliated and 29 independent; 47 from nationally chartered banks and 33 from state chartered banks. Data for the large banks would be read in a similar manner (see table 2).

Table 2
SAMPLE BANKS AND LOAN AGREEMENTS
ACCORDING TO CHARTER, AFFILIATION, AND BANK SIZE

Panel A

Bank Participants	National	State	Total
Affiliated	3/4 = 7	3/3 = 6	6/7 = 13
Independent	4/2 = 6	2/2 = 4	6/4 = 10
Total	7/6 = 13	5/5 = 10	12/11 = 23

Where: [small/large]

Panel B

Loan Agreements	National	State	Total
Affiliated	31/37 = 68	20/32 = 52	51/69 = 120
Independent	16/25 = 41	13/30 = 43	29/55 = 84
Total	47/62 = 109	33/62 = 95	80/124 = 204

Where: [small/large]

To examine the two hypotheses, several statistical tests are employed. To test the first hypothesis that the number of loan covenants depends on firm and bank characteristics, a paired-comparison *t*-test is used along with two regression techniques. In addition, a regression analysis is used to determine the relationship between interest rates and the number of covenants, as proposed by the second hypothesis.

RESULTS

The first hypothesis states that firm and bank characteristics will influence the number of covenants used. An examination of the number of loan covenants per agreement for the large and small firms indicates that small firms had an average of 18.2 covenants and the large firms had only 10.8 (see table 3, panel A). This result is what had been expected. The second panel of table 3 shows an additional measure of the relationship between size of firm and use of covenants. The scores repre-

sent the percent of the total possible number of covenants for each category. For example, with 123 small firms and a total of eight covenants in category 1, there were a possible 984 observations (123×8). The actual count was 622, or 63 percent of this maximum. The remaining categories are shown in a similar manner. Small firms exceed large firms in all categories, usually by a substantial margin.

To test whether the difference in the number of covenants is numerically important, a paired-comparison *t*-test was run for each set of data. The *t* score shown in each panel of table 3 indicates that the number of covenants in loan agreements for small firms is significantly higher than the number used in agreements for larger firms.

A second test involved a regression analysis, where the number of covenants was related to each of the independent variables—bank charter, type of bank, bank size, firm size, loan size,

Table 3
DATA ON COVENANTS BY SIZE OF FIRM

Panel A			
Average Number of Covenants by Size of Firm			
Category of Covenants*	Small	Large	
	Number		
1	5.06	2.68	
2	2.57	1.05	
3	4.74	2.69	
4	4.93	4.19	
5	0.93	0.20	
Total	18.23	10.81	

T score for the difference is 4.4225, which is significant at a level of .01.

Panel B			
Percent of Possible Covenants by Size of Firm			
Category of Covenants*	Small	Large	
	Percent		
1	63	33	
2	64	26	
3	59	33	
4	82	70	
5	31	6	
Total	63	37	

T score for the difference is 6.2233, which is significant at a level of .001

Note: A paired comparison *t*-test measures whether the difference in the observations for each of the categories is significant. A *t* score is determined and evaluated within a statistical table to give the level of significance.

*See table 1 for respective categories and their components.

and firm age. The regression analysis had several interesting results (table 4). The tests showed that bank charter was significant in determining the number of covenants used, with state banks using more than twice as many covenants as national banks. Also, independent banks used 38 percent more covenants than affiliated banks. Both of these results are counter to expectations. Confirming expectations, however, large banks had more covenants than small banks for each charter and type, by a 74 percent

margin. Also as expected, firm size and loan size were significant, with smaller firms and smaller loans receiving more covenants. Firm age was not significant in this study. Table 4 shows the results by general characteristic in descending order of the *R*-squares (or the ability of an independent variable to explain the dependent variable).

A stepwise regression yielded the results shown in table 5. These results indicate that three bank variables—bank charter, bank size, and type of bank—explain more than 50 percent

Table 4
REGRESSION ANALYSIS OF NUMBER
OF COVENANTS TO BANK AND FIRM CHARACTERISTICS

Characteristics	F Value	R ²	Significance
Bank Charter*	49.189	.3340	.0001
Loan Size	22.134	.1842	.0001
Bank Size*	12.877	.1161	.0005
Firm Size	11.199	.1107	.0012
Bank Type	5.295	.0513	.0235
Use of Proceeds	1.290	.0162	.2596
Organizational Form	1.504	.0156	.2231
Firm Age	0.098	.0014	.7548

Note: Regression analysis is a general statistical technique used to analyze the relationship between a dependent variable and several independent variables. The objective of regression analysis is to use the independent variables to predict the dependent variable. A simple regression is used when a single dependent variable is predicted by a single independent variable as shown here. The R² value indicates the percent of the variance explained by the independent variable. Higher degrees of importance are attached to significance levels below .05.

*Average number of covenants by:

Charter: State - 11.0; National - 4.6.
Type: Independent - 9.1; Affiliated - 6.6.
Size: Large - 9.2; Small - 5.3.

Table 5
STEPWISE REGRESSION ANALYSIS OF SELECTED CHARACTERISTICS

Characteristic ^a	Order	Partial R ²	Cumulative R ²	F Value	Significance
Bank Charter	1	.2920	.2920	21.86	.0001
Bank Size	2	.1819	.4739	17.97	.0001
Bank Type	3	.0362	.5101	3.77	.0577
Organizational Form ^b	4	.0281	.5382	3.04	.0875
Firm Age ^b	5	.0200	.5582	2.20	.1441

Note: A step-wise regression examines the contribution of each predictor variable to the regression model up to a specified elimination criterion, in this case a default significance of .15. The attempt is to find a small subset of the predictor variables that explains most of the variation in the dependent variable. The predictor variables are listed in their order of importance to the model.

^aCharacteristics are selected on the basis of the R² or the explanatory power of the variable.

^bFirm age and organizational form were added to the regression only because of a .15 default significance level for entry into the model and not because of their contribution to the cumulative R².

(cumulative R²) of the variance in number of covenants, more than any combination of the firm variables.

The second hypothesis declares that with increased use of restrictive covenants, interest rates charged on loans would be lower since covenants would serve to lower the risk to lenders.

Among large firms in this study, interest rates ranged from floating prime to prime plus 1.5 percent. The smaller firms had rates ranging from floating prime to prime plus 3.0 percent. Table 6 gives the number of firms at various interest rate levels for both the large and small firms. Clearly, small

Table 6
NUMBER OF LOANS
AT DIFFERENT INTEREST RATES

Interest Rate (Percent)	Number of Small Firms	Number of Large Firms
Floating Prime	4	67
+ 0.50	2	2
1.00	20	7
1.25	3	0
1.50	17	5
1.75	1	0
2.00	45	0
2.25	4	0
2.50	16	0
3.00	11	0
Total	123	81
Average Interest Rate	$P + 1.85$ Percent	$P + 0.2$ Percent

firms have the higher interest rates, as well as the larger number of covenants.

When comparing firms of similar size, there is some evidence that more covenants will reduce interest rates. Interest rates were regressed against the number of loan covenants for all firms in the sample and then for each of the six categories of banks: large and small; affiliated and independent; state and national. As shown in table 7, interest rates (rounded) declined by .07 percent for each covenant in the loan agreements for the total sample. In other words, 14 covenants would lower the interest rate about 1 percent. Comparing firms of similar size within the six bank categories, interest rates are estimated to decrease by .05 percent for each covenant for national banks, .10 percent for state banks, .11 percent for independent banks, .04 percent for affiliated banks, and .08 percent for large banks. Significantly, interest rates were not affected by the number of covenants used by small banks.

These results indicate that while interest rates are somewhat related to

the number of covenants, the banks with rates that are most sensitive to the use of covenants are large, independent, state-chartered banks. If a firm can live with restrictive covenants, it should secure a loan from such a bank, since the interest rate will be reduced the most by the covenants.

Several possible conclusions may be drawn from this evidence. Perhaps banks make no conscious connection between the number of covenants and the rate of interest charged. Or it may be that banks view risk as being so much greater for small companies that a combination of more covenants and higher rates is needed to cover the costs of risk. Based on the fact that banks do not have a well-defined measure of small business risk, it appears a size bias causes both higher rates and more covenants to be levied against the smaller firms. Small firms may be paying interest rate premiums that are not fully warranted by extra risk. On the other hand, such premiums may allow banks to be more lenient in the monitoring process and more amenable to uncontested charges in the covenants when violations occur.

SUMMARY AND IMPLICATIONS

The main purpose of this article has been to review the issue of restrictive loan covenants used in lending practices of banks. All banks use loan covenants to help overcome the presence of risk that arises largely because of different agency problems in companies of varying sizes. A variety of agency problems was discussed, as were the real and perceived risks faced by lenders. The uses and purposes of restrictive covenants were then explained and two hypotheses were proposed.

Results show that more loan covenants are used with small firms. The number of restrictive covenants varied significantly with the type of charter of

Table 7
REGRESSION ANALYSIS OF INTEREST RATE SENSITIVITY TO BANK VARIABLES

Characteristic	Parameter Estimate	F Value	R ²	Significance
Total sample	-0.074	26.978	.235	.0001
Charter: National	-0.054	4.270	.082	.0442
State	-0.098	14.265	.273	.0005
Type: Independent	-0.111	24.901	.401	.0001
Affiliated	-0.037	4.082	.076	.0487
Size: Large	-0.078	20.502	.283	.0001
Small	0.002	0.005	.001	.9418

the bank (state or national), the size of the bank (large or small), and the type of bank (affiliated or independent). On average, the number of covenants used in loan agreements by large, independent, state-chartered banks was greater than for other banks. These same banks had interest rates that were more sensitive to the number of covenants, suggesting some connection between the use of covenants and interest costs to borrowers, especially for firms of comparable size. This matching does not seem to result in lower costs of borrowing when comparing large and small firms, since small firms have substantially higher interest rates along with significantly more covenants.

Banks will continue to be an important source of funds for all businesses, especially small firms that are unable or unwilling to go to public markets for funds. As a result, the higher costs of borrowing borne by these smaller firms will continue. For banks, their returns will continue to be attractive compensation for small business lending.

Two implications emerge from this research. First, banks should be able to improve their competitive position with small firms by a more careful matching of risk, loan covenants, and interest rates. Such a review could result in

increased clients among small firms while improving the profitability of the bank's loan portfolio. Second, small companies might be more selective in the types of banks they approach for debt capital, seeking greater benefit for covenants imposed by loan agreements.

Future research could have both borrowers and lenders rank-order the covenants as to restrictiveness rather than assume equal restrictiveness as done in this study. Then the importance of certain covenants could be highlighted. Also, these results are regional; thus, a study with national scope could provide corroborative evidence.

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