

**The Interaction between Internal and External Corporate  
Governance Mechanisms:  
Evidence from Bank Loan Litigation in China**

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**Abstract**

We examine empirically whether internal corporate governance mechanisms play a role in reducing the probability of being sued by lending banks due to bank loan default and the market reaction to the announcement of bank loan litigation. Using bank loan litigation events in Chinese financial markets, our results show that companies with better internal corporate governance mechanisms are associated with a lower probability of being sued. We also find a significant negative market reaction to the announcement of a bank loan filing while insignificant market reaction to the announcement of bank loan litigation verdict. Moreover, we test whether internal corporate governance mechanisms can play a role in mitigating the effect of market reactions. Our findings indicate that there is no evidence of internal corporate governance in mitigating this effect. Our paper suggests that internal corporate governance mechanisms are important in preventing the trigger of external governance mechanisms (litigation) but do not play any role once external governance (litigation) takes over.

## 1. Introduction

Corporate scandals in the United States in the early 21st century have contributed to highlight the importance of corporate governance. Recently, increasing attention has been drawn to the effect of litigation as a form of external corporate governance and its interaction with internal corporate governance (see, for example, Ferris et al., 2007). Using bank loan litigations in Chinese financial markets, we examine the probability of companies being sued by their banks and the market reaction to the events conditional on internal corporate governance quality.

Bank loan litigation, as one kind of external corporate governance mechanism, is distinct from other corporate governance mechanisms. Firstly, bank loan litigation does not only involve the creditors' (the banks) crucial role in corporate governance, but also contains the litigation effect. Moreover, similar to other litigation, bank loan litigation is an ex post punitive measure whereas most of the internal corporate governance mechanisms are ex ante measures. Bank loan litigation should only come into force in those firms where internal corporate governance mechanisms are ineffective (Mohan, 2004). As the costs of a litigation is very high to the company and shareholders' value, we argue that companies with good corporate governance should prevent such events occurring. In other words, firms with worse corporate governance mechanisms are more likely to be sued due to bank loan defaults or firms with better corporate governance mechanisms are less likely to be sued due to bank loan defaults.

We empirically test whether corporate governance mechanisms have an effect the probability of bank loan litigation. We attempt to address the following questions: 1) Are there any differences in firms characteristics between the sued firms and non-sued firms? 2) Can better corporate governance mechanisms reduced the probability of being sued due to bank loan defaults? 3) What is the market reaction to the announcement of bank loan litigation including the announcement of a bank loan litigation filing and the announcement of a bank loan litigation verdict? 4) Can corporate governance mechanisms play a role in mitigating the effect of market reaction?

This study contributes to the literature in the following two ways. Firstly, to our knowledge, this is the first empirical study to analyze the relation between corporate governance mechanisms and bank loan litigations. Prior relevant studies include examining the relation between corporate governance mechanisms and derivative lawsuits (Ferris, Lawless and Makhija, 2001) and testing

the relation between corporate governance mechanisms and Securities Class Action litigations (Mohan, 2004), both of which are different from bank loan litigation. Secondly, our paper contributes to the increasing literature on corporate governance in emerging markets. We study listed companies in China financial markets.

Controlling for profitability and capital structure we show that companies with a higher quality of internal corporate governance and with larger state control are associated with less probability of being sued. We find significant negative market reaction to the announcements of lawsuits while no evidence of corporate governance in mitigating the effect. This evidence suggests that internal corporate governance is important in preventing the trigger of an external governance mechanism but do not play any role once external governance takes over.

This paper is organized as follows. In section 2, we present the literature review and in section 3 we formulate hypotheses based on both the existing literature. Section 4 describes the data and methodology and we present and analyze our empirical results in section 5. In section 6, we present the robustness tests. A brief summary and conclusion is provided in the final section.

## **2. Literature Review**

Litigation can play an important role in corporate governance. As one of the external corporate governance mechanisms, litigation is being paid increasing attentions by academic researchers. As Gillan (2006) puts it, “litigation is also an important element of the governance environment.” This paper attempts to test the litigation effect by focusing on bank loan litigation events in Chinese financial markets.

There is a considerable literature dealing with litigation. Firstly, some papers study the wealth effect of litigation. Bizjak and Coles (1995) examine the shareholder wealth effect of inter-firm antitrust litigation. Engelmann and Cornell (1988) measure the cost of corporate litigation by calculating the change in the dollar value of both the plaintiff and defendant using five cases. Cutler and Summers (1988) analyze the Texaco-Pennzoil litigation case and study the wealth effect of litigation. Prince and Rubin (2002) use event methodology to examine the effects of product liability litigation on firms in the automobile and pharmaceutical industries. Bhagat, Bizjak and Coles (1998) examine the wealth effect of corporate litigation according to different types of lawsuits and types of opponents.

Moreover, there are some papers studying the relationship between fraud and corporate governance. To examine the effects of different types of fraud on managerial turnover and board turnover, Agrawal and Jaffe (1999) followed Karpoff and Lott’s (1993) four categories of fraud. They partitioned the sample into frauds against stakeholders, frauds against government, financial reporting fraud and regulatory violations. Little evidence was found that firms suspected or charged with criminal fraud have unusually high CEO or board turnover surrounding allegations of fraud. Agrawal and Chadha (2005) empirically test whether certain corporate governance mechanisms are related to the probability of a company restating its earnings. Their results indicate that several key corporate governance measures such as the independence of boards, the independence of audit committee and the provision of non-audit services by outside auditors are irrelevant to the probability of a company restating earnings. However, they find that the probability of restatement is lower in companies whose boards or audit committees have an independent director with financial expertise and the probability is higher in companies in which the chief executive officer belongs to the founding family.

Lastly, there are two recent papers closely aligned to our paper. Ferris, Jandik, Lawless, and Makhija (2007) test empirically the efficacy of derivative lawsuits as an essential component of corporate governance mechanisms by examining board changes surrounding the filings of shareholder derivative lawsuits. They find that the incidence of derivative lawsuits is higher for firms with a greater likelihood of agency conflicts and derivative lawsuits are associated with significant improvements in the boards of directors. Mohan (2004) proposes that Securities Class Action litigation is an ex post substitute for effective ex ante governance and monitoring and tests whether firms with poor governance control are more likely to be sued by shareholders using various measures of governance including management compensation, institutional ownership, board size and composition. He finds that firms with high total and abnormal compensation are more likely to be sued, while firms with large institutional blockholders are less likely to be sued. However his findings show no evidence that independent-dominated boards or small boards provide effective ex ante governance.

In the context of emerging market research, the effectiveness of internal corporate governance mechanisms and external regulation framework are likely to be much weaker than those in developed market. The effectiveness of ex ante internal corporate governance requires an efficient financial market and experienced market participants to enforce it. Given the fact that both of these will take a considerably long time to achieve as the market develops, the effectiveness of external and ex post mechanisms are much important in this markets.

In next section, we discuss the testable hypotheses on the topics of the interactions between internal and external corporate governance in the context of bank loan litigation in China's Stock Market.

### 3. Testable hypotheses

The occurrence of a bank loan litigation could be seen as an end result of the interaction between the two major parties: the borrowing company (here after: company) and the lending bank (here after: bank). In the following, we try to show that litigation is costly both for the company and the bank. It is the last thing both parties want it to happen in a banking relationship.

From the company's point of view, a board of directors in a financial distressed company would try all possible situations to resolve the problem before this bad news went public. Litigation from its creditor would send a very negative signal to its shareholders and its stakeholders such as supplier, customer, and other creditors. This would only worsen the financial situation of the company and may even lead to liquidation. Given such a high cost of bank loan litigation, an effective and experienced board of director should make every effort to prevent such a thing happening *ex ante*.

Considering all of the above disadvantages of being sued, we formalize our hypotheses as follows:

**HYPOTHESIS A0:** Its corporate governance mechanisms do not affect the probability of a company being sued by lending banks.

**HYPOTHESIS A1:** Better internal corporate governance mechanisms reduce the probability of a company being sued by its lending banks.

The lending banks have several options to address the bank loan default, such as renewing the original contract, extending the original contract, converting the loan to equity or initiating a lawsuit against the borrowing firms. From the perspective of lending banks, compared to the former three approaches, suing the borrowing company may worsen the financial situation of the company as other creditors and suppliers withdraw their credits from the company. Furthermore, initiating a lawsuit involves the cost of attorneys, etc. Therefore in normal circumstances, balancing the costs and benefits, the lending banks may not be inclined to choose the last option. In this regard, lending banks can be treated as a "partial insider". In particular, they closely monitor the company's financial indicators. When a bank initiates a law suit on a company, it should be seen as a very important event containing information of the borrowing company

financial situation. It signals bad news for the borrowing firm. We would expect the market should to adjust their valuation of the company and would have negative reaction to the bank loan filing announcement. Accordingly we have the following hypotheses:

**HYPOTHESIS B0:** Bank loan litigation contains no new information about the firm's value and no market reaction is found in relation to the bank loan litigation filing announcement.

**HYPOTHESIS B1:** Bank loan litigation contains new information about the firm's value and negative market reaction is found in relation to the bank loan litigation filing announcement.

Following the litigation filing announcement, there is an announcement on the law suit after the court reach their verdict. Unlike other types of law suit, the outcome of such law suits is much more predictable. It is very clear that it is the borrowing firms' responsibility to pay off their money to lending banks on time and the evidence is easily available. There is no surprise for the investors to predict the consequence of these kinds of bank loan litigation. In other words, the verdict announcement should contain no new information and the market reaction should be insignificant. Accordingly we have the following hypotheses:

**HYPOTHESIS C0:** Verdict announcements contain no new information about the firm's value and the market reaction should be insignificant.

**HYPOTHESIS C1:** Verdict announcements contain new information about the firm's value and the market reaction should be significant.

Finally, we consider the role of internal corporate governance in mitigating the market reaction to the bank loan litigation announcement. Previous literature has found that corporate governance plays important roles in reducing information asymmetry. Market reactions to news are conditional on the quality of corporate governance ( (see e.g., Cai, Short and Keasey (2006) ). In the context of the current study, a relatively higher quality board should have communicated with their shareholder about the company's financial situation before the occurrence of the law suit announcement. The effect communication would smooth the market reaction to the bad news. In other words, we would expect relatively less negative market reaction for companies with better internal corporate governance.

We propose our hypotheses as follows:

**HYPOTHESIS D0:** Internal corporate governance mechanisms have no effect on the magnitude of the market reaction for these sued firms.

**HYPOTHESIS D1:** Better internal corporate governance mechanisms reduce the magnitude of the market reaction for these sued firms.

## 4. Data and Methodology

### 4.1 Data

A sample of all bank loan litigation announcements is compiled from [www.cninfo.com.cn](http://www.cninfo.com.cn)<sup>2</sup>. We further cross-check these announcements in another website [www.jrj.com.cn](http://www.jrj.com.cn).

Stock price data and accounting data comes from the CCFR<sup>3</sup> Database, Tsinghua University, China. Governance data are obtained from GTI Corporate Governance Database. Due to some of the corporate governance variable not being available from the GTI Corporate Governance Database, we manually collect these data directly from the annual reports. The annual reports are downloaded from websites such as [www.cninfo.com.cn](http://www.cninfo.com.cn), [www.sse.com.cn](http://www.sse.com.cn)<sup>4</sup> and [www.sse.org.cn](http://www.sse.org.cn)<sup>5</sup>. All these websites are officially-designated information disclosure media regulated by CSRC.

We test bank loan litigation in China over the period 2004 to 2005. We begin our sample in 2004 because there almost no bank loan litigation disclosed before 2004. Another reason is the difficulties in obtaining corporate governance data prior to 2004. In addition, to capture precisely the bank loan litigation effect, we do not count in these events that announcements contain other non-bank-loan-litigation information in the same announcement. To minimize the effect of confounding events, we exclude the bank loan litigation announcements accompanies by other corporate events within [-5,+5] window of the bank loan litigation.

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<sup>1</sup> [www.cninfo.com.cn](http://www.cninfo.com.cn) is one of the officially-designated media for China's listed firm disclosure regulated by the Chinese Securities Regulatory Commission (CSRC).

<sup>2</sup> [www.cninfo.com.cn](http://www.cninfo.com.cn) is one of the officially-designated media for China's listed firm disclosure regulated by the Chinese Securities Regulatory Commission (CSRC).

<sup>3</sup> CCFR: China Center for Financial Research.

<sup>4</sup> [www.sse.com.cn](http://www.sse.com.cn) is the homepage of Shanghai Stock Exchange.

<sup>5</sup> [www.sse.org.cn](http://www.sse.org.cn) is the homepage of Shenzhen Stock Exchange.

Our final sample contains 85 announcements of filings in bank loan litigation with 32 filing announcements in year 2004 involving 22 companies and 53 filing announcements in year 2005 involving 32 companies. In terms of verdict announcements, the sample contain 86 observations, 34 in 2004 involving 21 companies and 52 in 2005 involving 31 companies. Sample statistics are reported in Table 1.

[Insert Table 1 about here]

The specific internal corporate governance measures that we focus are the ratio of independent directors to total directors, CEO split, ownership structure, directors with certain expertise and other variables followed by Fan et al (2007)

The ratio of outside directors to total directors as one of the most internal corporate governance mechanisms is considered to be a good way to improve the efficiency of the board. We argue that firms with boards that are more independent have a lower likelihood to be sued by banks. As for board size, although small boards may have an advantage at making decisions, big boards have more resources to address a financial crisis. We study the relationship between the board size and the likelihood of being sued by banks.

In addition to independence and board size, the accounting, law and financial expertise of members of boards, the academic background of board directors and the education background of board directors also have certain influence on the decisions made by boards. Normally, firms with boards with more directors who have more experience in accounting, law, or finance, with specific academic background and high level education are more likely to detect financial issues and more likely to address potential financial distress in advance. We test the relation between the expertise of boards and the probability of being sued.

Moreover, it is argue that a CEO's influence on the board can affect its effectiveness and the more separated the roles of CEO and chairman, the more efficiently the bank loan default can be solved by the board. We also examine the relation between the CEO's split and the likelihood of being sued by banks.

In addition, ownership structure is an important governance mechanism and also can influence the likelihood of being sued. If the first largest shareholder is the central government or

local government, the firms may less likely to be sued given the influence of these organizations. Furthermore, firms with a more diverse shareholders base are likely to have greater agency problems or free rider problems than firms with a more concentrated shareholders base. So we argue that firms with more concentrated shareholders are less likely to be sued by banks.

In the meanwhile, we use firm performance measures and liability measures as our control variables. Firms with high performance usually have a greater ability to pay off the capital borrowed through the banks or have a good reputation to borrow money to pay off the debt. In other words, firms with good performance can pay off the debt in time and are less likely to be sued by banks due to bank loan default. In addition, firms with very high debt levels will struggle to pay off current debt claimed by banks and more likely be sued by banks. We test the relationship between firm performance measures and the likelihood of being sued, the relationship between firm liability measures and the likelihood of being sued.

Table 2A presents the descriptions of dependent and independent variables used in univariate and multivariate analysis. Table 2B documents the descriptive statistics of these variables. Panel A in table 2B shows that, on average, firms have about 9.537 directors in their boards, and 87 percent firms split the role of chairman and CEO. About 14% CEO and 39% Chairman have political background. Firms' boards comprised 33% independent directors. In term of director characteristics, the average age of directors in the sample is around 46, and only 11.6% of the directors in sample were female, and the average education level directors received is undergraduate degree. In addition, the sample shows that 26% directors have political background, 22% directors have academic background, and 33.6% directors have accounting, law, or finance background.

Panel B in Table 2B presents that the average ROA, ROE of the sample are -0.098 and -0.0699 respectively, and the average of Tobinq<sub>70</sub>, Tobinq<sub>80</sub> are 1.1573 and 1.077 respectively.

In term of liability measures, Table 2B Panel C shows that on average, the DTA, Current Ratio, Quick Ratio and Cash Ratio are 0.8298, 1.0104, 0.7908 and 0.2328 respectively.

Finally, Panel D in Table 2B shows that the percentage of shares held by the first largest shareholder, the percentage of shares held by the largest five shareholders, the percentage of shares held by the largest ten shareholders are 32.7%, 53.6% and 56.6%. In addition, there are

37.9% firms in samples, in which the first largest shareholder is the central government or local government.

[Insert Table 2A about here]

[Insert Table 2B about here]

## 4.2 Methodology

### 4.2.1 Matching Algorithm and Probit Model

To find the different companies characteristics and calculate the likelihood of the being sued by banks, we need to construct the control firms (i.e. matching firms). Using an algorithm similar to Huang and Stoll (1996) and Venkataraman (2001), the control firms are matched according to the following algorithm. The control firms are matched with the sample firms with the same industry classification code. Firms pairs are deleted if

$$CharacteristicDeviation(DEV) = \left| \frac{2(X_{sample} - X_{control})}{(X_{sample} + X_{control})} \right| > 1$$

Where X refers to the firms accounting measures including the total asset and debt to asset. The purpose of this screen is to eliminate candidate pairs for which the firms' characteristics are extremely far apart. Next, for each matched pair, we compute the following statistic:

$$AverageCharacteristicDeviation(ADEV) = \sum \left[ \frac{2(X_{sample} - X_{control})}{(X_{sample} + X_{control})} \right]^2$$

Finally, for each pairs firm, we pick a control firm with the smallest statistic and delete pairs with duplicate control firms.

When we construct the control firms, we follow these principles: 1) sample firms in certain year must be different each other. 2) control firms must be different from sample firms. 3) firms in control firms in certain year must be different from each other.

During the matching procedure, we have some companies that are sued by banks more than once in one year and thus for these companies. In other words, these companies have more than one bank loan litigation filing announcements in a single year. Given the fact that the company characteristics measures are stable relatively in term of industry, size, and debt to asset, all of which are criteria to construct the control firms, we select the last bank loan litigation in certain

year as the representative.

Moreover, some sample firms changed their industry classification in 2004 or in 2005. We use industry classification before the litigation is filed as the sample firms' industry classification to match the control firms. The control firms are matched according to the similar level 3 industry classification<sup>6</sup> to sample firms.

Based on the above procedure, we obtain 22 control firms corresponding to 22 sample firms for bank loan filing in 2004, and 32 control firms corresponding to 32 sample firms for bank loan filing in 2005. The details are reported in Appendix A.

We use the standard Probit Model regression to predict the likelihood that a firm without bank loan litigation would be sued as opposed to the firm with bank loan litigation

#### 4.2.2 Event Study Methodology<sup>7</sup>

We use the standard event study methodology to measure the market reaction to the litigation announcement. We implement the test procedure by computing ex post abnormal return ( $AR_{it}$ ) as

$$AR_{it} = R_{it} - (\hat{\alpha}_i + \hat{\beta}_i R_{mt}) \quad (1)$$

Where  $R_{it}$  and  $R_{mt}$  are the daily return of the firm associated with transaction  $i$  at time  $t$  and the daily market index return at time  $t$ , respectively. We use the Chinese Composite Stock Price Index return as the market index return. The coefficients  $\hat{\alpha}_i$  and  $\hat{\beta}_i$  are ordinary least squares estimates of the intercept and slope, respectively, of the market model regression. To compute the abnormal returns, we estimate the transaction specific parameters  $\hat{\alpha}_i$  and  $\hat{\beta}_i$  with an ordinary least squares regression, using 200 daily returns beginning with day  $t = -220$  and ending with  $t = -21$  relative to the announcement date.

We construct the cumulative abnormal return ( $CAR_i$ ) between any two dates  $T_1$  and  $T_2$  as

$$CAR_i(T_1, T_2) = \sum_{t=T_1}^{T_2} AR_{it}, \quad (2)$$

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<sup>6</sup> We are unable to match all sample firms to another firms operating within the same level 4 industry group.

<sup>7</sup> For details about the Event Study Methodology see Campbell, Lo and Mackinlay (1997) or Bhagat and Romano (2002)

and we compute the sample cross-sectional average cumulative abnormal returns ( $ACAR(T_1, T_2)$ )

as

$$ACAR(T_1, T_2) = \frac{1}{N} \sum_{i=1}^N CAR_i(T_1, T_2) \quad (3)$$

We use the t-statistic to test the hypothesis that the average  $CARs$  over any given interval are equal to zero.

## **5. Empirical Results**

### **5.1 Corporate governance and the probability of being sued**

#### **5.1.1 Univariate analysis**

Before examining the likelihood of being sued with a probit model, we compare the various measures for sample firms with those of control firms.

Panel A of table 3 reports the board of directors' measures for the sample and control firms. The findings show that the control firms have a bigger board size than the sample firms, although it is statistically insignificant. The SPLIT\_NEW variable measures whether the CEO and the Chairman of the board is the same person. There are more cases of CEO/Chairman Split in the control firms than in sample firms. The INDE\_RATIO is defined as the percentage of the independent directors on the board representing the board independence. The findings suggest that the control firms have higher percentage of independent directors than the sample firms.

The RATIO\_PROF is defined as the percentage of the directors with accounting, law or finance background, or who used to work or are currently working for accounting firms, law firms or other financial institutions. The result shows that the sample firms have more professionals than the control firms and the difference in mean is statistically significant, which is contrary to our intuition. All others corporate governance measures are statistically insignificant.

In sum, there exists some difference in board of directors' measures between the sample and control firms, although most of differences in these measures are not statistically significant.

Panel B of Table 3 reports four alternative measures of performance for the sample and control firms; return on assets (ROA), return on equity (ROE), Tobin's q (discount of 70%) and

Tobin's q (discount of 80%). Return on assets (ROA) is defined as earnings before interest and taxes divided by the book value of total assets. Return on equity (ROE) is defined as earnings before extraordinary items divided by the book value of equity. Tobin's q is the ratio of the market value of the firm to the replacement cost of its assets. The mean ROA in our control firms is -0.0202, higher than -0.1764 in our sample firms and the difference in mean is statistically significant at the 0.01 level. The mean ROE in our control firms is -0.135, also higher than -1.2628 in our sample firms, which is statistically significant at the 0.01 level as well. Both the mean Tobin's q (discount of 70%) and mean Tobin's q (discount of 80%) in sample firms are higher than that in control firms and not statistically significant. So, we can conclude that firms with better performance are less likely to be sued in terms of ROA and ROE.

Panel C of Table 3 reports the various liability measures for the sample firms and control firms; current ratio, quick ratio, cash ratio, and the debt to total asset ratio. Current Ratio and Cash Ratio measures in our control firms are higher than that in our sample firms and statistically significant both at the 0.01 level, while Quick Ratio measures are lower in our control firms, which is statistically insignificant. Similarly, the debt to asset ratio is smaller in the control firms as compared to the sample firms, which indicate that the control firms have the stronger solvency.

Panel D in Tables 3 reports the ownership structure measures for the sample and control firms. The mean OC1, OC5 and OC10 in control firms are 36.6%, 55.7% and 58.39% respectively, higher than in sample firms, which are 28.92%, 51.58% and 54.86% respectively. The differences in mean are statistically significant at 1%, 10% and 10% level respectively. The univariate results suggest that the higher the ownership concentration is, the less likely is a firm to be sued by court. The mean FIR\_SHA\_NA in control firms is higher than the sample firms and statistically significant in 1% level. This suggests that state-owned characteristic of the biggest shareholder has influence on the possibility of being sued.

[Insert Table 3 about here]

### **5.1.2 Probit model analysis**

We use a multivariate probit model to estimate the likelihood of being sued due to the bank loan default. All models in table 4 show that both BOARD\_SIZE and INDE\_RATIO are significantly negatively related to the dependent variables, which indicate that the bigger the size of the board and the more independent the directors, the less likely is a firm to be sued by the

lending banks. In addition, ROA in all models is negatively related to the dependent variables and statistically significant at the 5% level. This indicates that firms with better performance are less likely to be sued by the banks, which indicates that firm performance has an influence on the probability of being sued. DTA in models is positively related to the dependent variable and statistically significant at the 5% level. This finding indicates that the higher the liabilities of a firm have, the more likely is it to be sued by the banks. Finally, both the OC10 and FIR\_SHA\_NA are negatively related to the dependent variable and are statistically significant. Both indicate that the ownership structure measure has influence on the litigation probability.

[Insert Table 4 about here]

In summary, the probit analysis shows that firms with better corporate governance, better performance and closely held by the state are less likely to be sued. These results reject the hypothesis A0 that internal corporate governance mechanisms do not affect the probability of a company being sued by lending banks.

## **5.2 Market reaction to the announcement of bank loan Filing and bank loan Verdict**

Table 5 presents the abnormal returns around bank loan litigation filing announcements. We find significantly negative abnormal return on the borrower's stock on the event date of announcement. The average abnormal return is -1.1% on T=0 and statistically significant at the 1% level using t-test. The proportion of abnormal return smaller than zero is 62.35%, so the number of negative abnormal return is greater than the number of positive abnormal return on T=0. We also find the similar results on [0,1] and [-5, +5].

In summary, our results suggest that bank loan litigation announcements contain new information about a firm's future value and the market react negatively to the news.

[Insert Table 5 about here]

In contrast, for verdict announcements, there is no evidence (see Table 6) that the announcements of verdict in a bank loan litigation is associated with negative abnormal return on the borrower's stock. Verdict announcement contain no new information for the market. The

effect of bank loan litigation on firm value is reflected in total in filing initial announcement.

[Insert Table 6 about here]

## **5.2 Corporate Governance and Market reaction to the announcement of bank loan Filing**

Lastly, we test whether the internal corporate governance mechanism can explain the magnitude of the market reaction. Table 7 shows the regression results. Our results indicate that almost all independent variables can not explain the magnitude of the market reaction, especially for the corporate governance measures. Thus, we find no evidence that the corporate governance influence the magnitude of the market reaction.

[Insert Table 7 about here]

The finding of market reactions to the filing and verdict announcements has important implications for the role internal corporate governance plays in the process of bank loan litigation. It suggests that internal corporate governance mechanisms are important factors in determining the probability of a borrowing company being sued by their lending bank. When an external mechanism (in this case, bank loan litigation) is triggered, it generates an important signal to the other stakeholders of the company. Specifically, shareholders react to this news negatively. From this point onward, the effect of internal corporate governance mechanism shows no effect in mitigating the problem.

## **6. Robustness Test**

We substitute the ROE with ROA and regresses the Probit Model again. We obtain the similar results. All coefficients retain the same sign. Likewise, we use other ownership concentration variables to replace OC10. The results are the same as above.

In addition, we calculate the AR and CAR using Market-Adjusted Model<sup>8</sup> and Mean Adjusted Model<sup>9</sup>. The market reactions to the filing announcement of bank loans and verdict announcement of bank loans are still the same as prior studies. Similarity, we use the

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<sup>8</sup> Market Adjusted Model---subtract the market's return on the event day from the firm's return on the same day.

<sup>9</sup> Mean Adjust Model---estimate the average return for each firm leading up to the event day and subtract a firm's average return from the firm's realized return for each day in the event windows.

non-parameter test to examine the significance of the abnormal return. The results are the same as the t-test.

## **7. Summary and Conclusions**

External corporate governance mechanisms are more important when the internal corporate governance practice is immature and ineffective. This is more so in emerging markets than in developed markets where good practice has been suggested and adopted. In this paper we study the interaction between one form of external governance mechanism (i.e., bank loan litigation) and general measures of corporate governance and ownership structure in emerging market.

Using a sample of 86 bank loan litigations in 2004 and 2005 in Chinese Stock Market we find that companies with better internal corporate governance mechanisms are less likely to be sued than companies with worse internal corporate governance mechanisms in terms of the ratio of outside directors, and board size. In addition, companies with better performance and lower liabilities are associated with a lower probability of being sued. Finally, both the ownership concentration and state-owned characteristic of the biggest shareholder have influence on the litigation probability.

Secondly, we test the market reaction to the bank loan litigation announcement. As for lawsuit filings, we find that the average abnormal return (AAR) on the event date is -1.10% and the average cumulative abnormal return (ACAR) on [-5,+5] is -2.33% indicating that the borrower companies experience a loss on average of 1.10% and 2.33% of the market value of their equity on a single day and ten days respectively, which is statistically significant at the 1% level and 5% levels. On the other hand, we find no evidence that the lawsuit verdict has any effect on the market value.

Finally, we test the role of internal corporate governance mechanisms played in mitigating the effect of market reactions and we find no evidence of internal corporate governance in mitigating the effect.

In conclusion, internal corporate governance mechanisms are important in preventing firms from being sued by lending banks but do not further play any role when the external corporate governance mechanism is triggered.



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**Table 1. Descriptive Statistics for bank loan Filing<sup>10</sup> and Verdict<sup>11</sup> announcements by year**

This table gives descriptive statistics for announcements classified by filing or verdict, year of announcement. The sample consists of firms listed on the Shanghai Stock Exchange and Shenzhen Stock Exchanges in China that reported a lawsuit filing or verdict in the [www.cninfo.com.cn](http://www.cninfo.com.cn) website releasing news announcement designated by the CSRC (China Securities Regulatory Commission) during the period 2004-2005.

	2004	2005	Total
		Filing	
Number of Observation	32	53	85
Number of Firms	22	32	54
		Verdict	
Number of Observation	34	52	86
Number of Firms	21	31	52

<sup>10</sup> **Filing**: the initial litigation/lawsuit made by litigant (plaintiff).

<sup>11</sup> **Verdict**: the final judgment made by judge in court.

**Table 2A. Overview of dependent and independent variables**

The definition and explanation of dependent and independent variables.

Variable	Description
CAR	Cumulative average abnormal return during various event windows, such as [-1, 1], [-5, 5] and [0, 1].
TOTAL_ASSET	Total assets. Assets of the company from consolidated annual report of year before announcement (RMB)
<b>Board of Directors</b>	
BOARDSIZE	The total number of directors on the board
SPLIT	Dummy variable equal to 1 when the chairman of the board and the CEO are the same person, otherwise zero.
CEO_POLI	Dummy variable equal to 1 if the CEO was or is an officer of the central government, local government, or the military, and 0 otherwise
CHAIR_POLI	Dummy variable equal to 1 if the chairman of the board was or is an officer of the central government, local government, or the military, and 0 otherwise.
INDE_RATIO	The proportion of independent directors on the whole board
DIR_AGE	The average age of directors on the board
DIR_SEX	The proportion of female directors on the whole board
DIR_EDU	The average score of the education level of the directors on the board. The value of the score ranges between 0 and 4; If a director's education level is below junior college, the value is 0; if junior college, the value is 1; if graduated with a bachelor degree, the value is 2; if graduated with a master's degree, the value is 3; and if graduated with doctorate degree, the value is 4.
RATIO_POLI	The proportion of the directors with political connection on the board. The political connection means that the director was or is an officer of the central government, local government, or the military.
RATIO_ACAD	The proportion of the directors with academic background on the board. In other words, the proportion of the directors who used to work or are currently working for universities or research institutions
RATIO_PROF	The proportion of the directors with accounting , law, or finance backgrounds, or who used to work or are currently working for accounting firm, law firm, or financial institutions or intermediaries, or who are accountants, lawyers, or auditors.
<b>Profitability Measures</b>	
ROA	Return on assets, that is, net earnings divided by assets.
ROE	Return on equity, that is, net earnings divided by average common stockholders' equity
TOBINQ_70	Market valuation measure taking account of the illiquidity discounts of 70%. Details about the variable definition are given in Appendix B.

TOBINQ\_80                      Market valuation measure taking account of the illiquidity discounts of 80%. Details about the variable definition are given in Appendix B.

**Liability Measures**

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CURR\_RATIO                      Current ratio, that is, total current assets divided by total current liabilities

QUIC\_RATIO                      Quick ratio, that is, quick assets divided by total current liabilities.

CASH\_RATIO                      Cash ratio, that is , cash residual divided by total current liabilities.

DTA                                  Debt-to-asset ratio, total debt divided by total asset

**Ownership Structure**

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OC1                                  Percentage of shares held by the first largest shareholder

OC5                                  Ownership concentration 5, that is, the percentage of shares held by the largest five shareholders.

OC10                                  Ownership concentration 10, that is, the percentage of shares held by the largest ten shareholders.

FIR\_SHA\_NA                      Dummy variable. Nature of the first largest shareholder. If the first largest shareholder is the central government or local government, then equals to 1, and 0 otherwise.

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**Table 2B. Overview of explanatory variables (continued).**

Summary statistics 108 observations including 54 sample firms plus 54 control firms

Variable	Mean	Median	Max	Min	Std. Dev
TOTAL_ASSET	1.26E+09	1.04E+09	8.30E+09	3.65E+07	1.19E+09
<b>Panel A: Board of Directors</b>					
BOARDSIZE	9.5370	9.0000	17.0000	5.0000	2.2524
SPLIT_NEW	0.8704	1.0000	1.0000	0.0000	0.3375
CEO_POLI	0.1389	0.0000	1.0000	0.0000	0.3474
CHAIR_POLI	0.3889	0.0000	1.0000	0.0000	0.4898
INDE_RATIO	0.3336	0.3333	0.4300	0.1800	0.0500
DIR_AGE	46.3427	46.5535	55.0000	39.0000	3.7265
DIR_SEX	0.1163	0.1106	0.5000	0.0000	0.1141
DIR_EDU	2.2748	2.2857	3.6667	1.3333	0.4593
RATIO_POLI	0.2636	0.2222	0.7143	0.0000	0.1692
RATIO_ACAD	0.2217	0.2222	0.7778	0.0000	0.1543
RATIO_PROF	0.3368	0.3333	0.8571	0.0000	0.1834
<b>Panel B: Profitability Measures</b>					
ROA	-0.0983	-0.0143	0.1416	-1.7520	0.2296
ROE <sup>12</sup>	-0.6989	0.0125	0.1617	-14.2921	2.0888
TOBINQ_70	1.1573	0.7883	21.4232	0.0838	2.1625
TOBINQ_80	1.0777	0.7514	21.0074	0.0145	2.0961
<b>Panel C: Liability Measures</b>					
DTA	0.8298	0.6593	16.3291	0.2495	1.5159
CURR_RATIO	1.0104	0.9391	2.5717	0.0269	0.4452
QUIC_RATIO <sup>13</sup>	0.7908	0.7428	2.1279	0.1274	0.3716
CASH_RATIO <sup>14</sup>	0.2328	0.1457	1.1907	0.0003	0.2383
<b>Panel D: Ownership Structure Measures</b>					
OC1	0.3276	0.2897	0.6977	0.1239	0.1338
OC5	0.5364	0.5303	0.7593	0.2713	0.1135
OC10	0.5663	0.5754	0.7919	0.3083	0.1074
FIR_SHA_NA	0.3796	0.0000	1.0000	0.0000	0.4876

<sup>12</sup> ROE only has 92 observations due to data unavailability.<sup>13</sup> QUIC\_RATIO only has 64 observations due to data unavailability.<sup>14</sup> CASH\_RATIO only has 106 observations due to data unavailability.

**Table 3**

A comparison of various measures of **corporate characteristics** between the sample firms and the control firms. means and difference are listed. Sample firms and control firms have 54 observations respectively.

	Sample firms (54)	Control Firms (54)	Difference	P_Value <sup>15</sup>
TOTAL ASSET	1.23E+09	1.29E+09	-6E+07	0.8163
<b>Panel A: Board of Directors</b>				
BOARDSIZE	9.2593	9.8148	-0.5555	0.2014
SPLIT_NEW	0.8333	0.9074	-0.0741	0.2559
CEO_POLI	0.1481	0.1296	0.0185	0.7833
CHAIR_POLI	0.3519	0.4259	-0.0741	0.4345
INDE_RATIO	0.3272	0.3399	-0.0127	0.1880
DIR_AGE	45.889	46.797	-0.9077	0.2071
DIR_SEX	0.1156	0.1170	-0.0014	0.9483
DIR_EDU	2.2518	2.2979	-0.0461	0.6044
RATIO_POLI	0.2508	0.2764	-0.0256	0.4351
RATIO_ACAD	0.2015	0.2419	-0.0404	0.1744
RATIO_PROF	0.3686	0.3049	0.0638	0.0706*
<b>Panel B: Profitability Measures</b>				
<b>ROA</b>	<b>-0.1764</b>	<b>-0.0202</b>	<b>-0.1562</b>	<b>0.0003***</b>
<b>ROE<sup>16</sup></b>	<b>-1.2628</b>	<b>-0.1350</b>	<b>-1.1279</b>	<b>0.0089***</b>
TOBINQ_70 <sup>17</sup>	1.4675	0.8471	0.6203	0.1368
TOBINQ_80 <sup>18</sup>	1.3752	0.7800	0.5952	0.1408
<b>Panel C: Liability Measures</b>				
<b>CURR_RATIO</b>	<b>0.9169</b>	<b>1.1040</b>	<b>-0.1871</b>	<b>0.028**</b>
QUIC_RATIO <sup>19</sup>	0.8116	0.7699	0.0417	0.7011
<b>CASH_RATIO<sup>20</sup></b>	<b>0.1651</b>	<b>0.3005</b>	<b>-0.1354</b>	<b>0.003***</b>
DTA	1.0302	0.6293	0.4009	0.1705
<b>Panel D: Ownership Structure Measures</b>				
<b>OC1</b>	<b>28.92%</b>	<b>36.60%</b>	<b>-7.68%</b>	<b>0.0025***</b>
<b>OC5</b>	<b>51.58%</b>	<b>55.70%</b>	<b>-4.12%</b>	<b>0.059*</b>
<b>OC10</b>	<b>54.86%</b>	<b>58.39%</b>	<b>-3.53%</b>	<b>0.088*</b>
<b>FIR_SHA_NA</b>	<b>0.2593</b>	<b>0.5000</b>	<b>-0.2407</b>	<b>0.0096***</b>

<sup>15</sup> P-value are determined using a standard t-test for means, the median test for medians

<sup>16</sup> ROE only has 46 observations due to data unavailability.

<sup>17</sup> Market valuation measure taking account of the illiquidity discounts of 70%.

<sup>18</sup> Market valuation measure taking account of the illiquidity discounts of 80%.

<sup>19</sup> QUIC\_RATIO only has 32 observations due to data unavailability

<sup>20</sup> CASH\_RATIO only has 53 observations due to data unavailability.

**Table 4\*\*.** Cross-sectional Probit regressions of the probability of the litigation

This table reports the results of **Probit Model** with the dependent variable of the sample firms equals to one, while the dependent variable of the control firms equals to zero. P-values are reported in parentheses. Each regression is based on 108 observations.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
INTERCEPT	-0.8466	-0.2230	4.1858	3.8631	0.1776	0.7818	-0.3720
	0.8272	0.9529	0.2958	0.2861	0.9707	0.8705	0.9396
LOG_ASSET	0.0274	-0.0737	0.1615	-0.1072	<b>0.4523</b>	0.3320	<b>0.4351</b>
	0.8829	0.6791	0.4177	0.5309	<b>[0.0611]</b>	0.1519	<b>[0.0705]</b>
<b>ROA</b>	<b>-3.4881</b>				<b>-3.0639</b>		<b>-2.6090</b>
	<b>[0.0018]</b>				<b>[0.0026]</b>		<b>[0.0327]</b>
<b>DTA</b>		<b>2.5530</b>				<b>2.0473</b>	0.7738
		<b>(0.0006)</b>				<b>[0.0187]</b>	0.4445
<b>LOG (BOARDSIZE)</b>			<b>-1.6701</b>		<b>-1.7709</b>	<b>-1.8858</b>	<b>-1.7167</b>
			<b>[0.0356]</b>		<b>[0.0359]</b>	<b>[0.0240]</b>	<b>[0.0421]</b>
<b>SPLIT_NEW</b>			-0.4470		-0.6081	-0.6005	-0.6165
			0.3130		0.1895	0.2062	0.1901
CEO_POLI			0.1864		-0.1627	0.0944	-0.1030
			0.6602		0.7127	0.8299	0.8199
CHAI_POLI			-0.0877		0.0696	-0.0614	0.0794
			0.7799		0.8400	0.8587	0.8182
<b>INDE_RATIO</b>			<b>-6.4947</b>		<b>-6.1564</b>	<b>-6.4802</b>	<b>-5.9398</b>
			<b>[0.0349]</b>		<b>[0.0955]</b>	<b>[0.0634]</b>	<b>[0.1053]</b>
DIR_AGE			-0.0225		-0.0312	-0.0110	-0.0287
			0.5621		0.4548	0.7926	0.4961
DIR_SEX			-0.6839		-0.5532	-0.7014	-0.6973
			0.5850		0.6725	0.6047	0.6036
DIR_EDU			-0.0570		-0.1751	-0.0801	-0.1506
			0.8751		0.6722	0.8358	0.7132
RATIO_POLI			-0.8821		-1.1344	-0.5263	-1.0337
			0.3683		0.2725	0.6100	0.3169
RATIO_ACAD			-0.8149		-0.6179	-0.4848	-0.5910
			0.4235		0.6046	0.6744	0.6217
RATIO_PROF			1.2498		1.0127	1.1010	1.0497
			0.1479		0.3339	0.2635	0.3174
<b>OC10</b>				<b>-2.6229</b>	<b>-1.9819</b>	<b>-2.4668</b>	<b>-1.9593</b>
				<b>[0.0033]</b>	<b>[0.0344]</b>	<b>[0.0143]</b>	<b>[0.0395]</b>
<b>FIR_SHA_NA</b>				<b>-0.5241</b>	<b>-0.5085</b>	<b>-0.4733</b>	<b>-0.4999</b>
				<b>[0.0459]</b>	<b>[0.0837]</b>	<b>[0.1047]</b>	<b>[0.0864]</b>
McFadden R <sup>2</sup>	0.1262	0.0880	0.1006	0.1074	0.2647	0.2335	0.2681

**Table 5. Abnormal returns around bank loan Filing announcements.**

The sample size is 83 for all windows. Average abnormal returns (AAR) and average cumulative abnormal returns (ACAR) are calculated using the market model and the standard event study methodology<sup>21</sup>. The estimation window for calculating the market model parameters is the event time interval [-120, -21]. AAR and ACAR are tested for significance using a two-tail t-test with the null hypothesis that bank loan filing announcements have no impact on companies' A share price. Sign test and Rank test results are reported as well. "\*\*\*\*", "\*\*\*", and "\*\*" indicate significance at the 1, 5, and 10 percent levels respectively.

Event day	Average abnormal	Median abnormal	Max abnormal	Min Abnormal	CAR Mean	CAR Median	Proportion greater than zero	T test	Sign test	Rank test			
-10	0.104%	-0.293%	8.516%	-7.996%	0.104%	-0.293%	44.71%	0.315536	0.867722	0.179652			
-9	0.511%	0.677%	10.252%	-6.272%	0.615%	0.892%	58.82%	1.498236	1.518513	1.533617			
-8	0.524%	0.594%	10.173%	-6.520%	1.139%	0.400%	58.82%	1.745303	*	1.518513	1.472274		
-7	-0.085%	-0.360%	7.984%	-9.594%	1.054%	0.870%	43.53%	-0.259020	1.084652	0.705464			
-6	0.532%	0.174%	12.482%	-6.262%	1.586%	0.865%	54.12%	1.364330	0.650791	0.486376			
-5	0.108%	-0.122%	9.401%	-8.423%	1.694%	1.618%	44.71%	0.2419	1.0976	0.2928			
-4	-0.108%	-0.291%	8.843%	-9.241%	1.586%	1.896%	41.18%	-0.2949	1.5367	0.9103			
-3	-0.695%	-0.715%	8.459%	-8.615%	0.892%	0.123%	37.65%	-2.1034	**	2.4148	**	2.5266	**
-2	-0.572%	-0.640%	7.523%	-9.194%	0.320%	0.326%	42.35%	-1.5787	1.3172	1.5777			
-1	0.180%	-0.240%	9.675%	-7.210%	0.500%	0.621%	47.06%	0.5264	0.6586	0.2520	*		
<b>0</b>	<b>-1.102%</b>	<b>-1.084%</b>	<b>6.604%</b>	<b>-10.974%</b>	<b>-0.602%</b>	<b>-0.531%</b>	<b>37.65%</b>	<b>-2.9549</b>	<b>***</b>	<b>2.4148</b>	<b>**</b>	<b>2.9397</b>	<b>***</b>
1	-0.256%	-0.307%	11.431%	-8.450%	-0.858%	-0.759%	45.88%	-0.8061	0.8781	1.0874			
2	0.261%	0.166%	9.550%	-6.272%	-0.597%	-0.101%	54.12%	0.8114	0.6586	0.6833			
3	0.377%	0.501%	6.135%	-8.701%	-0.220%	-0.342%	56.47%	1.1832	1.0976	1.5051			
4	0.374%	0.025%	10.764%	-4.730%	0.155%	-0.111%	51.76%	1.1455	0.0000	0.4245			
5	-0.895%	-0.386%	9.405%	-10.905%	-0.740%	-0.618%	41.18%	-2.8003	***	1.7562	*	2.6219	***
6	-0.491%	-0.076%	12.218%	-13.050%	-1.231%	-1.270%	45.88%	-1.28798	0.650791	1.235657			
7	-0.226%	-0.145%	8.787%	-8.941%	-1.457%	-1.912%	44.71%	-0.651370	0.867722	0.972751			
8	0.565%	0.420%	8.958%	-6.712%	-0.892%	-2.578%	61.18%	1.730689	*	1.952374	*	1.757087	*
9	-0.696%	-0.771%	5.852%	-6.807%	-1.588%	-3.062%	34.12%	-2.703135	***	2.820096	***	2.716693	***
10	0.067%	0.106%	10.735%	-8.103%	-1.521%	-2.412%	51.76%	0.215039	0.21693	0.04819			

<sup>21</sup> Details about the standard event study methodology and market model are given in Appendix A.

**Table 6. Abnormal returns around bank loan Verdict announcements.**

The sample size is 86 for all windows. Average abnormal returns (AAR) and average cumulative abnormal returns (ACAR) are calculated using the market model and the standard event study methodology. The estimation window for calculating the market model parameters is the event time interval [-120, -21]. AAR and ACAR are tested for significance using a two-tail t-test with the null hypothesis that bank loan verdict announcements have no impact on companies' A share price. Sign test and Rank test results are reported as well. "\*\*\*\*", "\*\*\*", and "\*\*" indicate significance at the 1, 5, and 10 percent levels respectively.

Event day or window	Average abnormal	Median abnormal	Max abnormal	Min abnormal	CAR Mean	CAR Median	Proportion greater than zero	T test	Sign test	Rank test
-10	-0.157%	-0.042%	8.161%	-7.643%	-0.142%	0.014%	50.00%	-0.5193	-0.107833	0.3746
-9	0.080%	-0.092%	6.585%	-5.845%	-0.045%	-0.251%	48.84%	0.2885	0.107833	0.2325
-8	-0.107%	-0.174%	9.538%	-7.086%	-0.160%	-0.095%	47.67%	-0.3454	0.323498	0.6847
-7	-0.118%	-0.026%	6.363%	-7.357%	-0.283%	0.344%	48.84%	-0.4090	0.107833	0.2110
-6	-0.313%	-0.324%	11.354%	-5.982%	-0.607%	0.130%	43.02%	-1.0003	1.186161	1.3607
-5	-0.144%	-0.3161%	8.2071%	-5.3582%	-0.764%	0.110%	43.02%	-0.5185	1.1862	0.9818
-4	0.451%	0.3350%	13.0756%	-9.2411%	-0.308%	0.510%	53.49%	1.2092	0.5392	0.9602
-3	0.092%	-0.3808%	6.5547%	-5.4747%	-0.208%	0.250%	45.43%	0.3202	0.7548	0.0603
-2	0.507%	0.4049%	10.6335%	-5.5374%	0.309%	0.743%	59.30%	1.7181 *	1.6175	1.5459
-1	-0.057%	-0.2938%	9.3116%	-6.8587%	0.245%	0.330%	45.35%	-0.1852	0.7548	0.8052
0	-0.236%	-0.3301%	7.1129%	-7.6138%	0.036%	-0.659%	46.51%	-0.7323	0.5392	0.7062
1	-0.260%	-0.3998%	6.7783%	-6.2650%	-0.247%	0.788%	41.85%	-0.9578	1.4018	0.9344
2	-0.632%	-0.5806%	6.0830%	-8.7438%	-0.878%	0.027%	40.70%	-1.9163 *	1.6175	1.9033 *
3	0.602%	0.3308%	12.8401%	-4.6984%	-0.278%	1.231%	59.30%	2.0262 **	1.6175	1.7095 *
4	-0.095%	-0.1926%	8.0915%	-5.4020%	-0.369%	0.589%	45.35%	-0.3681	0.7548	0.6416
5	0.223%	0.2149%	8.2199%	-5.5940%	-0.132%	0.126%	52.33%	0.7028	0.3235	0.5167
6	0.618%	0.700%	6.519%	-9.445%	0.476%	-0.483%	56.98%	2.1810 **	1.186161	2.2391 **
7	-0.261%	-0.207%	6.650%	-5.932%	0.206%	-0.334%	45.35%	-0.8932	0.754829	1.0334
8	-0.239%	-0.265%	12.185%	-7.732%	-0.043%	-0.792%	44.19%	-0.7362	0.970495	1.232
9	0.055%	-0.269%	5.953%	-7.133%	0.016%	1.191%	47.67%	0.1994	0.323498	0.0603
10	0.254%	0.177%	8.248%	-5.818%	0.258%	2.357%	50.00%	0.8561	-0.107833	0.7105

**Table 7. Cross-sectional regressions to explain abnormal returns at bank loan Filing announcements**

This table reports the results of cross-sectional regressions of the [0, 1], [-5,5], [-10,-1], [-5,-1] cumulative abnormal returns on firm and loan characteristics previously defined. White heteroskedasticity-consistent t-statistics are reported in parentheses. “\*\*\*”, “\*\*”, and “\*” indicate significance at the 1, 5, and 10 percent levels. Each regression is based on 83 observations<sup>22</sup>.

	CAR[0, 1]	CAR[-5, 5]	CAR[-10,-1]	CAR[-5,-1]
INTERCEPT	-0.108306	0.854906	-0.002828	0.231269
	0.6359	0.0430	0.9942	0.4339
LOG_ASSET	0.003531	-0.025993	0.004681	-0.006498
	0.7085	0.1433	0.7804	0.5562
ROA	-0.037294	-0.043538	0.024383	-0.033268
	0.3735	0.6931	0.7666	0.6445
DTA	-0.002605	-0.009688	-0.008045	-0.008531
	0.5787	0.4024	0.4003	0.2776
LOG (BOARDSIZE)	0.028713	-0.002641	-0.100051	-0.008621
	0.3380	0.9716	0.1118	0.8412
SPLIT	0.003452	0.000829	0.044883	0.032537
	0.8385	0.9825	0.1771	0.1571
CEO_POLI	-0.007865	1.89E-05	-0.044119	-0.002548
	0.6268	0.9996	0.3107	0.9095
CHAIR_POLI	0.010917	-0.008806	0.017814	0.006893
	0.5240	0.8368	0.6288	0.7966
INDE_RATIO	-0.072324	-0.081930	-0.030246	0.085049
	0.5706	0.7389	0.8962	0.6503
DIR_AGE	-0.001121	-0.004689	0.006562	-0.000599
	0.5956	0.3530	0.1590	0.8537
DIR_SEX	0.095827	-0.005355	0.038800	-0.028171
	0.0390	0.9670	0.7381	0.7652
DIR_EDU	-0.005740	-0.024911	-0.053723	-0.034639
	0.7416	0.5075	0.1393	0.2075
RATIO_POLI	0.015599	-0.024335	-0.146722	-0.049579
	0.7770	0.8033	0.0791	0.4403
RATIO_ACAD	-0.002904	0.168649	0.216652	0.163130
	0.9532	0.1370	0.0565	0.0532
RATIO_PROF	0.015490	-0.112499	-0.011223	-0.058013
	0.6160	0.1872	0.8858	0.3093
OC10	0.038428	-0.049535	-0.079040	-0.033487
	0.2398	0.4281	0.2015	0.4394
FIR_SHA_NA	-0.003266	0.018306	-0.004854	0.017370
	0.8414	0.6267	0.8815	0.4889
R <sup>2</sup>	0.089778	0.115772	0.214764	0.189919

<sup>22</sup> The number of observations reduced from 85 to 83 due to data unavailability.

## Appendix A

List of the sample firms and their control firms by years

Sample Firms	Control Firms	Year	Sample Firms	Control Firms	Year
000038	600687	2004	000509	600467	2005
000156	600480	2004	000517	600680	2005
000555	000669	2004	000622	600290	2005
000583	600797	2004	000670	000417	2005
000592	000558	2004	000688	600657	2005
000622	600290	2004	000693	600706	2005
000633	600846	2004	000863	600728	2005
000699	600567	2004	000880	600698	2005
000718	000815	2004	000887	600213	2005
000736	000880	2004	000925	002017	2005
000805	600476	2004	600086	600107	2005
000863	600799	2004	600092	600888	2005
000999	600812	2004	600225	600251	2005
600275	600728	2004	600242	600275	2005
600286	600696	2004	600272	600381	2005
600369	600751	2004	600286	000544	2005
600385	000566	2004	600369	600751	2005
600515	600306	2004	600515	600712	2005
600617	000650	2004	600629	000827	2005
600659	000671	2004	600711	600858	2005
600745	000915	2004	600734	600185	2005
600844	600225	2004	600735	600159	2005
000007	000014	2005	600745	600241	2005
000010	000586	2005	600752	000788	2005
000034	000633	2005	600762	600248	2005
000156	600444	2005	600766	600738	2005
000410	000581	2005	600844	600836	2005

## **Appendix B: Calculation of Tobin's q**

Tobin's q is defined as

$$Tq = \frac{MVCS + BVPS + BVLTD + BVINV + BVCL - BVCA}{BVTA}$$

Where MVCS is the market value of the firm's common stock shares, BVPS is the book value of the firm's preferred stocks, BVLTD is the book value of the firm's long-term debt, BVINV is the book value of the firm's inventories, BVCL is the book value of the firm's current liabilities, BVCA is the book value of the firm's current assets, and BVTA is the book value of the firm's total assets. Because no preferred stock exists in China, the above formula reduces to

$$Tq = \frac{MVCS + BVLTD + BVINV + BVCL - BVCA}{BVTA}$$

In addition, we adjust the measurement of Tobin's q to take account of illiquidity discounts of 70 and 80% in the Chinese market. Specially, we multiply the amount of tradable shares by the market price and the amount of non-tradable shares by 30 and 20% of the market share price respectively to obtain the value of equity in the Tobin's q formula denoted by TOBINQ\_70 and TOBINQ\_80, respectively.