

Do Bank Loan Relationships Still Matter?

By

Tammy Berry
Department of Finance
Northern Illinois University
DeKalb, IL 60115-2854
(815) 753-7882

Steven Byers
College of Business
Idaho State University
Pocatello, ID 83209-8020
(209) 236-4509

Donald Fraser
Department of Finance
Texas A&M University
College Station, TX 77843-4218
(979) 845-3514

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Abstract

We find that bank loan announcement abnormal returns have diminished considerably since 1980. Indeed, bank loan announcements produced no statistically significant abnormal returns over the 1996-2000 period. These results are consistent with the argument that increasing competition in financial markets has reduced the value of bank loan relationships. We also find that loan announcement returns are more likely to be positive for syndicated loans, and in periods of high credit risk spreads.

Do Bank Loan Relationships Still Matter?

I. Introduction

Extensive prior research suggests that the announcement of a loan agreement produces positive abnormal returns for the borrowing firm. The specialization, monitoring, screening, and certification functions associated with lending relationships may contribute to these positive abnormal returns. The informational benefits that are associated with relationship banking, and that underlay the positive abnormal returns, presumably exceed any “holdup” costs potentially associated with relationship banking (Boot (2000)). These positive abnormal returns may also stem from the contractual flexibility of bank lending that supplements the monitoring function performed by the lender (Preece and Mullineaux, 1996).¹

In recent years, however, there has been increasing evidence and discussion of the changing nature of bank intermediation and the value of bank relationships. Boot (2000) points out that the proliferation of direct funding available to firms in the financial markets has started to “seriously challenge banks’ future as relationship bankers.” When investment banks underwrite public issues, they encounter credit risk and the risk involved in placing the securities, moving their role much closer to that of a traditional bank involved in lending and placing syndicated loans. A recent article in the financial press² described how banks are acting less like lenders and more like middle-men between borrowers and investors, i.e., the banks are acting more like bond markets. These trends suggest that the traditional market reaction to news of a bank loan may also have changed. Virtually all of the research in the extensive literature on loan

¹ Bank loans are often renegotiated. Public-debt contracts are seldom restructured. Banks loans also are usually shorter term than public debt contracts and have substantial covenants.

² Wall Street Journal, Tuesday, September 17, 2002.

announcements uses samples that include the 1970s, 1980s, and in a few cases the early 1990s. By combining the earlier sample periods with more recent data, our paper seeks to determine how the well-established loan announcement reaction has survived the changes in traditional bank lending relationships.

Empirical evidence by James (1987) and by Lummer and McConnell (1989) show positive and significant abnormal returns associated with loan announcements. While James does not distinguish between new loans and renewals, Lummer and McConnell find that positive abnormal returns are limited to renewals. They report that announcement period returns for new loans are statistically insignificant. Abnormal returns in prior studies appear to be associated with the quality of the lender (Billett, Flannery, and Garfinkel (1998), the size of the borrower (Slovin, Johnson, and Glascock (1992), the creditworthiness of the borrower (Best and Zhang (1993), the nature of the lender (Byers, Fraser, and Shockley (1998), and the syndication characteristics of the loan agreement (Megginson, Poulson, and Sinkey (1993) and Preece and Mullineaux (1996). Billett, Flannery, and Garfinkel (2001) also show that, although loan announcement returns are generally positive, borrowers significantly underperform over the three years following the announcement.

To the extent that the positive abnormal returns from loan announcements stem from unique characteristics associated with relationship banking, recent changes in the structure of the banking and financial system may have eroded these benefits. As Boot (2000) points out, relationship banking has two critical dimensions: 1) the production by a financial intermediary of customer-specific information, generally proprietary, and 2) the existence of multiple interactions with the same customer over time and/or products.

These characteristics describe a bank centered financial system rather than a market centered financial system. Yet the role of commercial banks and other financial intermediaries in the lending process has diminished greatly.

James and Smith (2000) point out that the share of bank credit in the financing of U. S. corporations has diminished substantially. Corporations increasingly depend upon financial markets rather than financial intermediaries for their financial needs. For example, the Federal Reserve's Flow of Funds Accounts report that nonfarm nonfinancial corporate business used market sources (commercial paper and corporate bonds) for funding in 1980 in amounts roughly equal to their use of bank credit. By the year 2000, however, the credit markets provided roughly \$5 to nonfarm nonfinancial corporate businesses for every \$1 provided by commercial banks. These structural changes in the financial system raise questions about the durability of these positive abnormal loan announcement returns.

While the dramatic changes in the financial system may have affected the market response to bank loan agreements, the direction of these changes is not a priori obvious. As Boot and Thakor (2000) point out, increasing interbank competition provides incentives for banks to make more relationship loans but each loan has lower added value. In contrast, increasing capital market competition reduces the amount of relationship lending but increases the value of each relationship loan. To the extent that recent structural changes in the financial system have contributed both to increased interbank competition and also to increased capital market competition, the effect of these structural changes could be either to increase or decrease the value of a loan

relationship. The issue then is fundamentally an empirical one and one that our paper provides evidence on.

We use a very large sample of bank loan announcements over an extended (21 year) period to provide evidence on the effects of these structural changes in the financial system on the importance of bank loan announcements. We also use this data set to explore a number of related issues regarding the determinants of these loan announcement returns. Our results provide evidence that the market response to bank loan announcements has diminished. Indeed, we fail to observe any statistically significant abnormal returns in the 1996-2000 period, either for new loans or renewals. Moreover, our evidence suggests that loan announcement returns are more likely to be positive for syndicated loans and during periods of stress in financial markets.

Section II provides information on our data and methodology. Section III provides the empirical results while Section IV provides concluding observations.

II. Data and Methodology

We identify loan announcements by examining press releases obtained from searching Lexis/Nexus over the period 1980 to 2000. We exclude any announcements of non-bank lending agreements. The press releases are then filtered to eliminate contaminating information such as earnings or dividend announcements made by the borrower on the prior day, day of, or the day after the loan announcement. Finally, to be included in the sample, firms must have daily stock price data available on the Center for Research in Security Prices data tapes and accounting information available on the

Compustat Industrial tapes. This process results in a sample of 977 uncontaminated loan announcements over the twenty-one year period 1980-2000.³

Following Lummer and McConnell (1989), bank loans are classified into new loans and renewals. We classify each announcement as new when the press release indicates the loan agreement is new or when there is no indication in the press release that they had been renewed with the same lender; otherwise the announcement is classified as a renewal. Forty-six percent of the announcements (454 agreements) are classified as renewals compared to fifty-four percent new loan announcements (523 agreements).

Preece and Mullineaux (1996) argue that the benefits to bank loan relationships flow not only from bank monitoring but also encompass the renegotiability dimensions of the private debt contract. They test this hypothesis using syndicated debt and find a statistically significant and economically meaningful difference between loan announcement returns for syndicated and nonsyndicated debt, with the returns diminishing as the number of participants in the syndicate increase. Following Preece and Mullineaux, we also classify each announcement as syndicated if the press release indicates a syndicate or group of banks is involved in the lending agreement. Sixty-five percent of the announcements (636 agreement) are classified as syndicated loans.

James and Smith (2000) argue that bank loan relationships are especially valuable when credit market spreads are unattractive as bank loan commitments provide insurance against unfavorable changes in the cost and/or availability of credit from the capital markets. We thus gather information on the credit risk spreads that prevailed during each of our loan announcement periods. James and Smith (2000) also argue that the bank loan

³ The regression results reported later in the paper use only 941 firms due to missing data for some of the independent variables.

announcement has particular value during periods when companies view their stock as being undervalued, thereby limiting the use of equity as a means of financing. Following this logic, we calculate a variable that measures the changes in the stock price of each borrower in the year prior to the announcement.

Table 1 provides descriptive statistics on the sample. More than one-half (54%) of the loans were new, and 65% were syndicated. Median total assets of the borrower was \$176 million, though the existence of a few large borrowers skewed the distribution so that the mean of total assets was \$1.111 billion. Many of the borrowers were experiencing relatively rapid growth, with a median growth rate of 15.95%. The borrower's cumulative equally weighted market adjusted return in the year prior to the loan announcement had a mean of -10.39% and a median of -23.41%, a result that is consistent with the conjecture of James and Smith that loan agreements are particularly important to a borrower in periods when its stock is depressed. The borrower's experienced a relatively high 3.64% (mean) standard deviation of monthly stock returns in the year prior to the loan agreement. Tobin's Q, measured as the borrower's market value of equity plus book value of debt divided by total assets, had a median value of 1.30, while long term debt financed 22% (median) of total assets for the borrowers in the sample.

We perform an event study surrounding the announcement of the bank loan agreement using the market model with an equally weighted index. Because we obtain our loan announcements primarily from wire services rather than printed news sources,

we use the two-day window (0, +1) to measure abnormal returns.⁴ We perform an event study for the entire sample period and for a variety of subperiods.

III. Empirical Results

A. Univariate results

The results of our event studies for the entire sample of loan announcements are reported in Table 2. The mean two-day cumulative abnormal return (CAR) for the entire 21 year sample period is 0.717%, which is statistically significant at the .001 level, a result that is consistent with related studies. 506 (51.79%) of the 977 loan announcements are positive and the Wilcoxin rank statistic indicates that this difference is statistically significant at the 1% level. Loan announcement returns are positive and statistically significant for both new loans and renewals, a result that is inconsistent with those reported by Lummer and McConnell (1989) but consistent with the evidence provided by Best and Zhang (1993) and Billett, Flannery, and Garfinkel (1995). Abnormal returns for renewals are marginally higher though the differences are not statistically significant.

Table 2 also presents the CARs for two separate subperiods – 1980-1990, and 1991-2000. The time patterns of the loan announcement abnormal returns over the two subperiods are particularly interesting. They do suggest a significant decline in the abnormal returns over the 21-year period of the analysis, particularly for renewals. For example, the abnormal returns for all loans are positive and statistically significant in the subperiod 1980-1990. Both new loans and renewals experience positive and statistically significant abnormal returns during this period, with renewals showing especially large abnormal returns. The Wilcoxin rank coefficients are also statistically significant for this

⁴ Our results are generally robust to alternative event window specifications including (-1,0) and (-1,+1).

time period. However, over the more recent period - 1991-2000 -, the loan announcement returns diminished considerably (to 0.55) for all loans and became only marginally significant. Perhaps most important, neither the new loans or the renewals abnormal returns are statistically significant in the 1991-2000 period. Moreover, the Wilcoxin rank statistic is statistically significant only for new loans and then only at the 10% level.

We explore the time trend in bank announcement returns further by forming 6 year moving averages of these returns for each year in our sample period. The first such 6 year average is computed for the 1980-1985 period, the second for the 1981-1986 period, and so on for the entire time of our analysis. The last 6 year moving average is for the 1995-2000 time frame. We compute both the CARs and the number positive and negative for each 6 year period. If relationship banking has become less valuable during the time period of our study, we would expect that the CARs would become smaller and less statistically significant over time.

Figure 1 provides a graph of the 6 year moving averages. For completeness, we present the averages for the 0,+1 CARs, the -1,0 CARs, and the -1,+1 CARs. The information contained in this figure is striking and clearly shows a downward pattern to the CARs. Indeed, the bank loan announcement returns seem to be positive and relatively unchanged during the 1980s but then fall substantially in the 1990s. By the late 1990s the CARs have declined dramatically and approach zero. These results are consistent for all three event date time periods.

More specific data on the time trends of the abnormal returns are shown in Table 3. Beginning in the early 1980s, the 0,+1 CARs were highly significant and their values

approached a positive 1%. This pattern persisted through the early 1990s. However, by the mid 1990s the values of the CARs diminished and they became statistically insignificant. The same pattern is observed for the mix of positive and negative CARs.

We attempted to quantify the downward slope of this pattern by regressing the 6 year moving averages on a time dummy variable. These results (not shown) clearly indicate a downward trend to the loan announcement returns. Focusing on the 0,+1 event window, for example, the coefficient of the time trend dummy variable is -.038, statistically significant at the 1% level.

It may, of course, be true that our results reflect the peculiarities of the sample selected for our analysis. To provide some insights into this possibility, we attempted to replicate the results of James and Lummer and McConnell with our data set.

Unfortunately, the time period of our study did not overlap perfectly with those either of James or of Lummer and McConnell. For example, James' data were drawn from the 1974-1983 period (while our data begin in 1980), and Lummer and McConnell's data cover the 1976-1986 period. However, for the time periods that overlap, our results are consistent both with James and with Lummer and McConnell. For example, James reports a positive and statistically significant return of 1.93%. We report a positive and statistically significant return of 1.17%. Lummer and McConnell report a positive and statistically significant return of 0.61% for all loan announcements, with -0.01% (not significant) for new loans and +1.24% (statistically significant) for renewals. For overlapping time periods, we find a positive and significant CAR for all loans of 0.74%, with new loans at -0.02% (not significant) and +1.83% (significant) for renewals.

The changes over time in loan announcement abnormal returns that we have observed may not reflect any alterations in the value of relationship banking but may simply be due to changes in the nature of borrowing firms. For example, loan announcement abnormal returns may be high in one period because the sample contains an unusually high number of high risk borrowers. To explore this issue, we calculated the relevant financial ratios for four subperiods: 1980-85, 1986-90, 1991-95, and 1996-2000. These results are shown in Table 4.

The evidence from Table 4 suggests that there have been some important changes in the financial characteristics of borrowers. The nominal book value of assets appears to have declined slightly (p value of 0.16). However, since these values have not been adjusted for inflation, it is clear that the real value of the total assets of the borrowing firms have fallen considerably. This is consistent with observed trends in the financial markets in which larger firms have shifted from bank financing to capital markets, leaving commercial banks with smaller (and perhaps more risky) borrowers. The book value of equity appears to have increased (p value of .07), though the growth appears to be centered in the most recent period. While profitability, as measured by return on assets, shows no trend, there appear to be important changes in financial leverage (less borrowing) and in asset growth rates (faster growth in the most recent period). Moreover, market based financial indicators for the borrowers also appear to have changed. Borrowers experience increased volatility in their stock over the sample period. While borrowers are generally stock market underperformers, the degree of underperformance has expanded over time.

These significant changes in borrower characteristics would suggest that the simple univariate analysis discussed above may not fully reflect the changing value of loan announcements. We therefore explore this issue in a multivariate framework in the following sections of the paper.

B. Multivariate results

1. The Basic Model

Table 5 presents the results for our basic model. In this model, we regress the two day abnormal returns on the size of the borrower (LASSETS), the return on assets of the borrower (ROA), the borrower's leverage (LEVERAGE), the borrower's Tobin Q (TOBINQ), the borrowers change in total assets during the prior year (ASSTCHNG), a dummy variable that takes a value of 1 if the loan is a renewal (RENEWAL), a dummy variable that takes a value of 1 if the loan is syndicated (SYNDICATE) and the standard deviation of the borrower's stock returns. We also include a time dummy variable that takes a value of 1 prior to 1996 and a value of 0 in other periods (PRE1996DUM). A statistically significant value for this coefficient would be consistent with the argument that loan announcement returns have diminished and become insignificant. We provide the results for the full sample, with the incorporation of the dummy variable to indicate whether the loan is new or a renewal, and then we present separate regressions for new loans and for renewals

Focusing initially on the full sample results, the standard deviation of prior year returns is statistically significant in its relationship to the loan announcement abnormal returns both for the entire sample and for new loan announcements. Borrowers with high standard deviations in their returns – presumably more risky borrowers – experience, as

expected, higher loan announcement returns. This is consistent with prior research. For renewals, however, there is no significant relationship. Other variables – size of the borrower, profitability, and financial leverage are not statistically related to the loan announcement abnormal returns for any of the equations.

The results of the syndication variable are particularly interesting. Borrowers in which the loan is syndicated experience positive and highly significant abnormal returns for the full sample. As Dennis and Mullineaux (2000) point out, loans are more likely to be syndicated if there is greater transparency about the borrower, so that banks are more likely to retain loans to their lower quality borrowers. The syndication of higher quality loans might suggest that their loan announcement returns would be small or insignificant. In fact, Preece and Mullineaux find that announcements of syndicated loans are associated over the 1980-87 period with lower abnormal returns than the announcement of nonsyndicated loans. However, syndicated loans are evaluated both by the originating bank and by the participants in the syndicate, so that the certification effect may be greater for these syndicated credits. Moreover, Simmons (1993) reports that the overwhelming fraction of loans that have been syndicated pass scrutiny by bank examiners, thus suggesting that the fact that the loan has been syndicated provides further evidence of the quality of the borrower.

The renewal dummy variable for the full sample is not statistically significant, indicating no important differences in the abnormal return patterns for renewal vs. new loans. However, the separate regressions for the new loans and for the loan renewals suggest some differences in terms of the determinants of the abnormal returns. For example, while the syndicate dummy variable is highly significant (1% level) in the new

loan sample, it does not approach statistical significance in the loan renewal sample. This is perhaps not surprising as the important loan decisions for syndications are usually made at the creation of the syndicate.

We approach the question of whether the benefits of relationship banking have diminished by including a time trend dummy variable in the regression. This variable takes a value of 1 for the first 1980-1995 period, and a value of 0 for the 1996-2000 period. If the structural changes in the financial system have diminished the value of relationship banking, we would expect the variable to be more significant.

As shown in Table 5, the time trend variable – referred to as the PRE1996DUM – is positive and statistically significant (p value of 1.5%) in the regression equation that incorporates all the loan announcements, even when accounting for changes in the mix of borrowers and for syndication and other features. For the new loan sample, the time trend variable remains positive in sign and is statistically significant at the 3.5% level. For renewals, however, the time trend dummy variable does not approach statistical significance. These latter results suggest that the diminution in the value of bank loan relationships has been greater for loan renewals than for new loans, a result that is consistent with the univariate evidence presented in Tables 2 and 3, and with Figure 1.

C. The Influence of Market Environment

1. Credit risk spreads

We also explore the influence of differences in the market environment on loan announcement abnormal returns. In particular, we provide evidence in Table 6 on the potential effects of stresses in the credit markets on the loan announcement abnormal returns. Hadlock and James (2002) have suggested that the value of bank loan

announcements is greatest during periods when access to the credit markets is either impossible or extremely expensive.

The model presented in Table 6 is essentially the same as in Table 5 except that variations in credit spreads have been added to the model. We use two dummy variables: SPRDUM5 which takes a value of one when the BAA-AAA bond spread is less than or equal to its 5th percentile over the sample period (this we refer to as tranquil financial markets) and SPRDUM95 which takes a value of one when the BAA-AAA spread is equal to its 95th percentile (this we refer to as a stressful financial market).

The results in Table 6 suggest that loan announcements are affected by conditions in the credit markets. For periods when the credit spreads are extremely high, there is a large, positive, and statistically significant relationship between renewal announcements and the credit spread. Indeed, the SPRDUM95 variable indicates that the loan announcement returns for renewals are over 4% during periods of very high credit spreads, a result that may explain the high loan renewal abnormal returns in the 1980-85 period. In fact, 45% of the high credit risk premium took place in the 1980-85 period. Recall that Lummer and McConnell found positive loan announcement returns for renewals during their sample period. That period – 1971-1985 – overlaps with years of very high credit risk spreads, as shown in Table 6. Their results may, therefore, be attributable to these unusual periods.

Since our results for the syndicated loan variables are contrary to those of Preece and Mullineaux (who found that abnormal returns for syndicated loans are substantially less than for nonsyndicated loans), we did a simple univariate comparison of our syndicated loans versus our nonsyndicated loans. These results (not shown) indicated

that there is no statistical differences in the loan announcement returns for the two groups. There are, however, a number of other differences. As expected, syndicated loans are much larger (by a factor of 10) than nonsyndicated loans, borrowers in syndicated loans have more long term debt, lower standard deviation of returns, greater growth in assets, and are more profitable. These results are generally consistent with those of Dennis and Mullineaux (2000). Syndicated loans are also more likely to take place when credit spreads are high.

2. Undervaluation

Table 7 presents the results of incorporating into our basic model variables that measure the prior year's market adjusted cumulative returns. We incorporate this as a continuous variable (CUMEW) and then separately as two dummy variables, CUMDUM5, a dummy variable that is equal to one when the prior year market adjusted return is less than or equal to its 5th percentile (undervaluation) and CUMDUM95, a dummy variable that is equal to one when the prior year market adjusted return is greater than or equal to its 95th percentile (overvaluation).

The CUMEW variable is negatively associated with the loan announcement abnormal returns for both new loans and renewals and this negative relationship is statistically significant for loan renewals. The undervaluation variable (CUMDUM5) is not significantly related to the announcement period returns, suggesting that the stock undervaluation is not an important factor in affecting loan announcement returns. However, CUMDUM95 variable is negatively related to the loan announcement returns and statistically significant at the 1% level for the renewals, suggesting that the bank credit relationship is less valued in times of high stock prices for the borrower.

IV. Conclusions and Implications

We find strong evidence to suggest that loan announcement returns have diminished considerably and have even become insignificant in recent years. While loan announcement returns were positive and statistically significant during the 1980s and early 1990s, a result that is consistent with the findings both of James and Lummer and McConnell, the returns became statistically insignificant during the mid and late 1990s. Our results are not affected by changes in the composition of borrowers or in borrower credit risk, as revealed by our multivariate analysis. Loan announcement returns are more likely to be positive for new announcements than for renewals. We also find, consistent with the conjecture of James and Hadlock, that loan announcement returns are affected by credit conditions – especially extreme credit conditions – and by the overvaluation or undervaluation of the borrower’s stock. The syndication characteristic of the loan also appears to affect the announcement returns, with, contrary to prior research, abnormal returns being more positive for syndicated than for nonsyndicated loans. This is consistent with the argument that the dual credit evaluation process associated with multilateral syndicated loans provides extra certification as compared to the bilateral process for nonsyndicated loans.

To the extent that loan announcement abnormal returns may be taken as a proxy for the value of bank loan relationships, we conclude that bank loan relationships matter less – indeed much less -- than previously. This result is consistent with the diminished role of commercial banks in the credit flow process and the shift towards a more market based financial system. It may also reflect changes in bank pricing strategies associated with increasing diversity of bank products and of the expansion in syndicated lending.

References

- Best, R., and H. Zhang, "Alternative Information Sources and the Information Content of Bank Loans," Journal of Finance v. 48, No. 4 (1993), 1507-1523.
- Billett, M., M. Flannery, and J. Garfinkel, "The Effect of Lender Identity on a Borrowing Firm's Equity Return," Journal of Finance, June 1995, v. 50, No. 2, 699-718.
- Billett, M., M. Flannery, and J. Garfinkel, "The Long-Run Performance of Firms Following Loan Announcements," Working Paper, 2001.
- Boot, A., "Relationship Banking: What do we know?," Journal of Financial Intermediation, 9 (2000), 7-25.
- Boot, A. and A. Thakor, "Can Relationship Banking Survive Competition?," Journal of Finance, Vol. LX, No. 2, April 2000, 699-713.
- Byers, S., D. Fraser, and R. Shockley, "Lender Identity and Borrower Returns: The Evidence From Foreign Bank Loans to U. S. Corporations," Global Finance Journal, 9 (1998), 81-94.
- Chen, A., S. Mazumdar, and M. Hung, "Regulators, Lender Identity, and Bank Loan Pricing," Pacific-Basin Finance Journal, 4 (1996), 1-14.
- Dennis, S., and D. Mullineaux, "Syndicated Loans," Journal of Financial Intermediation, Vol. 9, 2000, 404-426.
- Diamond, D., "Financial Intermediation and Delegated Monitoring," Review of Economic Studies, 51 (1984), 393-414.
- James, C., "Some Evidence on the Uniqueness of Bank Loans," Journal of Financial Economics, 19 (1987), 217-238.
- James, C. and C. Smith, "Are Banks Still Special? New Evidence on Their Role in the Corporate Capital-Raising Process," Journal of Applied Corporate Finance, 13, 1 (2000), 52-63.
- Lummer, S., and J. McConnell, "Further Evidence on the Bank Lending Process and the Capital Market Response to Bank Loan Agreements,," Journal of Financial Economics, 21 (1989), 99-122.
- Meggison, W., A. Poulsen, and J. Sinkey, "Syndicated Loan Announcements and the Market Value of the Banking Firm," Journal of Money, Credit, and Banking, 27, 2 (1995), 452-474.

- Preece, D., and D. Mullineaux, "Monitoring, Loan Renegotiability, and Firm Value: The Role of Lending Syndicates," Journal of Banking and Finance, 20 (1996), 577-593.
- Preece, D., and D. Mullineaux, "Monitoring by Financial Intermediaries: Banks Versus Nonbanks," Journal of Financial Services Research, 4 (1994), 191-200.
- Simmons, K, "Why Do Bank Syndicate Loans?," Federal Reserve Bank of Boston New England Economic Review, 1993, 45-52.
- Slovin, M., S. Johnson, and J. Glascock, "Firm Size and the Information Content of Bank Loan Announcements," Journal of Banking and Finance, 16 (1992), 1057-1071.

Figure 1

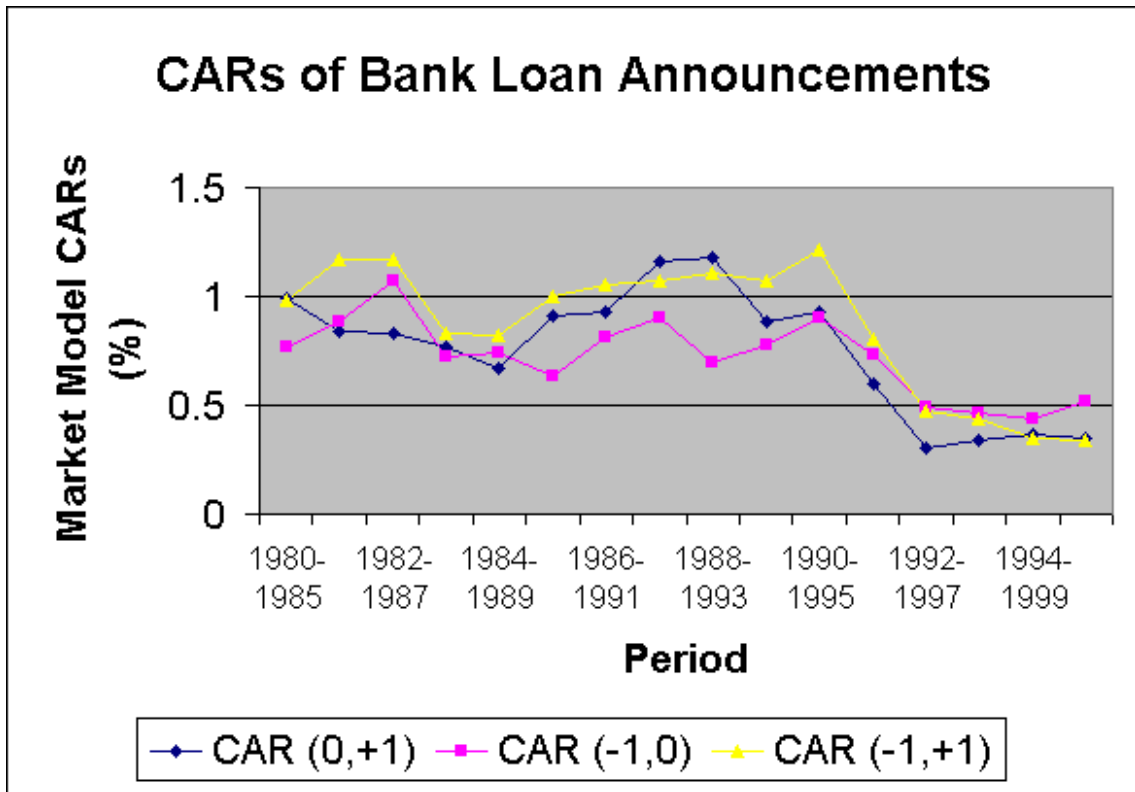


Table 1

Sample summary statistics of the financial characteristics for bank loan announcements between 1980 and 2000. All values are year-end prior to the loan announcement. Abnormal return is the two day (0,+1) announcement excess return using the market model.

	Mean	Median	Minimum	Maximum
Percentage of New Loans	54%	-	-	-
Percentage of Syndicated Loans	65%	-	-	-
Book Value of Total Assets (millions) of Borrower	1,111	176	1.94	87,985
Market Value of Equity (Millions) of Borrower	4,615	113	.83	1,851,862
Borrower's Percentage Change in Total Assets One Year Prior to Loan Announcement	60.75%	15.95%	-81.92%	11491.46%
Borrower's Cumulative Equally-Weighted Market-Adjusted Return One Year Prior to Loan Announcement	-10.39%	-23.41%	-162.18%	775.61%
Borrower's Standard Deviation of Monthly Stock Returns One Year Prior to Announcement	3.64%	3.32%	0.91%	14.46%
Borrower's Market Value of Equity Plus Book Value of Debt Relative to Total Assets (Tobin's Q)	1.65	1.30	0.43	14.59
Borrower's Long-Term Debt to Total Assets (debt ratio)	0.25	0.22	0.00	1.32

Table 2
Loan Announcements Over Time

The following table reports event study results for 977 firms announcing a loan agreement with a bank during the sample period 1980 to 2000. Mean cumulative abnormal returns (2-Day CAR) are reported for the (0,+1) window using the Market Model with an equally weighted index. The # positive, # negative, and the Wilcoxin-signed rank statistic are also for the (0,+1) window. (*, **, ***, indicate significance at the .10, >.05, and >.01 levels respectively.)

Period	All Loans	New Loans	Renewals
1980-2000	0.71*** 506:471***	0.63** 269:254**	0.80*** 237:217**
1980-1990	0.93*** 224:195*	0.65* 124:116	1:31*** 100:79**
1991-2000	0.55* 282:276	.62 145:138*	0.48 137:138

Table 3
Time Trends in Announcement Period Returns

This Table shows the bank loan announcement period returns for successive, rolling 6-year periods from 1980 through 1990. The first six-year period is 1980-1985. The second five year period is 1981-1986, and the other periods follow in a similar fashion. The -0,+1 announcement period returns are presented.

Time Period	Announcement Period Returns	Positive:Negative
1980-1985	0.99***	118:100***
1981-1986	0.84***	113:98***
1982-1987	0.83***	113:90***
1983-1988	0.77**	115:94**
1984-1989	0.67*	114:102*
1985-1990	0.91**	125:106**
1986-1991	0.93**	129:112**
1987-1992	1.16***	135:108***
1988-1993	1.18***	140:130**
1989-1994	0.88***	159:151*
1990-1995	0.93***	183:177
1991-1996	0.60*	200:195*
1992-1997	0.30	202:210
1993-1998	0.34	207:220
1994-1999	0.37	193:196
1995-2000	0.35	163:167

- * indicates statistical significance at the 10% level
- ** indicates statistical significance at the 5% level
- *** indicates statistical significance at the 1% level

Table 4
Trends in Borrower Characteristics

The following table reports median values of financial characteristics for firms announcing a loan agreement with a bank during the sample period 1980 to 2000 divided into four subperiods. The first number represents the number of borrowers in an industry within the respective subperiod. The number in parentheses represents the percent of total borrowers for that subperiod. The test of trends is a nonparametric test for trends across subperiods (p-values are in parentheses). The test of trends is reported for the entire sample and for new vs. renewals. R and N represent results of the test of trends for renewals and new loan announcements, respectively.

Financial Characteristic	Sub-Period				Test of Trends	
	1980-1985	1986-1990	1991-1995	1996-2000	Full Sample	(P-value)/ Sign
Book Value of Total Assets (millions)	210	177	158	169	-1.39 (0.16)	R (0.60)/ - N (0.20)/ -
Market Value of Equity (millions)	135	75	100	166	1.80 (0.07)	R (0.05)/ + N (0.45)/ +
Operating Income Before Depreciation and Extraordinary Items Normalized by Total Assets	12.2%	9.2%	11.5%	12.0%	0.44 (0.66)	R (0.09) + N (0.44)/ -
Long-term Debt to Total Assets	.26	.25	.20	.20	-4.42 (0.00)	R (0.00)/ - N (0.00)/ -
Percentage Change in Total Assets One Year Prior to Announcement	14.39%	12.60%	13.27%	25.22%	3.56 (0.00)	R (0.00)/ + N (0.10)/ +
Standard Deviation of Stock Returns One Year Prior to Announcement	3.00%	3.30%	3.31%	3.68%	5.48 (0.00)	R (0.02)/ + N (0.00)/ +
Cumulative Market Adjusted Stock Returns One Year Prior to Announcement	-16.4%	-19.4%	-30.3%	-24.2%	-2.44 (0.01)	R (0.34)/ - N (0.02)/ -

Table 5
Multivariate Regressions

Ordinary least squares regressions. The dependent variable is the borrower's two-day abnormal return around a bank loan announcement. Numbers in parentheses are p-values. Standard errors are robust to heteroskedasticity using White's correction.

	Full Sample	New Loans	Renewals
LASSETS	0.0003 (0.832)	0.0008 (0.576)	-0.0010 (0.639)
ROA	-0.0142 (0.442)	-0.0228 (0.298)	0.0076 (0.778)
LEVERAGE	-0.0096 (0.310)	-0.0080 (0.539)	-0.0101 (0.458)
TOBINQ	-0.0020 (0.262)	-0.0029 (0.228)	-0.0014 (0.603)
ASSTCHNG	0.0006 (0.416)	0.0006 (0.405)	-0.0025 (0.263)
RENEWAL	-0.0011 (0.764)		
SYNDICATE	0.0104 (0.023)	0.0179 (0.004)	0.0007 (0.919)
SDRETURNS	0.7207 (0.002)	1.0367 (0.001)	0.2663 (0.356)
PRE1996DUM	0.0106 (0.015)	0.0126 (0.035)	0.0055 (0.379)
CONSTANT	-0.0285 (0.042)	-0.0466 (0.010)	0.0024 (0.906)
N	941	505	436
R ²	.0463	.0941	.0139

Table 6
Credit Spread Regressions

Ordinary least squares regressions. The dependent variable is the borrower's two-day abnormal return around a bank loan announcement. SPRDUM5 is a dummy variable equal to one when the BAA-AAA spread is less than or equal to its 5th percentile. SPRDUM95 is a dummy variable equal to one when the BAA-AAA spread is greater than or equal to its 95th percentile. Numbers in parentheses are p-values. Standard errors are robust to heteroskedasticity using White's correction.

	Full Sample	New Loans	Renewals
LASSETS	0.0004 (0.735)	0.0009 (0.542)	-0.0005 (0.796)
ROA	-0.0141 (0.448)	-0.0228 (0.302)	0.0107 (0.686)
LEVERAGE	-0.0115 (0.223)	-0.0096 (0.465)	-0.0136 (0.311)
TOBINQ	-0.0020 (0.266)	-0.0031 (0.204)	-0.0009 (0.746)
ASSTCHNG	0.0006 (0.420)	0.0006 (0.417)	-0.0022 (0.326)
RENEWAL	-0.0014 (0.709)		
SYNDICATE	0.0104 (0.023)	0.0185 (0.004)	0.0006 (0.926)
SDRETURNS	0.7263 (0.002)	1.0283 (0.001)	0.2971 (0.299)
PRE1996DUM	0.0093 (0.035)	0.0116 (0.059)	0.0038 (0.548)
BAA-AAA Spread			
SPRDUM5	-0.0083 (0.275)	-0.0139 (0.247)	-0.0026 (0.752)
SPRDUM95	0.0175 (0.144)	-0.0102 (0.429)	0.0402 (0.020)
CONSTANT	-0.0280 (0.045)	-0.0445 (0.014)	-0.0009 (0.962)
N	941	505	436
R ²	.0506	.0976	.0375

Table 7
Undervaluation Regressions

Ordinary least squares regressions. The dependent variable is the borrower's two-day abnormal return around a bank loan announcement. CUMDUM5 is a dummy variable equal to one when the prior year market adjusted return is less than or equal to its 5th percentile. CUMDUM95 is a dummy variable equal to one when the prior year market adjusted return is greater than or equal to its 95th percentile. Numbers in parentheses are p-values. Standard errors are robust to heteroskedasticity using White's correction.

	Full Sample	New Loans	Renewals	Full Sample	New Loans	Renewals
LASSETS	0.0002 (0.848)	0.0008 (0.581)	-0.0011 (0.603)	0.0002 (0.843)	0.0007 (0.605)	-0.0010 (0.644)
ROA	-0.0132 (0.478)	-0.0226 (0.304)	0.0107 (0.697)	-0.0137 (0.456)	-0.0228 (0.300)	0.0075 (0.783)
LEVERAGE	-0.0101 (0.286)	-0.0085 (0.518)	-0.0094 (0.489)	-0.0104 (0.273)	-0.0086 (0.510)	-0.0098 (0.471)
TOBINQ	-0.0016 (0.377)	-0.0028 (0.254)	-0.0002 (0.932)	-0.0017 (0.354)	-0.0028 (0.247)	0.0002 (0.942)
ASSTCHNG	0.0006 (0.416)	0.0006 (0.407)	-0.0021 (0.351)	0.0006 (0.427)	0.0006 (0.410)	-0.0024 (0.277)
RENEWAL	-0.0013 (0.724)			-0.0012 (0.738)		
SYNDICATE	0.0105 (0.022)	0.0180 (0.004)	0.0012 (0.861)	0.0104 (0.023)	0.0178 (0.004)	0.0011 (0.872)
SDRETURNS	0.7180 (0.002)	1.0370 (0.001)	0.2533 (0.374)	0.7318 (0.003)	1.0318 (0.002)	0.2993 (0.317)
PRE1996DUM	0.0103 (0.019)	0.0124 (0.038)	0.0050 (0.425)	0.0103 (0.018)	0.0126 (0.035)	0.0046 (0.466)
CUMEW	-0.0033 (0.173)	-0.0017 (0.574)	-0.0064 (0.075)			
CUMDUM5				0.0031 (0.781)	0.0046 (0.759)	-0.0009 (0.956)
CUMDUM95				-0.0126 (0.076)	-0.0067 (0.487)	-0.0235 (0.012)
CONSTANT	-0.0289 (0.039)	-0.0468 (0.009)	-0.0001 (0.996)	-0.0284 (0.048)	-0.0459 (0.013)	0.0006 (0.979)
N	941	505	436	941	505	436
R ²	.0481	.0947	.0199	.0487	.0952	.0208