Analyst Forecast and Performance of Bank Loan Announcing Firm

Abstract

Previous research shows that firms announcing bank loans have positive announcement returns. Information signaling and the monitoring hypothesis have been proposed to explain the positive market reaction. Other studies show that firms announcing bank loans suffer long-run underperformance. In this study, we use the analyst forecast error to test whether the investor overoptimism explains the long run underperformance of firms announcing bank loans. Our results support that the analysts are overoptimistic with respect to earnings and long run growth. When analysts offer more optimistic forecast, the firms announcing bank loans suffer greater underperformance in the long run.

Keywords: bank loan, overoptimism, long run performance

Introduction

Fama (1985), Berlin and Loeys (1988), and Kwan and Carleton (1998) argue that bank loans enhance a borrowing firm's value by reducing information asymmetry or by monitoring firm performance. James (1987, 2003), Lummer and McConnell (1989), Ongena and Roscovan (2009) and, Chen, Gan and Li (2011) find positive stock return responses to the announcement of bank loan agreements. However, in the long run, Billet, Flannery and Garfinkel (2006) show that firms announcing bank loans suffer negative abnormal stock return over the subsequent three years. Since banks have greater professional knowledge and capability to generate information about the value of other firms than outside investors, a bank loan announcement arguably represents favorable information for investors. Thus, the disappointing long run stock return of firms announcing bank loans is puzzling.

In the traditional view, securities are rationally priced and reflect all publicly available information. In recent years a growing body of literature on securities returns challenges the traditional view. Daniel, Hirshleifer and Subrahmanyam (1998) develop model to show that overconfidence implies investor overreaction to information of news, leading to long-term reversal. Debondt and Thaler (1985) show most people overreact to unexpected and dramatic news events. Ritter (1991) and Rajan and Servaes (1997) provide empirical evidence to show that investors are overoptimistic with respect to IPO announcements. In this paper, we investigate investor expectations and long run stock performance after bank loan announcements.

According to attribution theory (Bem, 1965), individuals too strongly attribute events that confirm the validity of their actions to high ability, and events that disconfirm the action to external noise, such as bad luck. Daniel, Hirshleifer, and Subrahmanyam (1998) propose if an investor trades on private signal, a later public

signal confirms the trade if it has the same sign (good news after a buy, or bad news after a sell). Thus, if an investor receives confirming public information, his confidence rises. The confirming public information thus triggers further overreaction to a preceding private signal. Daniel, Hirshleifer and Subrahmanyam (1998) show that the overreaction drives stock price momentum. This initial overreaction gradually reverses over the long run.

In order to test whether the investors are overoptimistic about the firms announcing bank loans, we use analyst forecast as proxy for investor expectation. Givoly and Lakonishok (1979), and Fried and Givoly (1982), Michaely and Womack (1999), Ackert and Athanassakos (2003) propose that analysts' earnings forecasts convey useful information to market participants. When investors have doubts about the target firm, they tend to refer to the opinions of analysts. Analysts' forecasts guide and even drive investors in making investment decisions. Thus, analyst forecasts may be used as a proxy for investor expectations.

Diamond (1984, 1991), Lummer and McConnell (1989), Best and Zhang (1993), and Schenone (2010) argue that banks have greater access to information which is not available to outside investors. Fama (1985) indicates that if a bank decides to lend money to a firm then the announcement also conveys the banks' positive perceptions to other investors in market. Besanko and Kanatas (1993) delineate the special roles of bank lending, and show that banks provide monitoring for entrepreneurs. Datta et al. (1999) argue that the banks have lower costs in supervising the borrowing firms. Ahn and Choi (2009) provide evidence to show that bank loans reduce earnings management behavior and increase the quality of governance of the borrowing firms. Ross (2010) proposes that banks may screen and monitor borrowing firms, and finds that the abnormal returns around the bank loan announcement date is about 1.03%. Based on these studies, it appears that bank loans could enhance borrowing firm value

by reducing information asymmetry and making monitoring more efficient.

McNichols and O'Brien (1997) show that because analysts are reluctant to issue unfavorable investment information, analysts tend to cover firms they view favorably and drop firms they view unfavorably. The results are consistent with the conjecture that analysts report recommendations and forecasts selectively, based on whether their private information about a firm is favorable.

A bank loan announcement is viewed as good news for the borrowing firm. It may confirm analysts' opinions of the stock selection, increases analyst confidence, and may influence the analyst to overreact to preceding private information. If the analysts issue a more overoptimistic forecast, the overreaction in stock price will gradually revert to the fundamentals over time, representing a negative abnormal stock performance in the long run. Thus, after a bank loan announcement, we expect that the relationship between analyst forecasts and the long run abnormal stock return is negative.

For the sample of US public firms announcing bank loan during 1997 to 2005 period in this study, we find negative long run abnormal return from next year following the bank loan announcement. In our sample, the three-year buy and hold abnormal return of the firm announcing bank loan are negative. The underperformance of borrowing firms is consistent to Billiet, Flannery and Garfinkel (2006). Using the analyst forecast error, we find that the analysts made more optimistic forecast error to the firms announcing bank loan than to the peer firms based on industry, size, and book to market ratio. Comparing to the industrial benchmark, analysts also have higher long run growth projection to the firms announcing bank loan. Given the evidence of analyst optimism, we next test the relationship between the analyst growth forecast and the long run performance. The results represent the more optimistic growth forecast after the bank loan

announcement, the lower the long run abnormal stock performance of the borrowing firms. These results support our arguments that, the analysts' optimism is "overoptimism" and the stock price reverses in the long run to correct the short run overoptimism to the firms announcing bank loan.

The main contribution of this study is to propose investor overoptimism as explanations for the long run underperformance of the bank loan announcing firm, and investigate the resources of the overoptimism. Billet, Flannrty and Garfinkel (2006) provide evidence of the long run underperformance of firms announcing bank loans. In the literature there are few explanations for the long run underperformance of firms announcing bank loans. Overoptimism is proposed to explain the long run reversal in stock performance after private placements of equity (Hertzel, Lemmon et al., 2002) and IPO (Rajan and Servaes, 1997). In this study, we first apply the idea of overoptimism in response to bank loan announcements. Consistent with Billett, Flannery, and Garfinkel (2006), firms announcing bank loans underperform in the long run. Our results also reinforce the implications of earlier studies that announcement returns can be misleading about the extent of financing effects on firm value.

Data and Methodology

Sample description

We collect bank loan announcement events from the LexisNexis Academic News database. We use the following keywords[1] to search for bank loan announcement news: "line of credit", "credit line", "credit facility", "credit agreement", "credit extension", "new loan", "loan agreement", "loan renewal", "loan extension", "finance

[1] These keywords are used by Billett, Flannery, et al. (1995)

company loan", "term loan", "bank loan", "commercial loan", and "loan revision". The announcement period is from 1997 to 2005. Stock market information is collected from CRSP. Financial data are collected from COMPUSTAT. The sample distribution is shown in Table 1. We obtain the analyst's forecast data from IBES. The total sample includes 2770 bank loan announcement. Among these, 1679 firms announcing bank loans have analysts' forecast data in IBES. Table 1 shows the sample distribution. The sample distribution is similar after we exclude the observations without data in IBES. In panel A, the minimum number of bank loan is in 2000, and the observations increase after 2000. Panel B shows the industry distribution for firms announcing bank loans, with the majority being manufacturing, service, and finance related.

Insert Table 1

Analyst optimism

In this study, we use the analyst forecast error to proxy investor optimism. The forecast error is calculated as follows:

$$\text{Earnings Forecast Error}_{i,t,T} = \frac{\text{Earnings forecast}_{i,t,T} - \text{Actual earnings per share}_{i,T}}{\text{Stock price}_{i,t-1}}$$

$\text{Earnings forecast}_{i,t,T}$ is the average earning forecast for firm i in fiscal year T of analysts in IBES at time t. Actual $\text{earnings}_{i,T}$ per share is the announced EPS of firm i in fiscal year T. Stock $\text{price}_{i,t-1}$ is the stock price of firm i in the end of last month before forecast announcing date. If the analysts are more optimistic about the performance of the bank loan announcing firm, they tend to offer higher earnings forecasts, resulting in greater forecast error. Our samples are of firms announcing

bank loans. If a bank loan agreement signals is regarded as favorable information, we expect that the analyst forecast error in our sample will be positive on average. The actual earnings and earnings forecast are collected from IBES. The earnings forecast is the mean of the earnings forecast of all analysts who follow the bank loan announcing firm and are available in IBES.

In order to test whether analyst's forecasts become more accurate over time, we separately report forecast made within one year of bank loan, and forecast made between one and two year after the bank loan announcement. In order to control for individual characteristics of the firms, we collect peer firms without bank loan announcements from CRSP and adjust the forecast error to test whether the analysts are more optimistic about firms announcing bank loans than peer firms. Rajan and Servaes (1997) indicate that optimistic behavior appears in the long term growth forecast. In this study we also include the long term growth (5 years period) forecast in IBES to test the analysts' attitude toward firms announcing bank loans.

Measurement of long run abnormal stock price performance

We adopt two approaches to measure long run stock-price performance following a bank loan announcement. First, we collect the daily stock return from CRSP and follow the method of Barber and Lyon (1997) to calculate the 3-year buy and hold return (BHR) :

$$\mathrm{BHR}_{i,1:36} = \prod_{t=1}^{36}(1 + \mathrm{R}_{it}) - 1$$

$\mathrm{BHR}_{i,1:36}$ is the buy and hold return, and R_{it} is daily return of sample firms. In order to estimate the abnormal return, we use the NYSE/AMEX/NASDAQ value-weighted index return, equal-weighted index return and return of peer firms as the benchmark to adjust the raw buy and hold return. The buy and hold abnormal return (BHAR) is calculated in this equation:

$$BHAR_i = BHR_i - BHR_{benchmark}$$

However, as pointed out by Fama (1998) and Mitchell and Stafford (2000), this methodology may be problematic because it does not adequately account for potential cross-sectional dependence in returns. To address this possibility, we also estimate abnormal returns using the calendar-time portfolio approach used by Mitchell and Stafford. The calendar-time portfolio approach was first used by Jaffe (1974) and Mandelker (1974). For each calendar month in our sample period, we form a portfolio of all sample firms that have announced bank loan agreements in the previous 3 years. We then regress the portfolio excess return on the Fama-French (1993) 3-factors follows:

$$R_{pt} - R_{ft} = \alpha + \beta_m(R_{mt} - R_{ft}) + \beta_s SMB_t + \beta_h HML_t + \varepsilon_t$$

Where R_{pt} is the equal-weighted or capitalization value-weighted average raw return for stock in calendar month t (where a sample stock is included if month t is within the 36-month period following its acquisition announcement). R_{ft} is the one month T-bill return, R_{mt} is the CRSP value-weighted market index return, SMB_t is the return on a portfolio of small stocks minus the return on a portfolio of large stocks, and HML_t is the return on a portfolio of stocks with high book to market ratio minus the return on a portfolio of stocks with low book-to-market ratio. Additionally, following Carhart (1997), we also regress the calendar-time portfolio return using a four factor model which includes one additional factor, UMD_t, the return on high momentum stock minus the return on low momentum stocks. The intercept term, α, in the three-factor and four-factor model are used to measure the average monthly abnormal return on the calendar time portfolio.

Defining peer firms

Barber and Lyon (1997) note that the size-and-book-to-market-matched control firm approach yields well-specified statistics. In order to estimate the long run

abnormal return. We find the peer firm base on industry (2-digit SIC code), size, and book to market ratio All firms are collected from CRSP which are listed on NYSE/AMEX/Nasdaq, and exclude REITS, ADR and firms in our sample. We further select the peer firms have same 2-digit SIC code, and most closed size (book to market ratio) to sample firms as the industry-size (-book to market ratio) peer firms. Additionally, we sum the absolute value of the difference of size and book to market ratio. We select the firms have sample 2-digit SIC code and minimum of the summation difference as the industry-size-book to market ratio peer firm.

Empirical model

We use the regression model to test the relationship between the analysts' forecasts and the long-run performance of the bank loan financing firms. The dependent variable is the logarithm of buy-and-hold abnormal (LBHAR) return.

$$\mathrm{LBHAR_i} = \ln(1 + \mathrm{BHR_i}) - \ln\,(1 + \mathrm{BHR_{benchmark}})$$

The independent variable is the industry-adjusted long-term growth forecast made by analysts 3 months after the bank loan announcement. Rajan and Servaes (1997) indicate that although the forecast error is more direct measure to the optimism of analysts, it has drawback of being based on ex post data (actual earnings), and the realized actual earnings is mechanically correlated with long run return. Therefore, we adopt the long run growth projection to do the analysis of analyst optimism and future performance. We do not use the forecast error because it involves the ex post data (realized actual earnings). Additionally, we have several control variables in this regression.

The loan characteristic variables:

Relative loan size: computed as the natural logarithm of the bank loan amount divided by market value. Billet, Flannery, Garfinkel (2006) find that relative loan size

is statistically significant as larger relative loan sizes are associated with worse ex post peer-adjusted returns. Moreover, poor ex ante performers tend to take relatively larger loans on which the lender chargers a higher rate spread. Because relative loan size significant affects borrowing firms' long-term performance, we include this variable.

Loan revision: a dummy variable. If the news indicates that the agreement is new, we classified it as a new loan, and the dummy variable value is zero. If the news indicates that the agreement is a revision, extension, or replacement of the existing credit agreements, we classified it as a loan revision, and the dummy variable value is one. Lummer and McConnell (1989) find that only favorable loan revisions have positive abnormal returns. This suggests that loan revisions are more likely than new loans to be based on a strong banking relationship.

Syndication: it is a dummy variable. If a firm's bank loan borrows from only one bank, we classified it as a single loan, and the dummy variable value is zero. If a bank loan is credited by many banks, we classified it as a syndicated loan, and the dummy variable value is one. Preece and Mullineaux (1996) found that the borrower's announcement return is inversely related to the number of lenders in the loan syndicate. Thus, loans involving a large syndicate are more likely to suffer from the hold-out problem and are more difficult to renegotiate if the borrower is financially distressed. Therefore we include this variable to test whether a single loan or syndicated loan may affect the firms' future returns.

Variables for firm characteristics are:

Firm size: computed as the natural logarithm of the market value of equity. Fama (1985), and Diamond (1984) proposed that the small firms benefit more from the screening and monitoring entailed in bank loan, because the small firms are usually associated to more information asymmetry to capital market, and difficult to finance

in equity market. Slovin et al (1992) provide empirical evidence to show small firm receive the greatest benefit from the certification of bank loan announcement.

Equity's book-to-market ratio: computed as the log of equity book value divided by market value. Fama and French (1992) provide evidence to show that there is positive relationship between the book to market ratio and stock return. Fama and French (1995) find the high book-to-market ratio firms have high average return. Rau and Vermaelen (1998) identified the low book-to-market ratio firm as the glamour firm. The market and management are more likely to overextrapolate the firm's past performance, and then the stock price reverse in the long run.

Empirical Results

Table 2 shows the descriptive statistics of the analyst forecast error of the earnings per share. We report forecast errors for windows of 3 through 12 months at three-month intervals. The window is the number of months between when the forecast is made and the fiscal year end. Panel A shows forecast error within one year following the bank loan announcement, while Panel B shows the forecast error in the second year after the bank loan announcement. In Panel A, 12 months before the fiscal year end, the analysts offer a 6.1% higher forecast error for firms announcing bank loans. . Analysts forecast are argued to be optimistic bias, since the analysts have incentive to maintain the commercial relationship with followed companies and are reluctant to issue unfavorable forecast (Das et al. 2003). Thus, we adjust the forecast error for peer firm. After control the forecast error of peer firms (industry-size, industry-book to market ratio, and industry-size-book to market ratio peer firms) the analysts still offer significantly more positive forecast for firms announce bank loan.

In general, the forecast error is smaller when the forecast is closer to the fiscal year end, meaning that though analysts revise their forecasts as the fiscal year end approaches. Panel B contains the forecast error made between one and two years after bank loan announcement. A comparison of Panels A and B represents that forecast accuracy does not improve.

Insert Table 2

Analysts also make long term earning growth projections in IBES. Rajan and Servaes (1997) and IBES suggest that long run growth projection a five-year horizon is representative for what analysts expect in mind when these forecasts are made. In Table 3, we report the long term growth forecast and the industry-adjusted long term growth forecast. The industry-adjusted long term growth equals the long term growth forecast minus the average long term growth forecast of the firms in the same industry. We report the announced long term growth forecast for the 3 month window after the bank loan announcement, from 3 months to 24 months. We find that, the long term growth projection for firms announcing bank loans is significantly higher than the industry average. After bank loan agreement, the analysts persistently have relative optimistic projection about the borrowing firm's long run growth. On average, the bank loan announcing firms are expected to grow about two percent faster than industrial growth rate.

Insert Table 3

The empirical results in Table 2 and Table 3 show that the analysts tend to offer relative optimistic forecasts about firms announcing bank loans. This positive forecast

error is consistent with our expectation that the bank loan agreements are viewed as positive news and the analysts respond to the information by issuing more optimistic earnings forecasts.

In Table 4, we report the descriptive statistics of the buy and hold return and the buy and hold abnormal return adjusted by benchmark. We find that, returns for firms announcing bank loans are significantly lower than most benchmarks, besides the value-weighted index return. The negative long run abnormal return is consistent with the findings of Billett, Flannery, and Garfinkel (2006) that firms announcing bank loans display poor stock performance in the long run.

Insert Table 4

In Table 5, we use the calendar-time portfolio return, three-factor model (Fama and French, 1993), and four-factor model (Carhart, 1997) to test the existence of the long run abnormal return. In the model with valueequal-weighteded portfolio return, the intercept term is -0.883 (t=-3.50) and -0.638 (t=-2.74) in the three-factor and four-factor models. In the model with equal-weighted portfolio return, the intercept term is -0.875 (t=-4.13) and -0.609 (t=-3.38) in the three-factor and four-factor models. These significantly negative intercepts mean that firms announcing bank loans underperform in the long run after controlling for other effects in both the three factor and four-factor model.

Insert Table 5

The results of regression analysis are shown in Table 6. The dependent variables in model 1 to model five are buy and hold abnormal return, the benchmarks in proper

order are value-weighted market return, equal-weighted market return, industry-size matching firm return, industry-book to market ratio matching firm return, and industry-size-book to market ratio matching firm return. The significantly negative relationship between the long run stock performance and the analysts' long run growth forecast supports our contention that the more optimistic the analyst growth forecast, the firms announcing bank loans experience poorer long run stock performance.

Insert Table 6

Conclusion

Banks are viewed as institutional investors who have greater professional capability, and access to information than other market investors for evaluating firm value and providing monitoring and consultant services. In the literature, announcement returns of a bank loan are shown to be positive. Researchers propose the information signaling and monitoring hypotheses to explain the positive abnormal returns. Billet, Flannery and Garfinkel (2006) find that the long run performance of firms announcing bank loans is disappointing. If the bank loan could create valuation through information signaling and monitoring, what explains the reversal of the long run performance of the bank loan announcing firm?

In this study, we propose that overreaction to the benefits of a bank loan is the explanation for the long run reversal of stock performance. We use analyst forecast error as the proxy for analysts' optimism and collect US bank loan announcement events to test our agreements. After a comparison bank loan announcing firms with non-announcing peers in the same industry matched for size, and book to market ratio,

our results show that analysts offer relatively more optimistic earnings forecasts for firms announcing bank loans. Analyst optimism also appears in the long run growth projection. The more positive forecast error and long run growth projection show that analysts are more optimistic about firms announcing bank loans. In our analysis, we find that when analysts issue more optimistic long run growth projection after a bank loan announcement, the firms announcing bank loans suffer reversal and greater underperformance in the long run.

Billett et al (2006) provide evidence that the borrowing underperform in the long run, which is conflict to the proposed benefit from bank loan. In this study, we try to discuss the underperformance of the firm who announce bank loan from the investor behavior, and provide evidence to show that the investor overreaction in the short run is one possible explanation for the long run underperformance after bank loan announcement.

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Table 1
Distribution of Bank Loan Financing Firms

This table summarizes the sample distribution of bank loan financing firms listed on the New York Stock Exchange (NYSE), the American Stock Exchange (AMEX), or the NASDAQ exchange from 1997 to 2005. The sample is collected from LexisNexis. 2770 firms meet the sample restrictions. Number on Institutional Brokers Estimate System (IBES) refers to the number of bank loan annoucing firms listed on the IBES database within two years of the bank loan financing. The two-digit SIC code is obtained from Compustat.

Panel A: Distribution of Sample Over Time

Offering Year	N	%	Available in IBES	%
1997	255	9.21	132	7.84
1998	375	13.54	177	10.54
1999	406	14.66	214	12.75
2000	187	6.75	103	6.11
2001	195	7.04	115	6.83
2002	268	9.68	175	10.42
2003	318	11.48	236	14.07
2004	382	13.79	266	15.87
2005	384	13.86	261	15.57
Total	2770	100	1679	100

Panel B: Distribution of Sample across Two-Digit SIC Codes

Industry	2-digit SIC	N	%	Available In IBES	%
Manufacturing	20~39	793	28.63	490	29.28
Services	70~89	498	17.98	322	19.22
Finance, Insurance, and Real Estate	60~67	463	16.71	233	13.89
Transportation and Communications	40~49	316	11.41	226	13.47
Retail Trade	52~59	229	8.27	162	9.64
Wholesale Trade	50~51	171	6.17	91	5.39
Mining	10~14	157	5.67	98	5.81
Agriculture, Forest and Fishing	01~09	74	2.67	2	0.06
Construction	15~17	69	2.49	55	3.23
Total		2770	100	1679	100

Table 2
Analyst Earnings Forecast Errors for Bank Loan Financing Firms

This table presents average analyst earnings forecast errors for the bank loan financing firms. The forecast error is computed as: (Earnings forecast – Actual earnings) / Stock price at the time of the earnings forecasts. We report forecast errors for forecast windows of three through 12 months in three-month intervals. Window is the number of months between when the forecast is made and the fiscal year end for which the forecast is made. Matched firm adjusted forecast errors are computed by subtracting the forecast error of the firm with the same SIC code closest in size, book to market ratio, or the sum difference of size and book to market ratio to the bank loan financing firms. "***" represents a 1% significance level; "**"represents a 5% significance level; "*" represents a 10% significance level.

			Matching Firm Adjusted Forecast Error					
Window	Forecast error	N	Industry/ Size	N	Industry/ BM	N	Industry/ Size/BM	N
Panel A: Forecasts made within one year of the bank loan announcement								
3 months	0.024 ***	1580	0.014 ***	917	0.018 ***	769	0.017 ***	880
6 months	0.042 ***	1571	0.022 ***	871	0.025 ***	745	0.023 ***	841
9 months	0.039 ***	1544	0.018 ***	818	0.013 ***	715	0.017 ***	788
12 months	0.061 ***	1446	0.025 ***	742	0.032 **	654	0.024 ***	717
Panel B: Forecasts made between one year and two years after the bank loan announcement								
3 months	0.043 ***	1585	0.013 ***	807	0.025 ***	691	0.015 ***	773
6 months	0.043 ***	1564	0.025 ***	795	0.029 ***	680	0.024 ***	763
9 months	0.053 ***	1514	0.020 ***	723	0.032 ***	619	0.020 ***	697
12 months	0.037 ***	1384	0.014 ***	642	0.017 ***	560	0.016 ***	630

Table 3
Forecasts of Long Term Earnings Growth for Bank Loan Financing Firms

This table presents average forecasts of long-term earnings growth for the bank loan announcing firms. Long-term earnings growth projection made for firms listed on IBES within two years of the bank loan announcement are included. We report long term growth projection for time period of 3 through 24 months in three-month intervals. Time refers to the time period after the bank loan announcement that the forecast is made. Industry-adjusted long term growth rates are computed by subtracting the average of all firms in CRSP with the same two-digit industry code, and are listed in IBES. The parentheses report t-statistics.

Time	Long-term Growth Forecasts (in %)	N	Industry-Adjusted Long term Growth Forecasts (in %)	N
3 months	17.9447	1355	2.1881(7.48)	1343
6 months	18.0684	1383	2.3598(7.62)	1366
9 months	18.2057	1396	2.5982(7.80)	1378
12 months	17.6095	1395	2.0169(7.52)	1372
15 months	17.7016	1384	2.1471(7.51)	1360
18 months	17.2950	1396	1.8485(6.84)	1366
21 months	17.4693	1390	2.1742(6.99)	1361
24 months	17.1589	1382	1.9079(6.74)	1353

Table 4
Three Year Performance for Bank Loan Financing Firms

This table presents three year stock performance for the bank loan financing firms. Buy-and-hold returns (BHR) for the sample firms and buy-and-hold abnormal returns (BHAR) for the sample firms relative to benchmarks (market index or matched firms) are calculated in the period of 36 months after the bank loan announcement date. The BHAR is the difference between the BHR on the sample firm and that of the benchmarks. Market return is the CRSP value-weighted and equal-weighted index return. Matching firm is matched by the same industry and closest in size, book to market ratio, or sum of difference in size and book to market ratio. The parentheses report t-statistics. "***" represents a 1% significance level; "**"represents a 5% significance level; "*" represents a 10% significance level.

	N	Mean	t-statistic	Median
Raw Return	1679	0.3688	(13.35)	0.1606 ***
Benchmark		Buy and hold abnormal return		
Value-weighted index	1679	0.1468	(5.39)	-0.0561
Equal-weighted index	1679	-0.0812	(-3.11)	-0.2972 ***
Size/Industry matching firm	1221	-0.1598	(-3.18)	-0.1284 ***
BM ratio/Industry matching firm	1173	-0.1914	(-3.51)	-0.1802 ***
Size, BM ratio/Industry Matching firm	1172	-0.1837	(-3.68)	-0.1385 ***

Table 5
Long-run Returns Following Private Placements Calendar-Time Portfolios

This table reports the unadjusted intercept from calendar-time portfolio regressions:
Fama-French's (1993) Three-Factor Model:

$$R_{pt} - R_{ft} = \alpha + \beta_{\mathrm{m}}(R_{mt} - R_{ft}) + \beta_{\mathrm{s}} SMB_t + \beta_{\mathrm{h}} HML_t + \varepsilon_t$$

Carhart' s (1997) Four-factor Model:

$$R_{pt} - R_{ft} = \alpha + \beta_{\mathrm{m}}(R_{mt} - R_{ft}) + \beta_{\mathrm{s}} SMB_t + \beta_{\mathrm{h}} HML_t + \beta_{\mathrm{u}} UMD_t + \varepsilon_t$$

The dependent variables (R_{pt} - R_{ft}) are event portfolio returns, R_p, in excess of the treasury bill rate, R_{ft}. Each month, we form a portfolio of all sample firms that have BLF from 1th month to 36th month. The factors, from Fama and French (1993) and Carhart (1997), are the excess returns on the market portfolio (R_{pt} - R_{ft}), the difference in returns between the portfolios of small stocks and big stocks (SMB_t), and the difference in returns between the portfolios of high book-to-market stocks and low book-to-market stocks (HML_t). The UMD_t is defined as the difference between a portfolio return of stocks with the highest 30 percent returns and a portfolio return of stocks with the lowest 30 percent returns. The intercept α measures the monthly abnormal returns, given the model. The parentheses report t-statistics. "***" represents a 1% significance level; "**"represents a 5% significance level; "*" represents a 10% significance level.

Panel A: Fama-French Three-factor Model				
	Value-weighted		Equal-weighted	
	α	Adjusted-R^2	α	Adjusted-R^2
	-0.883*** (-3.50)	0.801	-0.875 (-4.13)	0.856
Portfolio Number	143		143	
Panel B: Carhart Four-factor Model				
	Value-weighted		Equal-weighted	
	α	Adjusted-R^2	α	Adjusted-R^2
	-0.638*** (-2.74)	0.836	-0.609 (-3.38)	0.900
Portfolio Number	143		143	

Table 6

Regressions of Long-run Stock Performance of Bank Loan Financing Firms

This table presents regression analyses. The dependent variable (LBHAR) is the logarithm of long run abnormal return of the firms announcing bank loan. The benchmarks in model 1 to model 5 are value-weighted index return, equal-weighted market return, industry-size matching firm, industry-book to market ratio matching firm, and industry-size-book to market ratio matching firm. Long growth forecast is the average industry-adjusted long-term growth forecast reported for a firm three months after the bank loan announcement. Industry-adjusted long-term growth forecasts are computed by subtracting the average long-term growth forecast for all firms in the industry. Industry is defined at the two-digit SIC code level. ln(size) is logarithm of market value of equity. ln(book to market ratio) is computed as logarithm of equity book value divided by market value. ln(relative size) is computed as logarithm of bank loan amount divided by market value. Revision is a dummy variable, whose value is zero if it is a new loan and one if it is a loan revision. Syndication is a dummy variable, and the value is zero if it is a single loan and one if it is a syndicated loan. The t-statistic is in parentheses. "***" represents a 1% significance level; "**" represents a 5% significance level; "*" represents a 10% significance level.

Model	1	2	3	4	5
Intercept	-0.391***	-0.675***	-0.366*	-0.491**	-0.457**
	(-2.585)	(-4.629)	(-1.923)	(-2.543)	(-2.423)
Long growth forecast	-0.005	-0.006***	-0.014***	-0.013**	-0.012**
	(-1.480)	(-1.805)	(-2.724)	(-2.395)	(-2.403)
ln(size)	0.066**	0.068*	0.029	0.036	0.039
	(2.332)	(2.482)	(0.839)	(1.014)	(1.111)
ln(book to market ratio)	0.279***	0.244**	0.117*	0.085	0.117*
	(5.500)	(4.988)	(1.810)	(1.284)	(1.830)
ln(relative size)	-0.034	-0.035***	-0.076*	-0.071	-0.084*
	(-0.952)	(-1.013)	(-1.744)	(-1.568)	(-1.924)
Revision=1, New=0	-0.073	0.040	0.032	-0.129	-0.031
	(-1.066)	(0.607)	(0.371)	(-1.477)	(-0.366)
Syndication=1, Single=0	-0.049	-0.010	-0.056	0.077	-0.014
	(-0.580)	(-0.127)	(-0.535)	(0.719)	(-0.133)
Adjusted R-Square	0.042	0.039	0.016	0.016	0.017
N [a]	914	914	798	802	796

[a] Number of observations differ due to availability of variables, and matching sample.