

# **Bank Borrowers and Loan Sales: New Evidence on the Uniqueness of Bank Loans**

**Sandeep Dahiya<sup>\*</sup>, Manju Puri<sup>†</sup>, Anthony Saunders<sup>‡</sup>**

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## **Abstract**

This paper examines the information content of the announcement of a sale of a borrower's loans by its lending bank. A large body of research has documented the positive impact on a firm's stock price around the announcement of initiating or renewing a lending relationship. In light of these findings it would seem natural that when a bank chooses to sell off the loans of a particular borrower, that the stock returns of the borrower would be adversely affected; particularly for sales of sub-par loans where the bank's information advantage is likely to be highest. Our paper is the first to test this hypothesis. We find that the stock returns of borrowers are significantly negatively impacted in the period surrounding the announcement of a loan sale. The post-loan sale period is also marked by a large incidence of bankruptcy filings by those borrowers whose loans are sold. Overall, the evidence supports the hypothesis that the news of a bank loan sale has a negative certification impact, which is validated by the subsequent performance of the firms whose loans are sold. We conduct similar event study tests for those banks that engage in loan sales and find that the stock returns of the selling banks are not significantly impacted on average.

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<sup>\*</sup> McDonough School of Business, Georgetown University, G-04 Old North, Washington DC 20057. Tel. (202) 687 3832, Email: sd@msb.edu

<sup>†</sup> Graduate School of Business, Stanford University, Stanford, CA 94305, and NBER. Tel: (650) 723 3402, Email: mpuri@gsb.stanford.edu

<sup>‡</sup> Stern School of Business, New York University, 44 West 4<sup>th</sup> Street, New York, NY 10012. Tel: (212) 998 0711, Email: asaunder@stern.nyu.edu

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*"An original lender on a \$150 million Bradlees credit reportedly sold a \$5 million piece of the revolver in a hurry last week, according to traders familiar with the situation, sending the message to some traders that the lenders most familiar with Bradlees are not comfortable with the company's situation. Because a long-term lender dumped the paper, and urgently, traders said they suspect the lender knew something they did not."*

*-Bank Letter dated 6/19/1995*

## **1. Introduction**

The secondary loan market for loans includes two broad categories, the first is the primary or syndicated loan market, in which portions of a loan are placed with a number of banks, often in conjunction with, and as part of, the loan origination process (usually referred to as the sale of participations). The second category is the seasoned or secondary loan sale market in which a bank subsequently sells off an existing loan (or part of a loan). While a number of reasons for seasoned loan sales have been identified in the previous literature,<sup>1</sup> there have been no empirical studies of the effects of such sales on the returns of those borrowers whose loans are sold or on the banks selling loans.

Conventional wisdom has long held that loan sales by banks -- especially loans of customers who have established long-term customer relationships with that bank -- would have a negative information effect regarding the borrowing firm. This effect would result from the special or unique role of banks<sup>2</sup> as "insiders" to the borrowing firms, such that a decision to sell a customer's loan would be taken as revealing to the market hitherto private (negative) information regarding a borrower's financial condition. Indeed, while the effect of loan sales on borrowers has been untested prior to this paper, such an effect might be expected given the findings of James (1987), Lummer and McConnell (1989), Best and Zhang (1993), Billett, Flannery and Garfinkel (1995) among others, that new

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<sup>1</sup> See for example Pennacchi (1988) and James (1988) who model the effects of loan sales on a bank's capital position and its underinvestment problem.

<sup>2</sup> The special information producing and monitoring functions of banks have been discussed by Campbell and Kracaw (1980), Diamond (1984) and Fama (1985).

loans and loan renewals carry (positive) private information to the outside equity market about a borrowing firm's financial condition.<sup>3</sup> In a recent paper, James and Smith (2000) provide a comprehensive review of the past and recent research on the special nature of bank loan financing. Overall, they show that research to date finds a robust, favorable, impact of bank loan announcements on borrowers' stock returns in contrast to the insignificant or negative response of investors to the announcement of most other forms of new security issuance (e.g. public debt and equity).

While the positive impact of news announcing the *formation* of a bank lending relationship is well established, there is a paucity of studies examining the impact of the *termination* (or reduction) of a banking relationship on a borrower's stock returns and the long run performance of the borrowers in the post sale period.<sup>4</sup> In this paper we employ a previously unutilized information source to identify loan sale events. In particular, we focus on sales of seasoned sub-par loans, where the information effects of bank sales are likely to be highest, and test the effects of such sales on borrowers' returns. We conduct two set of tests. First, we test for and find a significant negative impact of loan sale announcements on the stock returns of borrowers, which is a mirror image of the established finding that the announcement of new lending relationships (or their continuation) have a positive effect on a borrower's stock returns. Our finding is both consistent with and extends the existing literature on this dimension. Second, we

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<sup>3</sup> James (1987) finds a significant positive impact of announcement of bank loan agreements; Lummer and McConnell (1989) document a positive impact of favorable loan renewals while non-renewals are accompanied by negative returns for the borrowers. Billet, Flannery, and Garfinkel (1995) show that the impact of loan announcements is positively related to the quality of the lender. Best and Zhang (1993) document evidence that the stock market reaction is strongest for those borrowers where the quality of publicly available information is the poorest. Related to this evidence, Puri (1996), and Gande, et. al (1997), find a positive effect for the prices of new securities when the bank is both the lender and underwriter, suggesting that the bank's certification role exists even in situations where there may be confounding effects due to the bank's multiple roles.

<sup>4</sup> Slovin, Shuska and Polonchek (1993) examine the impact of possible termination of lending relationships by examining the stock returns of borrowers of Continental Illinois Bank during the bank's financial problems. Dahiya (2000) examines the impact of borrower distress on the lending bank when the lending relationship is likely to terminate following announcement of default or bankruptcy filing by the borrower of the bank.

examine whether the negative information contained in the loan sale announcement is validated by the long-term performance of firms whose loans are sold. We find that almost half of those firms whose loans are sold file for bankruptcy within three years of the loan sale announcement. Interestingly, these firms are not the worst performing firms in their industry at the time of the loan sale, suggesting that publicly available information alone might have been insufficient for outside investors to pre-identify the degree of weakness of the firms whose loans were sold, and that the bank's loan sale announcement contained valuable negative private information.

We are also interested in the factors that influence a bank's decision to sell its loans. One possibility identified in the theoretical literature is that bank loan sales are motivated by a bank's desire to mitigate "regulatory taxes" such as capital requirements (see, for example, Pennacchi (1988)). Moreover, loan sales may reflect the loan origination and distribution abilities of a bank. Consequently, we examine the motivation for a bank to sell loans as well as the effect of a loan sale announcement on the selling bank's equity returns.

The outline of the paper is as follows: Section 2 discusses data sources and sample selection. Section 3 presents the results of tests on the effects of loan sales on borrower returns and the link between loan sales and the long run viability of the firm. Section 4 presents tests analyzing the effects of loan sales on the selling bank's returns and the characteristics of those banks that sell loans. Section 5 presents some robustness checks. Section 6 is a summary and conclusion.

## **2. Data and sample selection**

The bank loan sales market is an over-the-counter, wholesale market in which transactions are arranged through a network of dealers. Historically, trades took many weeks to complete, however, dealers now work for completion of trades with a T+10 day

horizon.<sup>5</sup> Typical sellers of bank loans are large wholesale money center (e.g. Citibank) and overseas banks (e.g. ING Barings). Typical buyers of bank loans are smaller regional banks, foreign banks, vulture funds (including hedge funds) as well as insurance companies. (See, for example, Miller (1998)). Key sources of information about the market are trade newsletters and screen services such as Bloomberg that list and identify loan sales. Our test design requires identification of loans that are traded in the secondary market and locating the date of actual sale of a loan by a bank to conduct the event study. We use two market newsletters, *Bank Letter*, and *Gold Sheets* as the primary data sources. To identify the secondary market sale of a bank loan by one of the lenders we check for loan sale news stories in Bank Letter. Bank Letter is a weekly publication, produced by Institutional Investor, Inc., which publishes a number of other well-known newsletters such as *Bond Week*, *Derivatives Week* and *Corporate Financing Week*.<sup>6</sup> Bank Letter is the primary “trade-rag” that carries news of the sales of bank loans by banks and the date of Bank Letter publication provides us with the event date to conduct the event study. *Gold Sheets* is a publication of Loan Pricing Corporation, which provides information about new loan originations and the terms of these loans. Gold Sheets is widely used by practitioners, and recently by some academics. While it carries no news stories of loan sales, it does carry secondary market loan price quotes (not the actual trades) of a large number of loans. Thus, Gold Sheets allows us to generate the universe of borrowers whose loans attract a price quote in the secondary market. From our discussion with traders, these two publications are the most widely followed newsletters in the secondary loan market.

The main period of our study is 1995-1998. (In section 6 we look at an augmented sample period 1995-2000). For the 1995-1998 period in *Gold Sheets* we found a total of

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<sup>5</sup> Interviews with loan traders reveal an increased standardization in the custody, settlement and payment procedures surrounding loan sales in recent years.

<sup>6</sup> *Bank Letter* has recently been renamed *Loan Market Week*.

215 US borrowers whose bank loans attracted a secondary market price quote that was published for the first time. *Gold Sheets* report the price quotes for the loans under two distinct categories. The first category is classified as “Par Loans” and includes all loans that are quoted at or very close to 100% of face value. The second category termed “Distressed Loans” or “Sub-par Loans” comprises of loans that have a bid quote significantly below the face value (usually 80% or below of the face value) and/or the borrower is in default on its loans.

Of the 215 loans, 162 were par loans and the rest (53 loans) were sub-par or distressed loans. While Gold Sheets provide us with a fairly good estimate of the total universe of loans being traded in the secondary market, we are unable to identify the exact date on which the loan sale took place for the first time, as it does not carry news of loan sale announcements. The loan sale announcement dates are obtained from reading the weekly issues of Bank Letter. We find 101 news stories of loan sale announcement for US corporate borrowers (an additional 6 news stories involved non-US borrowers thus a total of 107 loan sale news announcements). This list also included multiple sale announcements for the same borrower. For example, there were 11 separate loan sale announcements for Mobilemedia in the period 8/12/96 to 8/18/97. Taking the multiple announcements in to account the 101 announcements involved 58 different borrowers. To examine the information impact of loan sale announcement we carry out an event study on borrowers' stock returns around the date of loan sale announcements. As a first step, all borrowers for which announcements of loan sales were published in Bank Letter are identified. We then searched the CRSP daily price database for a match to those firms whose loans had been sold, so as to determine the availability of an equity price history around the date of announcement of a loan sale. This procedure reduced the sample of 58 borrowers to 29 firms for which sufficient stock price data existed. Since these loan sales are not classified as par or non-par, we use the following procedure to classify these borrowers as either par or sub-par. The loans are classified sub-par, if Gold

Sheets listed the loan as non-par within 2 months of the loan sale. Similarly if Gold Sheets listed it as par within 2 months of loan sale we classify it as par. If the loan sold does not appear in Gold Sheets within two months of sale we look at the price range mentioned in the loan sale story in Bank letter and if the price is below 80% of the face value we classify it as sub-par and par otherwise. Finally if no price is mentioned we try to determine if the firm is facing repayment difficulties from news stories and classify it as sub-par if such repayment difficulties are reported. Of the 29 firms we are able to classify 13 as par loans and 15 as sub-par loans. (For one firm – Checkers Drive-in Restaurants, no information was available and we are unable to assign it as either par or sub-par and we excluded it from the analysis). Appendix A provides the details of the main sample.

As a second step we conducted an event study on the whole sample of 29 loan sale announcements to examine the impact of such announcements on a borrower's stock return. Next, we split this sample into par and sub-par loans since we expect bank informational effects to be stronger in sub-par firms. However, comparing our sample to the total number of traded loans listed in Gold Sheets it seems clear, that our sample captures only a small proportion of all par loan sales (13 as compared to 162 par loans mentioned in the Gold Sheets), but a larger proportion of sub-par loan sales (15 compared to 53 sub-par loans in Gold Sheets). Since the informational effects we are looking for are likely to be strongest in sub-par loan sales, where we have a representative sample of such traded loans, we will be focusing primarily on these firms in this paper. Hereafter, the 15 sub-par firms whose loan sale announcements appeared in Bank letter will be referred to as the Bank Letter sample and the 53 sub-par firms that generated a secondary market bid price quote as the Gold Sheets sample. 13 of the 15 firms in the bank letter sample are also in the Gold Sheets sample, thus the Bank letter sample is effectively a sub sample of the Gold Sheets sample of sub-par firms.

In order to examine the operating performance of the firms in the period before the loan sale was made we compute financial characteristics (performance measures) of these firms using data for the year prior to the year in which the loan sale took place. In particular, we calculate a borrowing firm's return on assets by dividing EBITDA (Compustat data item # 13) by the book value total assets (Compustat data item # 6), total leverage, computed by dividing book value of current liabilities and long term debt (sum of Compustat item # 5 and # 9) by the book value of total assets, and investment intensity, which is the ratio of capital expenditure (Compustat data item # 128) divided by book value of total assets.

The borrowing firms whose loans were sold come from a number of industries; in order to account for industry wide effects we adjust each borrowing firm's performance measures by median industry performance. For example, to calculate the industry-adjusted return on assets we calculate this ratio for all firms in the Compustat files that had the same 4-digit SIC code as the sample firm and take the median of these ratios. This median return on assets for the industry is then subtracted from the return on assets for the sample firm (for the same year). This procedure is carried out for all the non-par firms in both samples so as to compute the industry-adjusted return on assets for every firm.

To analyze the long-term performance of the sample of loan sale firms (in the post-loan sale period) we focus on the survival rate of these firms after an announcement of sale of their loan is made. To determine if any of the sub-par firms in the Bank Letter as well as the Gold Sheets, samples filed for bankruptcy after a bank announced the sale of a firm's loan we follow a two step procedure. As a first step we match all the firms whose loans were sold against the list of firms filing for Chapter 11 in the *Bankruptcy Datasource*.<sup>7</sup> This step allowed us to identify the firms that went bankrupt subsequent to

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<sup>7</sup> The Bankruptcy Datasource is a database produced by New Generation Research, Boston. It is available through Securities Data Corporation as well as Lexis-Nexis. It is a comprehensive source of data on



the loan sale announcement. As a second step, we searched the Dow Jones News Retrieval Service for any stories that contained the sample firm's name and the words "Chapter 11" or "bankruptcy" to confirm if the news of the bankruptcy was reported in the public media. This step is a robustness check to ensure that we identify all firms that file for bankruptcy after a loan sale. While for the event study our sample is limited to sub-par loans, where we have both the loan sale date as well as the CRSP stock prices, we can feasibly measure long term performance for the entire sample of sub-par loans appearing in *Gold Sheets*, from the date that the first loan price appears. We report the long run survival rate for the firms in both the Bank Letter as well as the Gold Sheets samples. We find that the survival rates are similar across the two samples.

### 3. Test methodology and results

We employ the event study methodology as outlined in Mikkelsen and Partch (1986, 1988)) to estimate the impact of a bank loan sale announcement on the stock return of the borrowing firm. The abnormal returns are computed around the date of publication of bank letter in which the loan sale announcement first appeared. The abnormal return for common stock of borrower  $j$  on day  $t$  is defined as:

$$AR_{jt} = R_{jt} - (\alpha_j + \beta_j R_{mt}) \quad (1)$$

$R_{jt}$  is the continuously compounded rate of return for borrower  $j$  on day  $t$ , and  $R_{mt}$  is the continuously compounded rate of return for the CRSP's dividend inclusive, value-weighted index for NYSE/AMEX/Nasdaq stocks. The coefficients  $\alpha_j$  and  $\beta_j$  are estimated by regressing  $R_{jt}$  for the period 200 trading days before the event date (defined as the date of publication of Bank Letter announcing the loan sale) to 51 trading days before the event date on  $R_{mt}$ . The abnormal returns are computed for each day in the

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Chapter 11 filings (since 1988) by all firms that have public securities (debt and/or equities) outstanding and have more than 10 million in assets.

event period that begins 50 trading days before the announcement and ends 30 trading days after the announcement.

The average abnormal return on event day  $t$  for a sample of size  $N$  is

$$AR_t = \frac{1}{N} \sum_{j=1}^N AR_{jt} \quad (2)$$

Test of significance are based on standardized abnormal returns. Standardized errors for firm  $j$  on day  $t$  are defined as

$$SAR_{jt} = \frac{AR_{jt}}{S_{jt}} \quad (3)$$

where

$$S_{jt} = \left\{ V_j^2 \left[ 1 + \frac{1}{ED} + \frac{(R_{mt} - \bar{R}_m)^2}{\sum_{k=1}^{ED} (R_{mk} - \bar{R}_m)^2} \right] \right\}^{1/2} \quad (4)$$

$V_j^2$  is the residual variance for borrower  $j$  from the market model regression in equation 1,  $ED$  is the estimation period (150 trading days) used in the market model regression,  $R_{mt}$  is the market return on day  $t$  and  $\bar{R}_m$  is the mean market return over the estimation period. The average standardized abnormal return for day  $t$  is

$$ASAR_{jt} = \frac{1}{N} \sum_{j=1}^N SAR_{jt} \quad (5)$$

Under the assumption that individual daily abnormal returns are distributed normally,  $SAR_{jt}$  follows a Student  $t$  distribution with  $ED-2$  degrees of freedom. Cumulative abnormal returns ( $CAR_{T_1, T_2}$ ) are the sum of abnormal returns for the event window beginning with trading day  $T_1$  and ending with  $T_2$  is given by

$$CAR_{T_1, T_2} = \frac{1}{N} \sum_{j=1}^N \sum_{t=T_1}^{T_2} AR_{jt} \quad (6)$$

The test statistic for the null hypothesis that  $CAR_{T_1, T_2} = 0$  is  $Z_{T_1, T_2}$  given by

$$Z_{T_1, T_2} = \sqrt{N} (ASCAR_{T_1, T_2}) \quad (7)$$

where the average standardized cumulative abnormal return ( $ASCAR_{T_1, T_2}$ ) is calculated as follows

$$ASCAR_{T_1, T_2} = \frac{1}{N} \sum_{j=1}^N \sum_{t=T_1}^{T_2} SAR_{jt} / (\sqrt{T_2 - T_1 + 1}) \quad (8)$$

The results for the event study are reported in Table 1. Panel A reports the cumulative abnormal returns (CAR) for the entire sample of 29 loan sale announcements around the date of first announcement of a loan sale. Panel B reports the results of the event study for the 15 borrowers that we classify as sub-par while Panel C describes the same for the 13 borrowers classified as par. (One borrower could not be classified as either par or non-par and is excluded for the analysis). As can be seen, for various event windows (7 days, 5 days and 3 days) the results reported in Table 1 provide strong evidence of a negative news effect surrounding a bank loan sale announcement. From Table 1, Panel A, for a 3 day window surrounding the full sample of 29 loan sale announcements, the average abnormal return for the borrowers whose loans were sold was  $-1.74\%$ , which is significant at the 1% level. However this negative news impact is not same across sub-par and par loan sales. As reported in Panel B the impact of the news of a loan sale is much larger and more significant if the loan sale involves a sub-par borrower. This result holds true across all event windows. Moreover, as shown in panel C the negative abnormal return effect is statistically insignificant at conventional levels for the loan sale announcements involving par borrowers. Overall, these results are consistent with a bad news (information) effect arising from loan sales, in particular those of sub-par borrowers, which is the converse of the good news effect of new loan announcements or renewals (see, James (1987), for example).

Our next test comprises of examining whether the negative information that the market surmises from a loan sale announcement is validated by the borrowing firm's subsequent performance. If the market perceives that the bank's inside information about the firm's future prospects is unfavorable, since the bank has decided to sell the loan rather than continue its lending relationship with the firm at its current level, then a

logical consequence would be that such a firm's performance would worsen subsequent to the loan sale.

Perhaps the starkest and simplest measure of poor performance is whether or not a firm goes bankrupt. We collect data to examine if and when a firm filed for bankruptcy (under Chapter 11 of the U.S. Bankruptcy code) for a period of three years subsequent to the date of the loan sale announcement. This test has the additional advantage of allowing us to use the entire sample of 53 sub-par loan sales obtained from Gold Sheets as well as the 15 sub-par loan sales firms from Bank Letter used in the event study tests above. Overall, we find that a large number of our sample firms (close to half of the firms for whom loan sales occurred) file for bankruptcy within three years of the date of the first loan sale announcement<sup>8</sup>. Panel A of Table 2 shows that 32% of the firms whose loans were quoted as sub-par filed for bankruptcy within a year of the first bid price quote reported by Gold Sheets, an additional 8% within two years, and a further 2% within three years. In aggregate, 42% of the Gold Sheets sub-par sample firms filed for bankruptcy within three years of their loan first being announced for sale.

Although the bankruptcy filing rate appears to be high, there may be a concern that this rate reflects industry and/or economy wide factors. To control for such effects we carry out a robustness test. For each firm whose loan attracted a price quote, we obtain the 4-digit SIC classification from Compustat. If the firm is not listed in the Compustat database we search the *Dealscan* database for any loans made to that borrower. Dealscan database is maintained by Loan Pricing Corporation and contains details of over 60,000 private loans made to US borrowers. Apart from loan specific details such as amount, terms and maturity, the database also provides borrower specific information including primary SIC code. We were able to obtain information on 47 of our 53 borrowers.

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<sup>8</sup> We can evaluate the long-term performance for three years only for loans sold up through 1997. For the loans sold in 1998, we are examining performance only for two years. This implies that we slightly understate the likelihood of bankruptcy.

Next we compiled a list of these firms that included their SIC classification and the year in which the first loan price quote for that borrower appeared in Gold Sheets. Since some of the borrowers are from the same industry and/or had their first loan price quoted in the same year, there is some duplication in this list. We eliminate multiple observations of the same industry by including each industry only once. If there are multiple borrowers from an industry we pick the year in which an industry borrower's loan was quoted in Gold Sheets for the first time. This year is defined as the base year for that industry.

Next for each industry observation we generated the list of all firms with the same 4-digit SIC code that are in the Compustat database for the year immediately preceding the base year. If there were less than 3 firms that matched the borrower's industry group we generated all the firms with same 3-digit SIC code. This step generates a plausible universe of all firms in the same industry as the firm that attracted the first loan price quote in that industry. We trace all firms in each industry for any incidence of Chapter 11 filing in the three years subsequent to the year of loan sale activity. This exercise allows us to generate the bankruptcy incidence in the industries to which the loan sale borrowers belonged. The results presented in Panel B of the Table 2 show that the frequency of bankruptcy is 3% in the year in which the first loan sale price quote appeared and for the year following the loan sale activity it is 1.6%. This is substantially lower than the results reported in Panel A.

One can argue that the bankruptcy rate is likely to be higher among firms that are showing poor financial performance. Hence we repeat the same exercise with a subset of those firms that fall in the bottom quartile of their industry as ranked by their operating performance. We calculate the ratio of EBITDA to total assets for all firms. Those firms for which this ratio is in the bottom 25% of the industry are included in the sample of poorly performing firms in that industry. As expected, the bankruptcy filing rate is higher for this sub sample, with the frequency of bankruptcy being 4.7% in the year in

which the first loan price quote appeared and for the first year following the loan sale activity it is 2.6%. As the results in Panel C show, the bankruptcy rate is substantially lower than the rates reported in Panel A.<sup>9</sup>

These results, of subsequent poor performance, combined with our results of the negative stock price reaction at the time of the seasoned non-par loan sale announcement, is further evidence consistent with the view that banks play a special or unique role as monitors (or corporate insiders) and that announcement about bank lending decisions conveys hitherto private information to the capital market at large (see Fama, 1985, and James, 1987, for example)

A natural question, however, is whether the ex-post performance of these firms is correlated to their ex-ante performance prior to the loan sale, i.e., whether we could have anticipated the poor performance of these firms even without the announcement of the sale of a loan? Related to this is the question: what are the (publicly available) financial characteristics of those firms whose loans are sold at the time of the loan sale? To evaluate this question we collated information on the financial characteristics of those firms whose loans were sold in the year prior to the loan sale.

Table 3 provides some financial and operating performance measures for the sample of borrowing firms whose loans were sold over the 1994-1998 period. Panel A documents these measures for the sample of non-par firms obtained from the Gold sheets, while Panel B presents similar results for the Bank Letter sample. These performance measures are reported on an industry adjusted (median) basis. Specifically, financial ratios were calculated for all firms with the same 4-digit SIC code as that of the borrowing firm whose loan was sold and the median financial ratio (for the industry) was

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<sup>9</sup> These test were repeated for the sub sample of firms for which CRSP data and a precise loan sale date is available from Bank Letter. We examined the frequency of bankruptcy filings by the 15 sub-par firms that were the basis of our earlier event study test and compared these rates to the filing rate in their industries. The results are very similar to those reported in Table 2.

then subtracted from the financial ratio of the borrowing firm. Three such financial ratios are shown in Table 3. As can be seen, firms whose loans were sold appear to have performed below the industry median in the year preceding the loan sale. In particular, they had a lower return on assets, a higher level of debt (as measured by the ratio of book liabilities to total assets) and a lower degree of investment intensity (measured by capital expenditures to total assets) compared to the median firm in the same industry.

Nevertheless, we wish to examine further whether these are the poorest performing firms in their respective industry, i.e., whether, on an ex-ante basis, we would have expected these firms to have poor future viability (i.e. file for bankruptcy). For example, if our loan sale sample firms were in the bottom 5th percentile of their industry, an astute investor might reasonably anticipate that some of these firms would go bankrupt and/or exit the industry regardless of a bank's decision to sell the firm's loans. Table 4 compares the financial performance of the two non-par loan samples to their respective peer industry groups. Specifically, for the year immediately preceding the loan sale announcement, we calculate a set of financial ratios (as publicly available proxy measures of performance), for all firms that have the same 4-digit SIC codes as each borrower whose loan was sold. This allows us to generate a distribution for each financial ratio within the loan sale firm's industry. Surprisingly we find that the firms whose loans were sold are not the worst performers in their respective industries across all performance measures nor were they always concentrated in the bottom decile or even the bottom 25% (quartile). As Table 4 shows, for two of the three accounting measures return on assets and investment intensity, the majority of the sample firms lie in the second quartile (25th to 50th percentile). The results are similar across both the sample of non-par borrowers obtained from Gold Sheets (Panel A) and the sample obtained from Bank Letter (Panel B). This suggests that publicly available financial information alone may have been insufficient for outside investors to clearly distinguish, or pre-identify, the degree of weakness of the firms whose loans were sold and that publicly announced loan

sale decisions by banks appears to have provided valuable (hitherto private) information to outside investors regarding the true financial condition of these firms.

#### **4. The effect of loan sales on bank stock returns**

The decision to sell a loan may also contain information about the quality of bank loan portfolios. Indeed, loan sales may be interpreted favorably by the market as a reflection that the average quality of a bank's remaining portfolio will improve -- given its incentive to sell-off, or divest, its poorer quality loans. However, in selling such loans it has to assess the potential cost of such sales on harming its relationship with the borrower whose loan is sold, (as well as potential borrowers who may be concerned that their loans will be sold in the future<sup>10</sup>), and on its reputation with investors who buy the loans sold by the bank (should they deteriorate further in quality); plus the fact that a loan sale might signal that the bank's management in general, has exhibited poor judgment in its lending decisions and/or its capital position is weak. To examine the net effects of a loan sale on a selling bank, we conducted an event study for those banks announcing the sale of loans. We are limited by the fact that Bank Letter news stories announcing loan sales do not always mention the identity of the selling bank. The quote below provides a typical loan sale announcement:

*"A Musicland lender auctioned off \$11 million in bank debt late last week, with bids in the high 70s, according to market sources."*

*Bank Letter dated 1/27/1997*

For the 107 total loan sale announcement originally collected from Bank Letter, we were able to identify the loan selling institution in 58 cases. Of these, 25 sale announcements were made by foreign financial institutions and 33 were made by US

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<sup>10</sup> It is not unusual for borrowers to attempt curtailment of secondary trading in their loans, in an extreme case one borrower made it a part of the loan agreement by specifying eleven past lenders that it did not want its loan to be sold to. (See "Nextel Blackballs 11 Banks", Bank Letter, March 16, 1998)



financial institutions. The lenders mentioned in these 33 US financial institution announcements were then matched to the CRSP daily stock price database. Two lenders did not have stock price information<sup>11</sup> and two announcements involving Fleet bank were made on the same day and thus were included as a single announcement, leaving us with 30 bank loan sale announcement dates. Finally, we removed the 3 loan sales made by investment banks leaving 27 US commercial bank loan sellers.<sup>12</sup> The results of the event study on selling banks' returns are reported in Panel A of table 5. We also looked at the subset of loan sale announcements involving the 15 non-par borrowers that were examined in the "borrower"-related tests described in Tables 1 through 5. This subset yielded 15 clearly identifiable US bank lenders. The loan sale announcement effects for these 15 banks are reported in Panel B of Table 5.

The results of Table 5 indicate that, on average, the sale of loans by banks do not appear to have any net (new) impact on the selling banks stock returns (i.e. there is no evidence of any net costs or benefits to the selling banks' shareholders). This result holds true for the whole sample where the bank seller could be identified (Panel A) as well as the sub-sample of non-par loan sales (Panel B).

Nevertheless, it is of interest to examine the characteristics that differentiate between those banks that engage in loan sales and those that do not, especially as some have argued that an important motivation for loan sales is to improve a bank's solvency position such as the bank's regulatory capital ratio (see for example Pennacchi, 1988). As discussed above, for the event study examining a bank's own share price reaction to a sale of a loan, we were able to identify 27 unique loan sale event dates. Since some banks announced multiple sales in the same year, these multiple loan selling banks were treated as a single observation in the same year. This resulted in a final sample of 19

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<sup>11</sup> These were non-banking firms (Goldman Sachs and Heller Financial).

<sup>12</sup> Results remain unchanged if we include the three investment banks. The results for the sub sample of 3 Investment banks are similar to those reported for the sample of 27 banks.

distinct bank loan sale years. We obtained key financial characteristics for each of the selling banks for the year before the loan sale announcement from a variety of sources including Bank Compustat, Annual reports and 10-K filings. These included Size denoted by total assets (Bank Compustat data item # 36), Tier-1 capital (Bank Compustat data item # 48), Reserves for Bad Loans (data item # 78) and net income (data item # 161). We use these to construct the operating measures described in Table 6. For each bank sale year we generated the list of all banks in the Bank Compustat by using the following 4-digit SIC codes, 6020 – Commercial banks, 6021 – National Commercial Banks, 6022 – State commercial banks and 6029 –Commercial banks. We then calculated the ratios described in table 6 for these banks, giving us the distribution for each ratio for the banking industry as a whole. Banks involved in loan sales are large banks, with 18 out of 19 selling banks to be found in the top 25% of the banking firms ranked by total assets. Also most of the loan selling banks fall in the bottom quartile of banks ranked by their Tier-1 Capital, consistent with the hypothesis of Pennacchi (1988) that a prime incentive for loan sales is to boost a bank's capital ratios (although it is worth noting that none of the banks were below the BIS statutory 4% minimum requirement). In addition more than half of the banks fall in the top 25% of banks ranked according to the bad loan reserves to total asset ratio. Finally the selling banks are evenly distributed across the four quartiles if the ranking is done according to net income to total assets ratio. Overall, it appears that loan selling banks are on average of a poorer quality than non-selling banks.

## **5. Additional Robustness Tests**

Our main sample consists of all news stories from 1995-1998. Our sample ended in 1998 so that we could look at the long-term performance of those firms whose loans were sold. However, while we cannot examine the long-term performance of more recent loan sales, it is possible to extend our event study to include more recent loan sales

(so as to examine the robustness of our event study results). Accordingly, we gather additional data on loan sale news stories for 1999 and 2000 from Bank Letter, and Loan Market Week (the new title under which Bank Letter was continued from May 31, 1999 onwards).

Another robustness check is to examine whether there were other events taking place at the same time as the loan sale that may be impacting the event study results. Accordingly, we do a news search on ABI Inform for all news events in the event study window. We rule out observations where there are news of losses or defaults, a cut or suspension of dividends, a credit rating cut, a CEO selling a major equity stake, a law suit being filed, and takeover target related news. As a result of these checks we dropped three observations from our original sample and added 18 new observations from the 1999-2000 period. This yields a total sample of 44 loan sales, of which 25 are sub par, and 18 are par loan sales, and one loan sale cannot be classified.

With respect to the event study for the augmented sample (1995-2000) for borrowers for whom the loan sale is announced, our results are very similar to those shown in Table 1 for 1995-1998. The augmented results are reported in table 7. Overall, we find a significantly negative stock price reaction to loan sale announcements, which is larger and more significant for sub-par loan sales. Moreover, the signs and scale of abnormal returns closely mirror those in Table 1.

By adding 1999 and 2000, we also augment our sample to test for cumulative abnormal returns for (selling) banks from 27 to 33 (where the bank name and CRSP data is available) with the larger sample. We continue to find insignificant abnormal returns for selling banks with the larger sample.<sup>13</sup>

Finally, it might be of interest to examine the wealth effects for the “buyers” of the bank loans that are sold. As shown in Appendix A, only in a limited number of cases

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<sup>13</sup> Results not reported in tables but are available from the authors on request.

do we know the identity of the buyer. Specifically, for the augmented sample of 44 loan sales, we have information (and CRSP data) for the buyers in eight cases. We conduct an event study to test for cumulative abnormal returns for buyers on the loan sale announcement. Perhaps not surprisingly given the small sample size, we find insignificant cumulative abnormal returns for this group.

## **6. Summary and conclusion**

This is the first paper to evaluate empirically the effects of secondary loan sales by banks on both borrowers as well as bank stock returns. Using loan sales announcements reported in the publication *Bank Letter* we find evidence of a negative effect of loan sales by banks on borrowers' returns and the one that is strongest for the sale of sub-par loans. This result is consistent with a strong certification effect of loan sales. Specifically, the sale of a loan appears to carry a signal to the capital market that is the mirror image of the findings of James (1987), Lummer and McConnell (1989) and others regarding the (positive) news effect of loan initiations. This result adds further support to the view that banks play a special, or unique role, in diffusing hitherto private information to outside investors regarding the performance of borrowing firms. We also find that 42% of the firms whose loans are sold file for bankruptcy within 3 years of the announcement of a loan sale by their bank lender. While, cross-sectional tests confirmed that borrowers whose loans are sold are generally in a weaker financial and operating condition than a matched control group of firms whose loans are not sold, the sale of a loan appears to convey to the market additional (material) information about the relative degree of weakness of the borrowing firm whose loan is sold.

Finally, we examined the effects of a loan sale on the selling bank itself, since the sale of a loan may convey new information to the market regarding the quality of a selling bank's loan portfolio as well as impacting among other things, its reputation and relationships with other loan customers and investors. Interestingly, the sale of a loan by

a bank carried no significant impact on its own stock return, although loan sales appear to be made by generally weaker banks.

## References

- Best, R., Zhang H., 1993. Alternative information sources and the information content of bank loans, *Journal of Finance* 48, 1507-1522.
- Billet, M. T., Flannery M. J., Garfinkel J. A., 1995. The effect of lender identity on a borrowing firm's equity return, *Journal of Finance* 50, 699-718.
- Campbell, T., Kracaw W., 1980. Information production, market signaling, and the theory of intermediation, *Journal of Finance* 35, 863-882.
- Dahiya, S., 2000. The effect of borrower's financial distress on the lead bank, Unpublished working paper, Georgetown University, Washington DC.
- Diamond, D. W., 1984. Financial intermediation and delegated monitoring, *Review of Economics Studies* 51, 393-414.
- Fama, E., 1985. What's different about banks, *Journal of Monetary Economics* 15, 29-36.
- Gande, A., Puri M., Saunders A., Walter I., 1997. Bank underwriting of debt securities: Modern evidence, *Review of Financial Studies* 10, 1175-1202.
- James, C., 1987. Some evidence of the uniqueness of bank loans, *Journal of Financial Economics* 19, 217-235.
- James, C., 1988. The use of loan sales and standby letters of credit by commercial banks, *Journal of Monetary Economics* 22, 395-422.
- James, C., Smith, D. C., 2000. Are banks still special? New evidence on their role in the corporate capital-raising process, *Journal of Applied Corporate Finance* 13, 395-422.
- Lummer, S., McConnell J., 1989. Further evidence on bank lending process and capital market response to bank loan agreements, *Journal of Financial Economics* 25, 52-63.
- Mikkelson, W., Partch, M., 1986. Valuation effects of security offerings and the issuance process, *Journal of Financial Economics* 15, 31-60.
- Mikkelson, W., Partch, M., 1988. Withdrawn security offerings, *Journal of Financial and Quantitative Analysis* 23, 119-113.
- Miller, S., 1998. The development of the leveraged loan asset class. In Fabozzi, F. (Ed.), *Bank Loans: Secondary Market and Portfolio Management*, Frank J. Fabozzi Associates, New Hope, PA, pp. 1-23.
- Pennacchi, G., 1988. Loan sales and cost of bank capital, *Journal of Finance* 43, 375-396.

Puri, M., 1996. Commercial banks in investment banking: Conflict of interest or certification role? *Journal of Financial Economics* 40, 373-401.

Slovin, M. B., Shuska M. A., Polonchek J. A., 1993. The value of bank durability: Borrowers as the bank stakeholders, *Journal of Finance* 48, 247-266.

## Appendix A

The tables below give details of the 29 borrowers for which a loan sale announcement appeared in the Bank Letter. The loans are classified as par or sub-par based on the following criteria. If the Gold Sheet listed the loan as sub-par within 2 months of loan sale it is classified as sub-par. The classification of borrower as par is also established using the same rule. If the loan sold does not appear in Gold Sheet within two months of sale we look at the price range mentioned in the loan sale story and if the price is below 80% of the face value we classify it as sub-par and par otherwise. Finally if no price is mentioned we try to determine if the firm is facing repayment difficulties from the news stories and classify it as sub-par if that is indeed true.

Par/ Sub-par	Borrower Name	Selling Bank	Buyer	S & P Rating	Indicated Price (per \$ 100)	Indicated Amount (In \$ millions)
NA	Checkers Drive-In Restaurant	Original Lenders	Galileo Fund	Not Rated	NA	35
Sub-par	American pad & paper	Nations Bank/Chase	NA	Not Rated	94	40
Sub-par	American Rice	Original lenders	NA	Not Rated	90	21
Sub-par	APS Holdings	Bank Am	NA	Not Rated	91.5	20
Sub-par	Boston chicken	Bankers Trust	NA	CC	86	10
Sub-par	Bradlees	Original lenders	NA	B+	85.25	5
Sub-par	Caldor	Mitsubishi Trust/United jersey Bank	Lehman/JP Morgan	Not Rated	85	33.5
Sub-par	Edison Brothers	Original lenders	NA	Not Rated	NA	NA
Sub-par	Fleming company	Boatmen's Bank	NA	BB-	93.5	23
Sub-par	FPA Medical Management	Lehman	NA	CCC-	33	50
Sub-par	Morrison Knudsen	Mellon Bank	Merrill Lynch	Not Rated	82.5	25
Sub-par	Musicland	Comerica bank	Amroc Investments	CCC+	70	15
Sub-par	Paragon Trade Brands	Original lenders	NA	Not Rated	85	20
Sub-par	Philip Services	Credit Lyonnais	Goldman Sachs	Not Rated	94	50
Sub-par	Today's Man	Fleet	NA	Not Rated	66	7
Sub-par	Trans World Entertainment	Fleet Bank	NA	Not Rated	72 to 82	30
Par	Arch Communications Group	Original lenders	NA	B-	NA	NA
Par	Brylane	Wells Fargo	NA	Not Rated	99.8125	13
Par	Fred Meyer	NA	NA	Not Rated	98	4
Par	IVAX	Sakura Bank	NA	Not Rated	95	17
Par	Kmart	National City Bank	NA	BBB	95	10.5
Par	Lucent Technologies	Goldman Sachs	NA	A	100.75	30
Par	Marvel Entertainment Group	Citibank	NA	B-	94	9
Par	MobileMedia	Original Lenders	NA	B-	99.75	20
Par	Nextel	Original lenders	Retail Investor	CCC-	97	15
Par	Reebok International	Original Lenders	NA	A-	99.75	70
Par	Service Merchandise	Original bankers	Goldman Sachs, Merrill	BB	93.125	40
Par	Shoney's	CIBC	Goldman Sachs	Not Rated	94.5	100
Par	Time-Warner	Japanese Lenders	NA	BBB-	99.125	10



**TABLE 1**  
**Cumulative Abnormal Returns for the firms on the announcement of sale of their loan by their bank**  
**(Source The Bank Letter)**

Cumulative abnormal return (CARs) for 29 firms around the date of *first* announcement of sale of their loan by their lender. The CARs are calculated using the Center for Research in Security Prices (CRSP) database using the methodology outlined in Mikkeleson and Partch (1986). Panel A provides the event study results for the entire sample of 29 borrowers. Panel B provides the event study results for the sub-sample of 15 sub-par loan sales. Panel C provides it for the sub-sample of 13 par loan sale firms. (One borrower - Checkers Drive In Restaurant Inc., can not be classified as either par or sub-par and hence is not included in either Panel B or Panel C)

Panel A: Abnormal returns for the firms around the date  
of **first** loan sale announcement  
(N =29)

Event Window	CAR	Z-statistic
7-day window [-4, 2]	-4.70%	-2.55**
5-day window [-2, 2]	-4.50%	-3.53***
3-day window [-1, 1]	-1.74%	-3.60***

Panel B: Abnormal returns for the firms around the date  
of **first sub-par** loan sale announcement  
(N =15)

Event Window	CAR	Z-statistic
7-day window [-4, 2]	-8.11 %	-3.84***
5-day window [-2, 2]	-7.04%	-4.27***
3-day window [-1, 1]	-1.61%	-3.56***

Panel C: Abnormal returns for the firms around the date  
of **first par** loan sale announcement  
(N =13)

Event Window	CAR	Z-statistic
7-day window [-4, 2]	0.66%	0.69
5-day window [-2, 2]	0.15%	0.16
3-day window [-1, 1]	-0.97%	-1.21

\*\*\* Significant at 1% level, \*\* Significant at 5% level,  
\* Significant at 10% level

**TABLE 2**

**Incidence of financial distress for the sample of firms for which an out standing bank loan attracted a sub-par bid between January 1995 and December 1998**

The information on filing for Chapter 11 is obtained from Bankruptcy Datasource and Dow Jones News Retrieval Services. Panel A provides the incidence of bankruptcy for the entire sample of 53 firms for which a loan sale price quote appears in the Gold sheet and is classified as sub-par. Panel B reports incidence of bankruptcy for the sample of all firms that are in the same industry as the firms whose loan price quote appeared in the Gold Sheet. Panel C reports the results for the subset of firms in Panel B and consists of those firms that fall in the bottom quartile in their industry as ranked by the ratio of EBITDA to total assets.

**Panel A: Sub-par loans reported in Gold Sheet (N=53)**

Incidence of Chapter 11 filing	Less then 12 months after the loan sale announcement	12 months to 24 months after the loan sale announcement	24 months to 36 months after the loan sale announcement	More than 36 months after the loan sale announcement
Number of firms filing for Chapter 11 (% of sample)	17 (32 %)	4 (8%)	1 (2%)	0 (0%)

**Panel B: All firms with the same SIC as the firms in Panel A (N=751)**

Incidence of Chapter 11 filing	Same year as the year of loan price quote	1 year after the year of loan price quote	2 years after the year of loan price quote	3 years or more after the year of loan price quote
Number of firms filing for Chapter 11 (% of sample)	23 (3.1 %)	12 (1.6%)	10 (1.3%)	15 (2.0%)

**Panel C: All firms in Panel A which are in the bottom quartile of their industry as ranked by EBITDA/ Total Assets (N=191)**

Incidence of Chapter 11 filing	Same year as the year of loan price quote	1 year after the year of loan price quote	2 years after the year of loan price quote	3 years or more after the year of loan price quote
Number of firms filing for Chapter 11 (% of sample)	9 (4.7 %)	5 (2.6%)	4 (2.1%)	3 (1.6%)

**TABLE 3****Industry adjusted performance characteristics for the sample of sub-par loan firms**

The financial information is for the last fiscal year prior to the year in which the loan sale took place and is obtained from Compustat. The table reports the financial characteristics for the sample of sub-par loan sales from the Gold Sheet (Panel A) and the Bank Letter (Panel B). The ratios are reported on industry-adjusted basis, which is calculated as the difference between the relevant ratio (e.g. return on assets) of the sample firm and the median ratio (e.g. return on assets) for those firms operating in the same 4-digit SIC code as the sample firm. Return on assets is defined as the ratio of EBITDA to total assets. Investment intensity is the ratio of the capital expenditure to the total assets. Total leverage is the ratio of the sum of long term debt and current liabilities to the total assets. Also reported are the *t*- statistic and *z*- statistic for the null hypothesis that the mean and median are equal to zero.

## Panel A:

Financial ratio (N=number of firms with data available)	Industry adjusted Mean	t- statistic	Industry adjusted Median	z- statistic
Return on Assets (N=30)	-0.1754	-1.31	-0.0228	-2.30**
Investment Intensity (N=30)	-0.0001	-0.02	-0.0058	-1.17
Total Leverage (N=30)	0.1829	3.65***	0.1683	3.36***

## Panel B:

Financial ratio (N=number of firms with data available)	Industry adjusted Mean	t- statistic	Industry adjusted Median	z- statistic
Return on Assets (N=14)	-0.0114	-1.04	-0.0023	-0.75
Investment Intensity (N=14)	-0.0017	-0.462	-0.0029	-0.25
Total Leverage (N=14)	0.1751	4.09***	0.1988	2.92***

**TABLE 4****Within industry distribution of selected financial characteristics for the two samples of sub-par loan sales**

For each firm in the two samples financial data is gathered for all firms with the same 4-digit SIC code in Compustat for the year before the year of sale for the sample collected from the Bank Letter and for the year before the year in which the first price quote is reported in Gold Sheet for the Gold Sheet sample. The relevant financial ratio is calculated for every firm in that industry to get the distribution of the ratio and to determine in which quartile the sample firms lies. Quartile 1 is the bottom 25% of the industry, Quartile 2 is the bottom 25% to 50% of the industry, Quartile 3 is the top 50% to 75% of the industry and Quartile 4 is the top 25% of the industry. Return on assets is defined as the ratio of EBITDA to total assets. Investment intensity is the ratio of the capital expenditure to the total assets. Total leverage is the ratio of the sum of long term debt and current liabilities to the total assets. The percentage of firms of the total sample in each category is given in parentheses.

**Panel A: Sample of sub-par Loan sales from the Gold Sheet**

Industry Quartile (N=Number of firms with available data)	Quartile 1	Quartile 2	Quartile 3	Quartile 4
Return on Assets (N =30)	7 (23.3%)	12 (40.0%)	9 (30.0%)	2 (6.7%)
Investment Intensity (N=29)	6 (20.7%)	12 (41.4%)	6 (20.7%)	5 (17.2%)
Total Leverage (N=29)	3 (10.3%)	3 (10.3%)	7 (24.2%)	16 (55.2%)

**Panel B: Sample of sub-par Loan sales from the Bank Letter**

Industry Quartile (N= Number of firms with available data)	Quartile 1	Quartile 2	Quartile 3	Quartile 4
Return on Assets (N =14)	1 (7.1%)	6 (42.9%)	7 (50.0%)	0 (0%)
Investment Intensity (N=14)	2 (14.3%)	5 (35.7%)	4 (28.6%)	3 (21.4%)
Total Leverage (N=14)	1 (7.1%)	1 (7.1%)	4 (28.6%)	8 (57.2%)

**TABLE 5****Cumulative Abnormal Returns for *the Banks* on the announcement of sale of their loan**

In Panel A we report the Cumulative abnormal return (CARs) for 27 loan sale announcements by US banks. Panel B reports the Cumulative abnormal return (CARs) for the US banks for 15 **sub-par loan sales** sub sample. The CARs are calculated using the Center for Research in Security Prices (CRSP) database.

Panel A: Abnormal returns for the <b>Banks</b> (All announcements) (N =27)		
Event Window	CAR	Z-statistic
7-day window [-4, 2]	-0.09 %	-0.08
5-day window [-2, 2]	-0.05%	-0.10
3-day window [-1, 1]	0.59%	1.41

  

Panel B: Abnormal returns for the <b>Banks</b> of sub- par loan sales (N =15)		
Event Window	CAR	Z-statistic
7-day window [-4, 2]	-0.54%	-0.40
5-day window [-2, 2]	-0.12%	-0.06
3-day window [-1, 1]	0.25%	0.67

\*\*\* Significant at 1% level, \*\* Significant at 5% level, \* Significant at 10% level

**Table 6****Within industry distribution of selected financial characteristics for the two samples of sub-par loan sales**

For each selling bank financial data is gathered for all financial institutions with 4-digit SIC codes equal to (6020 – Commercial banks, 6021 – National Commercial Banks, 6022 – State commercial banks and 6029 –commercial banks NEC) in Bank Compustat for the year before the year of sale for the sample collected from the Bank Letter. The relevant financial ratio is calculated for every banking firm to get the distribution of the ratio and to determine in which quartile the selling bank lies. Quartile 1 is the bottom 25% of the industry, Quartile 2 is the bottom 25% to 50% of the industry, Quartile 3 is the top 50% to 75% of the industry and Quartile 4 is the top 25% of the industry.

Industry Quartile (N=Number of Banks with available data)	Quartile 1	Quartile 2	Quartile 3	Quartile 4
Total Assets (N=19)	0 (0%)	0 (0%)	1 (5.3%)	18 (94.7%)
Tier 1 capital (N=19)	17 (89.5%)	1 (10.5%)	0 (0%)	1 (0%)
Reserves for bad loans/Total assets (N=19)	3 (15.8%)	1 (5.3%)	4 (21.0%)	11 (57.9%)
Net Income/ Total Assets (N=19)	4 (21.0%)	4 (21.0%)	8 (42.2%)	3 (15.8%)

**TABLE 7**  
**Cumulative Abnormal Returns for the firms on the announcement of sale of their**  
**loan by their bank for the augmented sample from 1995-2000**  
**(Source The Bank Letter and Loan Market Week)**

Cumulative abnormal return (CARs) for 44 firms around the date of *first* announcement of sale of their loan by their lender. The CARs are calculated using the Center for Research in Security Prices (CRSP) database using the methodology outlined in Mikkeleson and Partch (1986). Panel A provides the event study results for augmented sample of 44 borrowers in the period 1995-2000. Panel B provides the event study results for the sub-sample of 25 sub-par loan sales. Panel C provides it for the sub-sample of 19 par loan sale firms. (One borrower - Checkers Drive In Restaurant Inc., can not be classified as either par or sub-par and hence is not included in either Panel B or Panel C)

Panel A: Abnormal returns for the firms around the date of <b>first</b> loan sale announcement (N =44)		
Event Window	CAR	Z-statistic
7-day window [-4, 2]	-4.11%	-1.75*
5-day window [-2, 2]	-3.86%	-2.63***
3-day window [-1, 1]	-1.30%	-2.65***

  

Panel B: Abnormal returns for the firms around the date of <b>first sub-par</b> loan sale announcement (N =25)		
Event Window	CAR	Z-statistic
7-day window [-4, 2]	-7.84 %	-2.95***
5-day window [-2, 2]	-6.70%	-3.47***
3-day window [-1, 1]	-1.24%	-2.12**

  

Panel C: Abnormal returns for the firms around the date of <b>first par</b> loan sale announcement (N =18)		
Event Window	CAR	Z-statistic
7-day window [-4, 2]	2.12%	1.07
5-day window [-2, 2]	1.36 %	0.42
3-day window [-1, 1]	-0.70%	-1.36

\*\*\* Significant at 1% level, \*\* Significant at 5% level,  
\* Significant at 10% level