

Rent Seeking and Corporate Finance: Evidence from Corruption Cases*

Joseph P.H. Fan^a, Oliver Meng Rui^b, and Mengxin Zhao^c

^aFaculty of Business Administration, The Chinese University of Hong Kong;
pjfan@cuhk.edu.hk; 852-2609-7839.

^bFaculty of Business Administration, The Chinese University of Hong Kong;
oliver@cuhk.edu.hk; 852-2609-7594.

^cDepartment of Finance, Bentley College; mzhao@bentley.edu; 1-781-891-2570.

May 2006

Abstract

This study investigates the impact of political rent seeking on corporate financing behaviors in China – a country plagued by corruption problems and high corporate sector debt. Based on 23 high level government officer corruption cases, we identify a set of publicly traded companies whose senior managers engage in bribing the corrupt bureaucrats or are connected with the bureaucrats through prior job affiliations. We report significant decline in these companies' leverage and debt maturity ratios relative to other unconnected firms subsequent to the arrest of the bureaucrats. These relations persist even if we only focus on the connected firms that are not involved in the corruption cases. This suggests that the weakened debt financing strength of the companies is not only attributable to the corruption cases per se, but also due to the lost connections with the bureaucrats. Our event study reveals that the relative decline in firm leverage are associated with negative stock market effects around the corruption events, reflecting the weakened financing capacity resulting from the lost political connections. An analysis of long-term performance corroborates this relation. We also examine a possibility that the rent seekers are efficient firms and hence corruption does not result in capital mis-allocation, but we fail to find such evidence. This study's overall evidence highlight the importance of rent seeking in firm behaviors, and support recent cross-country studies' findings that country-level institutional factors matter to corporate financing choices.

JEL Classifications: D23; G32; G38; K42; P26 ; P31

Key Words: Corruption; Rent Seeking; Corporate Finance; Capital Structure; China

*This paper has benefited from comments and suggestions from Utpal Bhattacharya, Ray Fisman, Jin Li, Wei Jiang, Justin Yifu Lin, Christian Leuz, Randall Morck, Harold Mulherin, Enrico Perotti, Vicki Tang, Sheridan Titman, Garry Twite, Bernard Yeung, T.J. Wong, and seminar participants at University of Alberta, Bentley College, Chinese University of Hong Kong, Harvard Business School, Peking University and participants at the Conference on Institutions, Politics, and Corporate Governance in Tokyo, the 2006 Finance Summit Conference. We thank Xiaoyang Hou for sharing data and research assistance.

Rent Seeking and Corporate Finance: Evidence from Corruption Cases

1. Introduction

It is well known that debt, in particular short-term debt, is the dominant external financing source for companies in developing economies and emerging markets. The high corporate financial leverage in emerging markets, and more generally differences in corporate financing structures across countries, can only be partially explained by conventional theories that focus on firm or industry factors.¹ More recent cross-country studies reveal that a significant part of the corporate financing patterns unexplained by firm or industry factors can instead be explained by country-level institutional factors (Demirguc-Kunt and Maksimovic, 1996, 1998, 1999, 2001; Rajan and Zingales, 1995; Booth, Aivazian, Demirguc-Kunt, and Maksimovic, 2001; Giannetti, 2003; Fan, Titman, and Twite, 2005).

This study examines the impact of political rent seeking and corruption on corporate financing decisions. In an economy plagued by corruption, firms are likely to finance with more debt as opposed to equity. This may be the case for two reasons. First, debt provides a higher degree of monitoring ability and enforcement by investors (Smith and Warner, 1979) than an open-ended equity claim which provides little protection from expropriation by managers or bureaucrats. Second, it may be easier for a corrupt bureaucrat to channel funds in the form of loans to his connected firms through a bank he controls (La Porta et al., 2002; Sapienza, 2004), rather than through the equity market that he has smaller ability to influence. Similar considerations apply to debt maturity. Firms in a more corrupt system are more likely to use short-term debts, because they provide better investor protection than long-term debts can

¹ This literature includes Modigliani and Miller (1958), Miller (1977), Bradley, Jarrell, and Kim (1984); Myers and Majluf (1984), Titman and Wessels (1988), Barclay and Smith (1995), MacKay and Phillips (2001), and many others.

provide. However, politically connected firms should have better access to long-term debt than unconnected firms have.

We test the second explanation of corporate financing in emerging markets – the rent seeking hypothesis. To have a control experiment, we collect a sample of 23 high (mostly provincial) level government officer corruption cases in China during 1995 to 2003. Among the 393 publicly listed companies within the corrupt bureaucrats’ jurisdiction, we identify 85 companies whose senior managers or directors have engaged in bribing the bureaucrats (the bribing firms) or are connected with the bureaucrats through past job affiliations (the connected firms). We examine the leverage and debt maturity structures of the bribers and the connected firms, and how these financing structures change relative to those of other unconnected/matching firms around the corruption cases.

We find that both the bribers’ and the connected firms’ financial leverages, measured by total debt over total assets, are significantly reduced relative to the unconnected (or matching) firms subsequent to the arrest of the corrupt bureaucrats. The relative decline in leverage is more attributable to decrease in long-term debt, while less to decrease in short-term debt. Consistently, the bribing firms and the connected firms’ debt maturities, measured by long-term debt over total debt, are significantly shortened subsequent to the capture of the bureaucrats. These results are robust to various leverage and maturity measures, inclusion of supplier credits as an additional source of financing, and inclusion of various control variables. The results suggest that being connected with corrupt bureaucrats provides firms with a comparative advantage of obtaining access to debt, in particular long-term debt. The debt financing advantage disappears when the connections are broken due to the arrest of the bureaucrats.

To examine whether any of the lost financing advantage is reflected in lower firm value, we perform an event study in which we estimate the cumulative abnormal stock returns (CARs) of the firms around the initial public release of the corruption news. We find that CARs, measured within various event windows of different length, are positively related to change in leverage around the corruption events. The event study results suggest that the stock markets discount the value of the firms whose financial leverages reduce (or do not increase as much as other firms) around the corruption events. In retrospect, bribing or being connected with bureaucrats has gained firms debt financing advantages, before the bureaucrats are caught guilty. In addition to the event study that focuses on short-term performance, we also examine the associations between time-serial changes in financial policy and long-term performance of the sample firms. To better isolate any short-term impacts of the corruption scandals and hence further mitigating potential endogeneity, we examine changes in financing/performance measures over a seven-year window centered by the corruption events, and find consistent positive relations between the firms' financing capacity and performance.

Finally, we attempt to address the question of whether the rent seeking activities and the capital allocation efficiency of China's financial system can co-exist, in that more efficient firms are more likely to pay bribes or build connections to secure their access to capital. We are unable to find such evidence.

The overall empirical evidence suggests that public sector governance affects corporate financing behaviors. It corroborates previous cross-country studies pointing to the importance of country institutional factors in shaping corporate financing decisions. In particular, Demircuc-Kunt and Maksimovic (1999) report that companies in countries with higher quality legal systems and property rights enforcement have longer debt maturity. Fan, Titman, and

Twite (2005) report that corporate capital structure and debt maturity decisions are closely related to a country's tax system, legal system, and corruption level.

This study is built on an economic literature showing that rent seeking importantly explains firm behaviors and economic growth (Shleifer and Vishny, 1994, 1998; and many others). Several recent papers report that a significant part of firm value comes from corruption and rent seeking activities (Fisman, 2001; Johnson and Mitton, 2003; Ramalho, 2003). Faccio (2006) shows cross-country evidence that firms seek rents from the state. Our finding that the rent seeking factor influences the allocation of financial capital among firms is consistent with two recent studies of the Chinese financial system suggesting that China's institutional and regulatory environments foster connection-based corporate governance (Allen, Qian, and Qian, 2005a, b).

Our evidence corroborates with Johnson, McMillan, and Woodruff (2002) and Acemoglu and Johnson (2005) showing that the risk of expropriation by governments is a fundamental factor that shapes the financial development of a country. Durnev, Li, Morck, and Yeung (2004) show that the low efficiency of some transition economies' capital markets in disseminating firm-specific information is closely related to weak property rights protection and poor government quality. Our study complements several studies that examine the roles of political connectedness in corporate financing behaviors. Charumilind, Kali, and Wiwattanakantang (forthcoming) find that Thai-firms with connections to banks and politicians have more long-term debt than firms without such ties do. Leuz and Oberholzer-Gee (2005) report that politically connected firms in Indonesia are less likely than politically unconnected firms to raise equity capital in foreign markets, possibly because domestic banks provide the connected firms with capital at low costs. Cull and Xu (2005) report that access to bank loans is associated with more firm investment in China, and that the Chinese firms' investment behaviors are related to

both the risk of government expropriation and contract enforcement. Khwaja and Mian (2005) report that politically connected firms in Pakistan receive abnormal lending from government banks and suffer from abnormal default rates. Dinc (2005) in a cross-country study reports that government owned banks tend to increase their lending in election years relative to private banks. Siegel (2005) reports that Korean firms connected to politicians gain better access to key outside resources through cross-border alliances. Faccio, Masulis, and McConnell (forthcoming) in a cross-country study report that politically connected firms are more likely to be bailed out by governments and their performance worsens more subsequent to their bailouts than non-connected firms.

Compared with the prior studies, our single-country event study setting offers several advantages. The empirical setting allows us to focus on a specific institutional factor, rent seeking, while holding constant other institutional factors that might correlated with either rent seeking or corporate financing decisions. Moreover, the empirical design addresses potential endogeneity in the relations between corporate financing choices and corruption. Since the connected firms are non-bribers, the corruption events are likely to be unexpected shocks. The subsequent changes in their leverage and debt maturity structures are less likely caused by their direct involvement in the corruption cases, but more likely due to lost connections with the corrupt bureaucrats.

The remainder of the paper proceeds as follows. Section 2 provides an overview of China's financial markets and rent seeking activities. Section 3 presents the sample, data, and the empirical results of the effects of the corruption events on capital and debt maturity structures. Section 4 analyzes the roles of financial policy changes in performance. Section 5 addresses the effects of corruption on capital allocation. Section 6 concludes the paper.

2. Institutional setting

This section describes China's rent seeking and corruption activities, its financial markets, and how the rent seeking activities shape firms' financing decisions.

2.1. Corruption in China

China is rapidly becoming one of the largest economies in the world as well as a leading destination for investments. However, it is also regarded as a highly corrupt country by world standards. The Heritage Foundation and *The Wall Street Journal* co-publish the Index of Economic Freedom, which ranks countries on 50 independent economic variables, including ones relating to corruption in the judiciary, the rule of law, and the ability to enforce contracts. Overall, the U.S. ranks the 6th, while China ranks the 128th out of 161 countries.² La Porta, Lopez-de-Silanes, Pop-Eleches and Shleifer (2004) find that China ranks among the worst countries in terms of political freedom as well as the protection of property rights. China is ranked 71 out of 145 based on the Corruption Perception Index of Transparency International.³ According to the official record of the Central Commission for Discipline Inspection of the Communist Party of China during 1997-2002, there are totally 861,917 corruption cases under investigation, 842,760 corruption cases concluded and 846,150 people punished by communist laws, of which 137,711 expelled from the communist party.

2.2. Corporate financing activities in China

China has maintained a government dominated financial system. The government tightly controls entry to commercial banking, investment banking and other financial services. The banking system in China comprises the central bank, four large state-owned commercial banks,

² More details are available at: <http://cf.heritage.org/index/country.cfm?ID=30.0>

³ The index measures the "degree to which corruption is perceived to exist among public officials and politicians. It is a composite index, drawing on 14 different polls and surveys from seven independent institutions, carried out among business people and country analysis, including surveys of residents, both local and expatriate." Source: Transparency International.

three policy banks⁴, ten national joint-stock commercial banks, about 90 regional commercial banks, and about 3,000 urban and 42,000 rural credit cooperatives. There are also branches or representative offices of foreign banks with limited activities. Overall, the four state-owned commercial banks dominate the market.⁵

Even though China's two major stock exchanges—Shanghai and Shenzhen—have only existed since 1990 and 1991, respectively, the number of companies listed on them have grown to 1,377 by the end of 2004. The total market capitalization of these listed firms on that date was US\$448.6 billion, which was equal to about 36% of China's gross domestic product.⁶ Despite this phenomenal growth, equity financing still lagged far behind debt financing as the country's mode of financing for the period from 1993 to 2001.⁷

Allen, Qian and Qian (2005a, b) find that debt-financing is the dominant mode of corporate finance and most bank credits are issued to companies in the State and Listed Sectors. They also show that China's banking system is run at low efficiency, as in the amount of non-performing loans (NPL) within the four state commercial banks.⁸ A large proportion of these

⁴ The three policy banks were established during the reform of the financial system in 1994 to take over the responsibilities of making policy loans from the four state commercial banks. Their mandates include making policy or low-interest loans to large government infrastructure investment projects specified by the government polices, providing agricultural financial services and subsidiary financing for the acquisition and storage of agricultural products, and supporting import and export credit for electronic and machinery equipment systems.

⁵ The four state-owned banks are Industrial and Commercial Bank of China (ICBC), the Agriculture Bank of China (ABC), Bank of China (BOC) and China Construction Bank (CCB). As of late 2001, they accounted for 63 percent of loans outstanding and 62 percent of deposits. With 103,000 branches among them, they are the only financial institutions that cover virtually all locations in China.

⁶ This information is obtained from the China Securities Regulatory Commission (CSRC) website: <http://www.csrc.gov.cn>.

⁷ The role of the equity markets in the Chinese economy is much less important than that of banks. Based on China Statistical Yearbook 2002, the accumulated capital raised from stock markets is RMB670 billion yuan (US\$79 billion), while bond outstanding is RMB86 billion yuan (US\$10 billion) and bank loans outstanding is RMB9,937 billion yuan (US\$1,197 billion). The capital raised from stock issuance is only 6.5% of the capital raised from both bank loan and bond issuance. Tong (2005) estimates that equity financing only represented 10% to 20% of all financing for the listed firms in this period.

⁸ Statistics show that the outstanding NPL of major Chinese banks remained at 2.44 trillion yuan (289.96 billion US dollars) by the end of 2003, with an NPL ratio of 17.8 percent. The big four state-owned commercial banks accounted for 1.91 trillion yuan (230.76 billion US dollars), with an NPL of 20.36 percent.

non-performing loans are resulted from poor lending decisions made for state-owned enterprises, some of which are due to political or other non-economic reasons.

As significant resources in transitional China are still allocated either directly or indirectly by the state, politicians and bureaucrats are likely exert important influences on the allocation of scarce resources such as bank loans. On the other hand, corruption is pervasive in the financial sector of China.⁹ Obtaining large scale data on such detected or undetected criminal cases is difficult, due to China's opaque information disclosure. However, the review of the overall financial system and stylized observations suggest that a link between corporate finance and rent seeking is plausible. We proceed to examine such links in the next section.

3. Empirical analysis

This section describes the sample, provides basic statistics of the financing structures of the sample firms, and reports regression results of the effects of rent seeking on the financing structures of the firms around the corruption events.

3.1. The sample

To examine how corporate financing policies change with rent seeking activities, we compile a list of corruption cases that involve high level government officers in China, and identify listed companies that are connected to these corrupt bureaucrats.

We employ the following procedure to collect corruption cases. First, we identify a list of corrupt bureaucrats, based on two government publications: *Excerpts of Discipline Cases of the*

⁹ Chinese anti-corruption officials have turned their sword to the financial industry recently, as the corruption in the financial system is viewed as more destructive to the country's financial health than other problems. Wang Xuebing, former governor of the Construction Bank of China, was sentenced to 12 years imprisonment in 2002 on a charge of accepting bribes worth 1.15 million yuan (US\$139,000) in 1993-2001. Liu Jinbao, vice president of the Bank of China, received suspended death sentence in 2005. Prosecutors accused Liu of embezzling 14.48 million yuan (US\$1.75 million), of which he personally pocketed 7.72 million yuan. He also received bribes amounting to 1.43 million yuan and was unable to account for 14.78 million yuan in personal assets.

Communist Party of China and *Villains of the Communist Party of China*¹⁰. We also make efforts to collect additional corruption cases publicized by the Central Commission for Discipline Inspection of the Communist Party of China. Totally we are able to identify 23 high level government officer corruption cases occurred from 1995 to 2003.

Among the 23 cases, 19 involve provincial level government bureaucrats, two involve central government bureaucrats, and two cases involve top executives of major state-owned national banks. For each of the provincial corruption cases, we examine all publicly traded companies located in the corrupt bureaucrat's jurisdiction around the corruption event. For each of the companies, we search through the company's initial public offering prospectus and annual reports prior to the corruption event to find out whether any of the company's senior managers, directors, or top-10 shareholders have engaged in bribing the bureaucrat. This is done by searching through the above government publications and news disclosures during investigation and lawsuit. For the 4 remaining cases that involve the central government and banks, we are able to identify publicly listed firms that have bribed these government/bank officers. Totally we identify 43 companies as bribers.

To facilitate a natural experiment, we next turn to identify a set of firms that are connected with the corrupt bureaucrats but are not bribers nor otherwise involved in the corruption cases. Again, for each company located in the jurisdiction of a corrupt bureaucrat, we search through the public disclosures to find out whether any senior managers, directors, or large shareholders are family members of or have prior job affiliation with the corrupt bureaucrat. We are able to identify 42 companies with such connections.¹¹ We call them connected firms. Finally,

¹⁰ The book titles are translated from Chinese.

¹¹ Almost all of them are job connections. Family ties are rare.

there are remaining 308 listed companies in the corrupt bureaucrats' jurisdictions but are neither bribers nor connected with the bureaucrats. We call them unconnected firms.

Below is an example of the search process. A criminal case was initially exposed in Jiangsu province in 1994. It was reported that Wuxi Xing Xing Industrial Ltd. illegally took substantial deposits (RMB 3.2 billion) from the public. During the investigation, it was found that Li Ming (secretary of the Beijing's mayor, Li Qiyuan) was involved in the scandal. Li Ming further professed corruption evidence of Zhou Beifang (chairman and CEO of Shougang Holding HK Ltd.), Chen Jian (secretary of Chen Xitong, the secretary of the Communist Party of China in Beijing), and Chen Xiaotong (son of Chen Xitong). In early 1995, Zhou Beifang, Chen Jian, and Chen Xiaotong were arrested. On April 5, 1995, Wang Baosheng, vice mayor of Beijing, committed suicide. Within the coming year, tens of Beijing officials were arrested. On July 31, 1998, Chen Xitong was finally sentenced to 16 years of imprisonment for corruption. Appendix 1 illustrates our classification of the bribers, the connected firms, and the unconnected firms in the corruption case. There are totally 11 publicly traded companies in Beijing around the corruption event. We are able to identify 5 bribers (one also have job connection), 3 connected (but non-bribing) firms, and 3 unconnected firms.

Table 1 provides a description of the 23 corruption cases. The corruption cases are initially disclosed (event day) during 1995 to 2003. The sentence day is usually a few months to a few years subsequent to the event day. The punishment received by the arrested bureaucrats varies from death penalty to dismissal from position and/or the Communist Party. Appendix 2 provides a brief description of each of the corruption scandals. Many of the scandals involve high-level bureaucrats receiving bribes in exchange of business opportunities or access to financial capital (bank loans or stock listing status).

As in Table 1, the 393 firms in our sample (comprising the 43 bribing firms, the 42 connected firms, and the remaining 308 unconnected firms) do not concentrate in just a few provinces but spread across the different China's regions.

Table 1 here

For each of the 393 firms, we collect financial data up to 2004 from the China Stock Market and Accounting Research (CSMAR) financial statement database.¹² Daily stock prices are obtained from the CSMAR transaction database. Twenty of the 393 firms do not have pre-event financial data, of which 7 are bribing firms, 2 are connected firms, and 11 are non-event firms. Hence the usable number of firms in our subsequent analysis is 373.

3.2. *Sub-sample groupings*

Our following analysis examines changes in capital structures of the bribing firms and the connected firms around the corruption events, and compares the changes with those of the unconnected firms. To facilitate discussion, we call the bribing firms and the connected firms as “the event firms”, and the unconnected firms as “the non-event firms.” Separately, we compare the financing patterns of the connected firms with those of the unconnected firms. As discussed in the introduction, we are particularly interested in examining the financing patterns of the connected firms around the corruption events, because the events are likely unexpected to these firms. Any reaction of financing behaviors of the connected firms is therefore likely to be caused by lost connections rather than by their involvement in the corruption.

As an alternative benchmark for comparison, we identify for each of the 373 usable sample firms three matching firms that are closest to the matched sample firm in size (within the range

¹² This database is developed by The Hong Kong Polytechnic University and Shenzhen GTA Information Technology Co. Ltd. It follows the format of CRSP and COMPUSTAT, and is the most comprehensive financial database available for listed Chinese firms.

from 0.5 to 1.5 times of the size of the sample firm), but located in different provinces from the sample firm. Firm size is measured as the book value of assets at the year end prior to the arrest of the corrupt bureaucrat. For each financial ratio of the sample firm, we match it with the average ratio of the three matching firms.

3.3. Descriptive statistics

A few alternative measures of corporate financing structures are employed in this study. Financial leverage is measured as total debt divided by total assets, or total debt plus accounts payable divided by total assets. Debt maturity is measured as long-term debt divided by total debt, or long-term debt divided by total debt plus accounts payable. We further define long-term leverage as long-term debt divided by total assets, and short-term leverage as short-term debt divided by total assets or short-term debt plus accounts payable divided by total assets. The inclusion of accounts payable in the alternative leverage and debt maturity measures is to account for supplier credits as a possible source of financing.¹³

Table 2 provides the basic statistics of the financing variables and other firm characteristics. In Panels A and B respectively, we report the pooled firm-year mean and median values of each of the variables during the three pre-event years, and over time change in the variable, defined as the post-event three-year mean value of the variable minus the pre-event three-year mean value. The event year is excluded from the analysis.¹⁴ Overall, these basic statistics suggest that the event firms' levels of assets, sales, and profitability do not change significantly over time. However, the event firms seem to experience slower growth in assets and sales than that of the

¹³ Demirguc-Kunt and Maksimovic (2001) find that trade credit is an important source of financing in economies with underdeveloped financial intermediaries.

¹⁴ Results would not change if we include the event year observations in our analyses. For those firms with less than three year data either prior to or after the corruption events, we take the average of the available years before measuring change in a variable. However, the overall results in this paper would not change if we alternatively include only those firms with complete seven years of financial data.

non-event firms after the corruption events. In our subsequent regression analysis, we control for the possibility that changes in the financing behaviors of the events firms around the corruption events are due to changes in fundamentals, not just broken political connections.

Table 2 here

We have the following observations on changes in each of the financing variables for the three sub-samples. First, firms in all of the three sub-samples experience rises in their financial leverages over time, with the biggest increase taking place for the non-event firms. Second, the mean debt maturity declines, and the magnitude of which is greater for the event firms than for the non-event firms. Third, the mean long-term debt to assets ratio almost does not change among the event firms, but it increases by about 4.2 percent among non-event firms. Fourth, the mean short-term debt to assets ratio increases for both the event and non-event firms. Lastly, the above observations hold true for the connected-firms-only sub-sample. From these statistics, the corruption events seem to have larger effects on the event firms' long-term leverage than their short-term leverage.

It is interesting that the overall reported patterns are not only found in the bribing firms but also in the connected firms that are non-bribers and are not directly involved in the corruption cases. The changes in financing patterns of the connected firms are likely due to lost connections with the arrested bureaucrats rather than due to the corruption events per se. This implication motivates us to separately examine this connected-firms-only sub-sample in the subsequent analysis.

3.4. Univariate analysis of net changes in capital structures

We next examine changes in financing structures of the event firms subsequent to the corruption events, net of the corresponding changes of the non-event firms. We define the net

change in a financing variable as the difference in the change of the financing variable between the event firms (as well as the connected firms) and the non-event firms. The change in the financing variable of a firm is calculated as the three-year mean variable value after the corruption event minus the three-year mean value before the event.

Table 3 here

Reported in Columns 2 and 3 of Panel A of Table 3, both the mean and median net changes in the leverage ratios of the event firms are negative and statistically significant (at the 1 percent level). These suggest that the event firms experience significant slower increase in debt financing than the non-event firms do. The mean and median net changes in the debt maturity ratios are negative, but are insignificant unless trade credits are considered. The net changes in the long-term debt to assets ratio are negative and highly significant, suggesting a decline in long-term financing of the event firms relative to that of the non-event firms. The net changes in the short-term leverage ratios are also negative and significant. When we focus on the connected firms only, we obtain the similar results (Columns 4 and 5).

Panel B of Table 3 employs the matching firms as an alternative benchmark for comparison of changes in the event firms' financing patterns. The results of the comparison with the matching firms are weaker but consistent with those with the non-event firms in Panel A. Overall, the significant differences in financing patterns between the event firms and their two different sets of control firms suggest that the event firms are reasonably identified.

The above univariate results can be illustrated graphically. Figure 1 shows the patterns of the annual mean debt to assets ratio from three years before to three years after the corruption events. There is an overall increasing pattern of the mean leverage ratios. However, the mean leverage ratio of the event firms is substantially slowed down around the corruption events and is

eventually lower than that of the non-event firms (Figure 1.1). The reversal in the leverage ratio holds true even after excluding the bribing firms (Figure 1.2). Figure 2 plots the annual mean long-term debt to total debt ratio for the event firms, the non-event firms, and the connected firms. Overall the mean debt maturity ratios decrease. However, the event firms experience more substantial drops in debt maturity relative to the non-event firms, and their debt maturities become shorter than the non-event firms after the corruption events (Figure 2.1). Similar results are found for the sub-sample of connected firms (Figure 2.2). Figure 3 plots the patterns of the mean long-term debt to assets ratio. It shows a sharp decline in the long-term leverage of the event firms around the corruption events (Figure 3.1). By contrast, the long-term leverage of the non-event firms continues to increase through the event period. Excluding the bribing firms, the long-term leverage of the connected firms still decreases around and after the events (Figure 3.2).¹⁵

 Figures 1, 2, and 3 here

3.5. Regression analysis

We next perform regression analysis to examine whether the event firms' financing policies evolve after the corruption events in the predicted manners, controlling for other factors that are known to affect leverage and debt maturity structures. The following regression models are employed:

$$\text{Financing}_{it} = \alpha_{0i} + \alpha_1 \text{Corrupt}_{it} + \alpha_2 \text{Post}_{it} + \alpha_3 \text{Corrupt}_{it} * \text{Post}_{it} + \alpha_4 \text{Lass}_{it} + \alpha_5 \text{Tangible}_{it} + \alpha_6 \text{Growth}_{it} + \alpha_7 \text{Profit}_{it} + \text{industry dummy variables} + \varepsilon_{it}$$

, where Financing represents a host of leverage and debt maturity variables measured in the various ways defined previously; Corrupt is a dummy variable equal one if the firm is an event

¹⁵ Similar graphs are obtained using median values, or using matching firms as an alternative benchmark.

firm, and otherwise zero; Post is a dummy variable equal one if the observation is after the year of the corruption event, and otherwise zero; Lass is the natural logarithm of total assets; Tangible is fixed assets over total assets; Growth is market value of equity over book value of equity; and Profit is net income over total assets. The regressions also include industry dummy variables. Consistent with the literature, the inclusion of the assets, growth, and profitability variables is to account for the possibility that some cross-sectional differences and/or over-time changes in corporate financial policy are induced by differences/changes in corporate fundamentals.

3.5.1. The Event firms

We run a set of mean regressions including the pre- and post-event three-year mean values of the dependent and independent variables as observations.¹⁶ The regressions employ 746 firm-period (373 firms time 2 periods) observations. We lose a few observations in some regressions when firms have missing data on accounts payable or their debt maturity can not be defined because of zero total debt. Panel A of Table 4 reports the results of mean leverage and debt maturity regressions. We initially focus on Columns 2, 3, 4, and 5. The estimated coefficients of the event firm dummy (Corrupt) are positive and significant in the leverage regressions, indicating that the bribing firms and the connected firms have higher leverage. The coefficient of Post is significantly positive in the leverage regressions (Columns 2 and 3) while significantly negative in debt maturity regressions (Columns 4 and 5), consistent with the earlier univariate results that financial leverage increases while debt maturity decreases over time.

We are particularly interested in the coefficient of the interaction term, Corrupt*Post. It is negative and highly significant in each of the regressions, strongly suggesting that the event

¹⁶ Extreme values of the dependent and independent variables are winsorized. We also use median values in the regressions instead of means, results are similar.

firms' leverage and debt maturity levels are substantially dampened upon and after the corruption events.

We next turn to the long- and short-term leverage regressions (Columns 6-8). The coefficient of *Corrupt* is insignificant for long-term leverage, indicating similar levels of long-term leverage between the event firms and the non-event firms. The coefficient of *Corrupt* is positive and significant at the 10-percent level for short-term leverage, implying the event firms have marginally higher short-term leverage than the non-event firms. The coefficient of *Post* is positive and significant throughout, suggesting overall increases in both short- and long-term debt. The coefficient of the interaction term, *Corrupt*Post*, is negative and highly significant in both the long-term and short-term leverage regression, suggesting that the event firms' long-term and short-term financing abilities are both weakened upon and after the corruption events. However, the estimated coefficient of the interaction term in the long-term debt ratio regression is significantly negative, suggesting an overall shortening of debt maturity.

The above changes in financing pattern around the corruption events cannot be explained away by differences/changes in other corporate fundamentals, because these factors are controlled in the regressions. However, some of these factors indeed affect the firms' financing patterns. Firm size (log assets) has strong positive effects on leverage and debt maturity. Asset tangibility has a positive effect on leverage and debt maturity. Specifically, it has a positive effect on long-term debt but a negative effect on short-term debt and trade credits. It indicates that firms with few tangible assets tend to rely more on short-term financing while less on long-term financing. The effects of sales growth are largely significant and positive on leverage but insignificant for debt maturity. Profit has a negative effect on leverage, but its

effects on debt maturity are insignificant. These relations are largely consistent with those reported in the prior literature.

Overall, the results in Panel A of Table 4 are consistent with that the event firms indeed enjoy an advantage in raising debt capital compared with the non-event firms; but the advantage discontinues when their political connections disappear with the arrest of the corrupt bureaucrats.

Table 4 here

Panel B of Table 4 provides mean regression results similar to Panel A, except that the non-event firm observations are replaced by the matching firm observations. Here the dummy variable *Corrupt* is equal to one if an observation is from an event firm, and zero if the observation is otherwise from a set of matching firms. The results of the mean regressions remain similar but weaker. In particular, the coefficient of the interaction term, *Corrupt*Post*, is negative but insignificant in the leverage ratio regressions (Columns 2 and 3). The coefficient is still negative and significant in the debt maturity and long-term leverage regressions. The estimated coefficients of the control variables are similar to those reported in Panel A.

As a robustness check, we also run the regressions on a pooled sample of event and non-event firms covering firm-year observations from three years before to three years after the corruption events, excluding the event year. Since the residual of a given firm may be correlated across years for a given firm and the residuals of a given year may be correlated across firms, we estimate our coefficients using clustered standard errors as Peterson (2005) to account for the dependence in the residuals. We obtain similar results as those in the mean regressions. Therefore we do not tabulate these results.

3.5.2. *The connected firms*

It could be the case that the above results are mostly attributable to the bribing firms. It would be more useful to know whether the deteriorated financing advantage associated with the corruption events can also be explained by lost political connection alone. For that reason we repeat the regression analysis on the connected firms only.

Panel A of Table 5 reports mean regression results based on the combined sample of the connected firms and the non-event firms. The dummy variable *Corrupt* is defined as one if the firm is a connected firm, and zero otherwise. We find that the estimated coefficient of the interaction term, *Corrupt*Post*, is negative but insignificant in the leverage regressions (Columns 2 and 3). The coefficient of the interaction term is negative and significant in the debt maturity and the long-term leverage regressions (Columns 4, 5, and 6).

Table 5 here

We repeat the regressions based on the combined sample of the connected firms and their matching firms. Panel B of Table 5 reports the regression results. The dummy variable *Corrupt* is equal to one if the observation is from a connected firm, and zero if it is from a set of matching firms. The results based on the matching firm benchmark are similar. Again, the regression results show significant negative effects of the corruption events on the connected firms' debt maturity and long-term leverage, as revealed in the negative coefficients of the interaction term, *Corrupt*Post*, in Columns 4, 5 and 6. The coefficients of the leverage ratios are insignificant (Columns 2 and 3).

We alternatively perform pooled regressions with the clustered standard error adjustment. The results (not reported) are consistent with those in Table 5.

The overall evidence in Tables 4 and 5 suggest that the debt financing capacity of the event firms is substantially weakened after the corruption events, particularly so for their long-term debt financing strength. The results hold even if we exclude the bribing firms, suggesting that the weakened debt financing pattern is not just caused by the corruption cases but also related to the lost political connections with the corrupt bureaucrats.

3.5.3. The non-event firms

We next examine the financing patterns of the non-event firms – the firms in the corrupt bureaucrats’ jurisdiction but are not involved in the corruptions nor connected with the bureaucrats. Because the non-event firms are also headquartered in the same province as the corrupt bureaucrats, their financing behaviors may be impacted. We repeat the regression analysis on the non-event firms and their matching firms. We redefine *Corrupt* as one (perhaps unreasonably) when an observation is from a non-event firm, and zero if it is otherwise from a set of matching firms.

The results of the mean regressions are reported in Table 6. We pay attention to the coefficients of the interaction term, *Corrupt*Post*. Interestingly, they are positive and significant in the leverage regressions, suggesting that the non-event firms’ debt ratios increase relative to the matching firms after the corruption events. The increases are attributable to increases in both long- and short-term debt, as indicated by the significant positive coefficients of *Corrupt*Post* in the long- and short-term leverage regressions. There is no significant difference in debt maturity between the non-event firms and their matching firms after the events. These results suggest that, unlike the event firms which show weakened financing strength, the non-event firms’ financing capacities show marginal improvement subsequent to the corruption

cases. The different results in the non-event firm sample also indicate that our classification between the event firms and the non-event firms is reasonable.

Table 6 here

4. Capital structure changes and performance

We have established the relations consistent with the effects of rent seeking on capital structures. The bribing firms and the connected firms have more debt and in particular long-term debt in their capital structures, before the arrest of their connected bureaucrats. We next address whether the changes in firm financial policies are associated with performance changes. In Section 4.1., we conduct an event study to examine how stock markets react to the corruption events, and whether stock prices incorporate the information of the leverage changes around the events. In Section 4.2., we examine long-term changes in accounting and stock-based performance measures, and whether these performance changes can be related to changes in firm capital structures.

4.1. The event study

To examine whether any of the lost financing advantages is reflected by lower stock valuation, we perform an event study in which we estimate the cumulative abnormal stock returns of the firms around the initial public release of the corruption news. The event day of a corruption scandal is identified as the first day that the public is informed about the bureaucrat's wrongdoings. Such notices can be *Shuang Gui* (a government detention measure that orders the person to confess his/her crimes at a specific location), arrestment, or removal from the current position. The event days of the 23 corruption cases have been reported in Table 1.

The standard event study methodology is used to investigate how the corruption news affects the stock prices of the firms. The abnormal return for security i on event date t is

$$AR_{i,t} = R_{i,t} - E(R_{i,t} | I_t)$$

, where $AR_{i,t}$, $R_{i,t}$, and $E(R_{i,t} | I_t)$ are the abnormal, actual, and expected returns for time period t , respectively. I_t is the information on which the expected return depends. There are two common ways for modeling the expected return: the mean adjusted returns model where I_t is a constant, and the market model where I_t is the market return. We employ both methods in our study. We use both equal- and value-weighted market returns when the market model is employed. We accumulate $AR_{i,t}$ to obtain cumulative abnormal returns (CARs), using various event windows ranging from 60 days before to 60 days after the event day. Because the results are qualitatively similar, we report the results based on the market model and value-weighted market returns.

Figure 4 shows the patterns of daily mean CARs around the corruption events.¹⁷ The average CAR of the event firms is decreasing and lower than that of the non-event firms. The mean CAR of the sample firms starts to decline since fifty days before the event day. It continues to drop after the event day. The overall decrease during the event period (-60 to +60 day) is rather small, about 2%. Most of the decline in mean CAR is attributable to the event firms. i.e. the bribing and connected firms. The mean CAR of the event firms is negative 8% toward the end of the event period. By contrast, the mean CAR of the non-event firms does not show a significant downward trend. Overall, China's stock markets seem to be able to differentiate rent seekers from others.

¹⁷ Due to missing stock return data of some firms, the sample size is 391 firms.

Figure 4 here

To examine whether there is any association between changes in leverage and the stock market reactions around the corruption events, in Table 7, we stratify the sample into three terciles (bottom, middle, and top) based on the degree of change in the three-year mean debt to assets ratio before and after the corruption events. We employ eight event windows of different length, ranging from sixty days before to sixty days after the events. Overall, more positive changes in leverage are associated with higher CARs, and more negative changes in leverage are associated with lower CARs. When we compare the mean and median differences in CARs between the top and the bottom terciles, we find that most of the mean and median CARs in the top tercile are significantly higher than those in the bottom ones. Moreover, 33% of the firms in the bottom tercile are either bribing firms or connected firms, while only 10% of the firms in the top tercile are bribing or connected firms.

Table 7 here

We next perform regression analysis on the effects of firm financing changes on CARs. The dependent variable is CAR, alternatively measured over the various event windows. The key independent variable is change in leverage (Chglev), measured as the three-year mean leverage after the event minus the three-year mean leverage before the event. We also include the dummy variable, Corrupt, which is equal to one if a firm is an event firm, and otherwise zero. All of the CAR regressions include the industry dummy variables.

The regression results in the left panel of Table 8 show that there is an overall significant and positive association between CAR and change in leverage. This relation is statistically significant in four of the eight event windows. From the estimated coefficients of Corrupt

which is negative and significant in most of the event windows, we learn that the event firms tend to experience more negative stock market reactions than the non-event firms.

The right panel of Table 8 reports the results of the CAR regressions including an additional interaction term, $Chglev*Corrupt$. This is to examine how the relation between CARs and change in leverage differs between the event firms and the non-event firms. We find that the coefficients of the interaction term are positive in most of the event windows, and significantly so in four of the windows, indicating the event firms' stock returns are more sensitive to the changes in leverage than non-event firms around the corruption events. Given this, we still find that the coefficients of $Chglev$ are positive and significant in three of the event windows.

Table 8 here

In summary, we find that the stock markets in China understand that political connections help firms to obtain debt capitals. During the corruption events, stock investors discount the values of the firms when their financing advantages are lost along with their political connections.

4.2. Long-term performance changes

The above event study results may still be subject to the short-term influences of the corruption scandals. That is, the stock performance and the capital structure changes may both be the short-term impacts of the scandals per se, hence their relations could be spurious. To address this issue we examine long-term performance effects of the changes in the event firms' financial policies. We focus on two performance measures: return on sales (ROS), and the market-to-book ratio measured as the market value of common equity divided by book value of common equity. To isolate the short-term influence of a corruption scandal, these performance measures are estimated three-year before and three-year after the year when the scandal erupts.

We then estimate performance change of a firm by taking the difference between the post- and pre-event performance measure of the firm. We also similarly estimate changes in firm financial policies captured by the leverage ratio, the long-term leverage ratio, the short-term debt ratio, and the maturity ratio as defined before.

Employing the full sample including the event and the non-event firms, we regress performance change alternately on the change in the financing variables. We include the Corrupt dummy as defined before, to control for unobserved differences between the event and non-event firms that lead to performance change. In addition, to examine whether the event firms' performance has different sensitivity to financial policy changes, we include an interaction term between the Corrupt dummy variable and each of the financial variables alternately. If by our empirical design the event firms' changes in the performance and financing measures are free of the short-term impact of the scandals, their sensitivities between financing and performance should be indifferent from those of the non-event firms. Therefore the estimated coefficients of the interaction terms are expected to be insignificantly different from zero. The regressions also include the industry dummy variables.

Table 9 here

Panel A of Table 9 reports the regression results. Generally, capital structure changes are positively associated with performance changes, as indicated by the positive estimated coefficients of the capital structure variables. In particular, a decrease in the long-term debt ratio is associated with a significant decrease in ROS. Financing changes that lead to decreased total debt, long-term debt, short-term debt, or debt maturity are all associated with significant decrease in the market-to-book ratio. These results suggest that debt financing, in particular long-term debt financing capacity is vital to the performance of the firms.

The coefficients of the Corrupt dummy variable are generally negative but significantly so only in the ROS regressions. The coefficients of the interaction terms between Corrupt and alternately the financing variables are mostly insignificantly different from zero, suggesting indifferent sensitivity of performance to financial policy changes between the event firms and the non-event firms. This is as expected.

The above results may still be subject to the endogeneity issue that the bribing firms' financing and performance are both punished even in the long-term and hence their relations are spurious. To mitigate this issue, we remove the bribing firms, hence leaving the connected firms and the non-event firms in the sample, and re-run the regressions. The results, as reported in Panel B of Table 9, remain similar.

We re-run the regressions using different performance measures including return on equity, return on assets, and operating income over sales. The results are robust to the different performance measures. As a further robustness check, we re-define the performance and financing variables as two-year averages and re-run the regressions. For each firm associated with a corruption event, we estimate post- and pre-event differences in two-year average performance/financing ratios. Each of the post- (pre-) event performance/financing ratios is calculated as the average ratio of the second and third year after (before) the scandal. Using these changes in two-year average ratios in the regressions yields similar results.

In summary, we have reported that the weakened financing capacity due to lost political connections has negative impacts on firm value as suggested by the patterns of short-term stock return. More generally, exogenous shocks (exposing corruption scandals) that change the relative financing strength of firms have long-term impacts on firm performance.

Finally, we run a series of sensitivity analyses to check the robustness of our key results in Tables 4 through 9. As described in Appendix 3, these key results are robust to alternative definitions of event firms, different degrees of corruption punishment, survivorship bias, alternative scaling factors of the financing variables, and different length of event windows.

5. Does rent seeking facilitate capital allocation?¹⁸

The empirical results thus far have shown that the Chinese companies' access to financial capital critically depends on their rent seeking capacities. However, we are interested in knowing whether or not the rent seekers are also efficient firms who bribe or invest in relationships because they are affordable.¹⁹ It could be the case that China's capital allocation system, though opaque, still manages to allocate financial capital to efficient firms. If so, exposing corruption scandals has a side effect of punishing efficient firms. A different possibility is that the rent seekers tend to be firms uncompetitive in terms of managerial/production efficiency, but gain their competing edge through political connections or outright bribery. In this scenario, the problem of China's financial system is not just social injustice but also mis-allocation of capital. Fighting corruption is unambiguously desirable because it will punish bad firms and promote good firms.²⁰ A third possibility is that given a non-transparent capital allocation system, everyone pays bribe to stay in the game, and whoever caught is a random event. In this scenario exposing scandals is expected risk with no implication on economic outcome.

¹⁸ This section has benefited from the suggestions of Bernard Yeung.

¹⁹ Some argue that corruption can serve as grease to facilitate business transactions. This view has been expressed in business press as well as in the economic literature (Lui, 1985).

²⁰ There exists a large amount of evidence that corruption slows down economic growth and domestic and foreign investment. See Bardhan (1997) and Aidt (2003) for an overview of the literature.

We are not able to examine the issue fully in this paper, as our sample and data are specific to the few corruption cases. Nevertheless, we attempt to address the question by examining several performance measures of the event firms (relative to the non-event firms) both well (three-year) before and well (three-year) after their corresponding corruption cases erupt, so that the performance measures are away from the direct influence of the corruption cases per se. The performance measures capture the differences in profitability between the event and the non-event firms.²¹ If the event firms behave more as rent seekers because they are more efficient than the non-event firms are, we would observe their pre-event performance superior to that of the non-event firms, and their post-event performance no worse than that of the non-event firms.²² However, if the event firms gain their competitive edge not from managerial/productive efficiency but mostly from rent seeking, we would expect that removing their political connections would lead to their poorer performance relative to the non-event firms. If the randomness argument is true, that the event and non-event firms are both rent seekers and their rent seeking activities have little to do with their managerial/production efficiency, then there would be little difference in their performance prior to the events, but the non-event firms would outperform the event firms after the events.

Table 10 presents differences in mean and median performance measures between the event firms and the non-event firms. Performance is measured alternatively by return on assets (ROA), return on equity (ROE), operating margin (operating income divided by sales), return on sales (ROS), and the market to book ratio (market value of equity divided by book value of equity). As in the previous section, these performance measures are calculated for each of the event and

²¹ The differences in profitability reflect the differences in both productivity and rent seeking capability between the event and the non-event firms.

²² We are assuming that the event and non-event firms are competing for an overlapping set of business opportunities, and that the scandals per se do not have long lasting impacts on firm productivity.

non-event firms at the fiscal year end of the third year before and the third year after the corresponding corruption event year. From Panel A, the between-group performance differences before the events are generally positive in mean or median, but insignificantly so except for the market-to-book ratio. After the events, the performance differences are mostly negative and statistically significant, except for the market-to-book ratio showing insignificantly positive values. In Panel B, we remove the bribing firms and focus our comparison between the connected firms and the non-event firms. We find that none of the measures show significant difference in performance between the connected and the non-event firms prior to the scandals. However, after the scandals the connected firms underperform the non-event firms, and significantly so in terms of ROA, ROS, and operating margin.

Table 10 here

The statistics in Table 10 suggest that the event firms do not significantly outperform the non-event firms before the corruption scandals are exposed, while they substantially underperform the non-event firms subsequent to the scandals. The evidence is inconsistent with the view that efficient firms pay bribes or build political connections to gain access to financial capital. Rather, the evidence is more consistent with the second scenario that the event firms gain their financing and possibly other competitive advantages primarily from rent seeking, because their performance clearly become worse than the non-connected firms even long after the scandals. However, we are unable to reject the third randomness view that rent seeking is pervasive among both the event and non-event firms, as we do not have strong evidence that their performance are different prior to the scandals.

Overall, we do not find evidence that financial capital is allocated to rent seekers because they are efficient firms. By contrast, we find these firms become uncompetitive once their

political connections are removed as the corruption scandals are exposed. A reason why corruption fails to grease but clogs business transactions is that government regulations are endogenous to bureaucrats' incentive to seek rents (Shelifer and Vishny, 1993, 1994). A less-than-benevolent bureaucrat can create red tapes to expropriate business rents. Consistently, Kaufmann and Wei (1998) report that corruption is not associated with decreased but with increased business costs.

6. Conclusions

We have examined the impact of corruption and rent seeking on corporate financing behaviors in China. This is done through an event study. We identify publicly listed firms who engage in bribing or are connected with corrupt high level government bureaucrats. We find that both the bribers' and the connected firms' financial leverages are significantly reduced relative to their control firms subsequent to the arrest of the corrupt bureaucrats. The relative declines in leverage are mainly due to decreases in long-term debt, while the relative levels of short-term debt are less significantly changed. Consistently, the bribing firms and the connected firms' debt maturities are significantly shortened subsequent to the capture of the bureaucrats. These results suggest that being connected with corrupt bureaucrats provide firms with a comparative advantage of access to debt, in particular long-term debt. The debt financing advantage disappears when the connections are broken due to the arrest of the bureaucrats.

We have also examined whether any of the lost financing advantages is reflected in poor firm performance. The prediction is confirmed in our study of stock return patterns around the corruption events. The results suggest that the stock markets discount the values of the firms

whose financial leverages reduce (or do not increase as much as other firms) around the corruption events. In addition, our analysis of long-term changes in firm financing policies and performance, which excludes the short-term impact of the corruption scandals, finds that access to financial capital is vital to firm competitiveness. Finally, we find little evidence from the sample suggesting that rent seeking facilitates capital allocation in China.

Our study makes several contributions to the literature. First, it provides evidence of the importance of institutional factors in shaping corporate financing choices, which is beginning to draw researchers' attention. Second, our single-country setting and the time-serial empirical design provide more robust evidence, as it is less subject to endogeneity and omitted variable problems that are common in cross-sectional studies. Third, the results of this paper help policy makers to gauge the importance of fighting corruption and building market supporting institutions. The evidence from China is useful to other emerging markets plagued by similar institutional problems.

References:

Acemoglu, D., and Johnson, S., 2005, Unbundling Institutions, *Journal of Political Economy* 113, 949-995.

Aidt, T.S., 2003, "Economic Analysis of Corruption: A Survey," *Economic Journal* 113, 632-652.

Allen, F., Qian, J., and Qian, M.J., 2005a, "Law, Finance, and Economic Growth in China", *Journal of Financial Economics*, 77, 57-116.

Allen, F., Qian, J., and Qian, M.J., 2005b, "China's Financial System: Past, Present, and Future", book chapter in *The Transition that Worked: Origins, Mechanism, and Consequence of China's Long Boom*, edited by L. Brandt and T. Rawski.

Barclay, M.J., and Smith, C.W., 1995, "The Maturity Structure of Corporate Debt", *Journal of Finance*, 50, 609-631.

Bardhan, P., 1997, "Corruption and Development: A Review of Issues," *Journal of Economic Literature* 35, 1320-1346.

Booth, L., Aivazian, V., Demirguc-Kunt, A., and Maksimovic, V., 2001, "Capital Structures in Developing Countries," *Journal of Finance*, 56, 87-130.

Bradley, M., Jarrell, G.A., and Kim, H., 1984, "On the Existence of an Optimal Capital Structure", *Journal of Finance*, 39, 857-878.

Charumilind, C., Kali, R., and Wiwattanakantang, Y., forthcoming, "Crony Lending: Thailand before the Financial Crisis," *Journal of Business*.

Cull, R., and Xu, L.C., 2005, "Institutions, Ownership, and Finance: The Determinants of Profit Reinvestment among Chinese Firms," *Journal of Financial Economics* 77, 117-146.

Demirguc-Kunt, A., and Maksimovic, V., 1996, "Stock Market Development and Firm Financing Choices", *World Bank Economic Review*, 10, 341-369.

Demirguc-Kunt, A., and Maksimovic, V., 1998, "Law, Finance and Firm Growth", *Journal of Finance*, 53, 2107-2137.

Demirguc-Kunt, A., and Maksimovic, V., 1999, "Institutions, Financial Markets, and Firm Debt Maturity," *Journal of Financial Economics* 54, 295-336.

Demirguc-Kunt, A., and Maksimovic, V., 2001, "Firms as Financial Intermediaries: Evidence from Trade Credit Data," Working Paper, World Bank and the University of Maryland.

- Dinc, I.S., 2005, "Politicians and Banks: Political Influences on Government-owned Banks in Emerging Markets," *Journal of Financial Economics* 77, 453-479.
- Durnev, A., Li, K., Morck, R., and Yeung, B.Y., 2004, "Capital Markets and Capital Allocation: Implications for Economies in Transition," *Economics of Transition* 12, 593-634.
- Faccio, M., 2006, Politically Connected Firms, *American Economic Review* 96, 369-386.
- Faccio, M., Masulis, R., and McConnell, J.J., forthcoming, "Political Connections and Corporate Bailouts," *Journal of Finance*.
- Fan, J.P.H., Titman, S., and Twite, G., 2005, "An International Comparison of Capital Structure and Debt Maturity Choices," Working Paper, Chinese University of Hong Kong, University of Texas – Austin, and University of New South Wales.
- Fisman, R., 2001, "Estimating the Value of Political Connections," *American Economic Review*, 91, 1095-1102.
- Giannetti, M., 2003, "Do Better Institutions Mitigate Agency Problems? Evidence from Corporate Finance Choices", *Journal of Financial and Quantitative Analysis*, 38, 185-212.
- Johnson, S., McMillan, J., and Woodruff, C., 2002, "Property Rights and Finance," *American Economic Review*, 92, 1335-1356.
- Johnson, S., and Mitton, T., 2003, "Cronyism and Capital Controls: Evidence from Malaysia," *Journal of Financial Economics*, 67, 351-382.
- Kaufmann, D., and Wei, S.J., 1998, "Does "Grease Money" Speed Up the Wheels of Commerce?", Working Paper, World Bank and Harvard University.
- Khawaja, A.L., and Mian, A., 2005, "Do Lenders Favor Politically Connected Firms? Rent Provision in An Emerging Financial Market," *Quarterly Journal of Economics* 120, 1371-1411.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R., 2002, "Government Ownership of Banks," *Journal of Finance* 57, 265-301.
- La Porta, R., Lopez-de-Silanes, F., Pop-Eleches, C., and Shleifer, A., 2004, "Judicial Checks and Balances," *Journal of Political Economy*, 112, 445-470.
- Leuz, C., and Oberholzer-Gee, F., 2005, "Political Relationships, Global Financing, and Corporate Transparency," Working Paper, Wharton School and Harvard Business School.
- Lui, F., 1985, "An Equilibrium Queuing Model of Bribery," *Journal of Political Economy* 93, 760-781.

- MacKay, P., and Phillips, G.M., 2001, "Is There an Optimal Industry Capital Structure?" Working Paper, University of Maryland.
- Miller, M.H., 1977, "Debt and Taxes," *Journal of Finance*, 32, 261-275.
- Modigliani, F., and Miller, M.H., 1958, "The Cost of Capital, Corporate Finance, and the Theory of Investment," *American Economic Review*, 48, 261-297.
- Myers, S., and Majluf, N., 1984, "Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have," *Journal of Financial Economics*, 13, 187-221.
- Peterson, M., 2005, "Estimating Standard Errors in Financial Panel Data Sets: Comparing Approaches," Working Paper, Northwestern University.
- Rajan, R., and Zingales, L., 1995, "What Do We Know about Capital Structure? Some Evidence from International Data," *Journal of Finance*, 50, 1421-1460.
- Ramalho, R., 2003, "The Effects of An Anti-Corruption Campaign: Evidence from the 1992 Presidential Impeachment in Brazil," Working Paper, MIT.
- Sapienza, P., 2004, "The Effects of Government Ownership on Bank Lending," *Journal of Financial Economics*, 72, 357-384.
- Shleifer, A., and Vishny, R., 1993, "Corruption," *Quarterly Journal of Economics* 108, 599-617.
- Shleifer, A., and Vishny, R., 1994, "Politicians and Firms," *Quarterly Journal of Economics* 109, 995-1025.
- Shleifer, A., and Vishny, R., 1998, *The Grabbing Hand: Government Pathologies and their Cures*, Cambridge, MA: Harvard University Press.
- Siegel, J., 2005, "Contingent Political Capital and International Alliances: Evidence from South Korea," Working Paper, Harvard Business School.
- Smith, C., and Warner, J.B., 1979, "On Financial Contracting: An Analysis of Bond Covenants," *Journal of Financial Economics* 7, 117-161.
- Titman, S., and Wessels, R., 1988, "The Determinants of Capital Structure Choice", *Journal of Finance*, 43, 1-19.
- Tong, D.C. 2005. "Corporate Governance and Securities Regulations in Mainland China", Seminar Paper, China Securities Regulatory Commission, presented at Chinese University of Hong Kong (May 5).

Appendix 1

A Corrupt Bureaucrat and His Allies

This table shows the relationships between listed companies headquartered in Beijing and Chen Xitong, the secretary of the Communist Party of China in Beijing. Chen was sentenced to 16 years of imprisonment for corruption in 1998.

Firm Name	Listed Market	Connection Type	Note
Beijing Development	HK	Colleague & Briber	Gao Qiming (chairman) was an ex-secretary of Chen Xitong. Besides, there were other three officials from the Beijing government sat on the company's board.
Shougang Concord Century	HK	Briber	Zhou Beifang, chairman and CEO of the controlling shareholder (Shougang Holding) of the company, was the conspirator and briber of Chen Xitong.
Shougang Concord Technology	HK	Briber	Zhou Beifang, chairman and CEO of the controlling shareholder (Shougang Holding) of the company, was the conspirator and briber of Chen Xitong.
Shougang Concord International	HK	Briber	Zhou Beifang (chairman and CEO) was the conspirator and briber of Chen Xitong.
Shougang Concord Grand Beiren Printing	HK	Briber	Zhou Beifang (chairman and CEO) was the conspirator and briber of Chen Xitong.
Beijing Auto	Shanghai	Colleague	Zhang Peng (director) was the vice mayor of Beijing City.
Beijing Urban-Rural	Shanghai	Colleague	Zhu Lining (director) was the vice president of Beijing Municipal Finance Bureau.
Beijing Tianqiao	Shanghai	unconnected firm	Both its chairman and vice-chairman had working experiences in the Beijing government.
Beijing Tianlong	Shanghai	unconnected firm	Not applicable
Wangfujing Store	Shanghai	unconnected firm	Not applicable

Appendix 2

Summary of the corruption cases

Wang Huizhong is a former a Vice-Province Governor of Anhui province. He accepted 20 bribes that were worth RMB5,171,000 from September 1994 to March 2001. He could not provide legitimate sources for assets that were worth RMB4,800,000. Wang received the death penalty in 2003.

Liu Jinbao is the former Vice-Chairman and CEO of the Bank of China (HK). He embezzled RMB14.48 million (US\$1.75 million), of which he personally pocketed RMB7.72 million. He also received bribes that amounted to RMB1.43 million and was unable to account for RMB14.78 million in personal assets.

Wang Xuebin is the former CEO of the China Construction Bank. He was sentenced to 12 years of imprisonment in 2002 on a charge of accepting bribes that were worth RMB1.15 million (US\$139,000) between 1993 and 2001.

Chen Xitong is the former CPC Secretary of Beijing. He accepted gifts that were worth RMB555,956 between July 1991 and November 1994. He ordered his secretary to build two villas that were worth RMB35,210,000 for personal use. He also spent RMB1,050,000 on personal entertainment. He was sentenced to 16 years of imprisonment in 1998.

Li Daqiang is the former Vice-Province Governor of Hubei province. In November 1995, he received 10,000 shares of stock of Hubei Xinfua Incorporated Company that were worth RMB100,100. He also accepted bribes that were worth RMB25,000 from Hubei Petroleum company. He pocketed gifts that were worth RMB80,000 and US\$10,000 from a manager of a stock brokerage house from 1994 to 1998. Li was dismissed from the service and the CPC in 2000.

Xu Penghang is the former Vice Chairman of the National Defense Technology Commission and the National Economics and Trade Commissions. In December 1993, he promised Hubei Huangshi Kangshai Group that it could be listed on the stock exchange. In return, his wife and daughter received 120,100 shares in the firm. In August 1996, Xu's family sold the shares at RMB10 each, pocketing a profit of RMB1,130,000. Xu was dismissed from the service in 2000.

Shi Zhaobin is the former Vice-CPC Secretary of Fujian province. He assisted Fujian Petroleum Company to obtain favorable deals. He accepted bribes that were worth RMB599,897 between July 1994 and August 1999. He was dismissed from the service and the CPC in 2001.

Xu Binsong is the former Vice-Chairman of the Guangxi Municipality. He helped several private businessmen, including Yuling Cements Group and Guixin Seed Company, to obtain governmental projects, business licenses and subsidies from local government. He accepted seven bribes that amounted to RMB550,000 from August 1995 to June 1997. He also accepted gifts that were worth RMB100,000. He was sentenced to life imprisonment in 1999.

Chen Kejie is the former Chairman of the Guangxi Municipality. He accepted bribes that were worth RMB20,000,000 for helping to transfer the controlling rights of the Yixin Real Estate Development Company from the Guangxi International Economic and Technology Cooperation Company to the Guangxi government in November 1994. He accepted bribes through his mistress that amounted to RMB9,000,000 and HK\$8,040,000 for helping Guangxi Guixin Development Company to obtain projects from 1996 to 1997. He also accepted various gifts that were worth RMB550,000 from July 1994 to 1997. Chan received the death penalty in 2000.

Liu Zhibin is the former Vice-Chairman of the Guangxi Municipality. In 1997, Liu accepted bribes that were worth RMB300,000, HK\$80,000, and US\$18,000 for helping a businessman to avoid taxes that were worth RMB690,000. From 1993 to 1999, Liu accepted bribes that amounted to RMB170,000 and US\$2,000 for helping a company to obtain a waiver of a utility bill that was worth RMB20,000,000. His wife collected bribes on his behalf that were worth RMB110,000 and HK\$13,000 for promoting three subordinates. Liu accepted bribes that amounted to RMB832,000. He was sentenced to 15 years imprisonment in 2002.

Wang Qinglu is the former Vice-Chairman of the PPCC in Guangxi. He granted favor deals to businessman Yang of

Beihai Haitai Investment Corporation, from whom his wife and son collected bribes that were worth HK\$180,000 and RMB230,000. Wang was relieved of his duties and dismissed from the CPC in 2001.

Liu Changgui is the former Vice-Province Governor of Guizhou province. He helped Guizhou Kaida Real Estate Development Company and Guizhou Jundian Construction Group to obtain projects. He accepted bribes that were worth RMB1,100,000 and US\$30,000. He was also unable to account for RMB1.76 million in personal assets. He was sentenced to 11 years of imprisonment in 2004.

Liu Fangren is the former CPC Secretary and PC Chairman of Guizhou province. He helped Guizhou Jundian Construction Group to obtain loan of RMB5 million. In return, he accepted bribes that were worth RMB1,490,000. He also assisted Guizhou Tongda Decoration Company to obtain decoration projects of RMB80 million. He accepted bribes that were worth RMB120,000 and US\$19,000 from businessman Chen. He was sentenced to life imprisonment in 2004.

Xin Yejiang is the former Vice-PC Chairman of Hainan province. He accepted 60,000 shares of Hainan Pharmaceutical Corporation for helping it to obtain an IPO quota. He sold the shares for RMB193,194 after the firm was listed. He was sentenced to five years of imprisonment in 1998.

Jiang Dianwu is the former Vice-PC Chairman of Hebei province. He accepted bribes that worth HK\$15,000 and a gift that was worth RMB11,600 from a Hong Kong businesswoman in December 1993. In return, he granted the businesswoman the right to operate a gambling business in a resort. He also accepted RMB50,000 in 1993 and RMB100,000 in 1995 from businessman Zhu of Yianzhao Textile Company. He was sentenced to 10 years of imprisonment in 1998.

Chen Weigao is the former CPC Secretary and PC Chairman of Hebei province. He abused his power and tolerated his family members committing various crimes and accepting bribes. He was dismissed from the CPC in 2003.

Cong Fukui is the former Vice-Province Governor of Hebei province. He helped Hong Kong Shengkang International Company to extend maturity of US\$3 million loan from July 1997 to 1998. He also assisted Hebei Yutong Enterprise Limited to obtain a loan of RMB45 million from 1998 to May 2000. In return, he accepted bribes that were worth RMB14,150,000 and HK\$340,000, and gifts that were worth HK\$52,000 from April 1996 to June 2000. He received the death penalty in 2001.

Meng Qingping is the former Vice-Province Governor of Hubei province. He granted the usage rights of 10.94 acres of land to a businesswoman of Fujian Huian Shanyao Construction Company in August 1989. He also helped a businessman of Hainan Qianghai Company to obtain 20 acres of land in 1992. His wife collected bribes of RMB140,000 and HK\$100,000 from 1989 to 1993. Meng was sentenced to 10 years of imprisonment in 1999.

Hu Changqing is the former Vice-Province Governor of Jiangxi province. He helped eight businessmen from Jianoxi Oute Group, Nanchang Haiwei Limited, Golden Sunshine Group, Jiangxi Weimeng Group, Jiangxi General Metal Material and Fujian Qunrong Real Estate Development Company to obtain various projects, bank loans, and business licenses. In return, he accepted bribes that amounted to RMB1,530,000, HK\$750,000, US\$35,000, and luxury gifts, such as watches and diamond rings, that were worth RMB1,400,000. He received the death penalty in 2000.

Mu TuoXing is the former Vice-Province Governor of Liaoning province. He granted a wild zoo project to Shengyang Shenjing Golf Club. He promoted the general manager of Shengyang Bus Group to the head of Shengyang Transportation Bureau. He helped Liaoning Real Estate Development Company to obtain projects. In return, he accepted bribes that were worth RMB6,641,400 from April 1993 to December 2000. He was unable to account for RMB2.695 million in personal assets. He also helped his family members to obtain projects. He received the death penalty in 2001.

Aman Haji is the former Vice-Province Governor of Xingjiang. He was accused of accepting huge bribes and abusing his power. His case is still under investigation.

Li Jiating is the former Vice CPC Secretary and Governor of Yunnan province. He accepted bribes that were worth

RMB11,000,000 from 1994 to July 2000. He received the death penalty in 2003.

Xu Yunhong is the former Vice-Province Governor of Zhejiang province. He helped Ningbao International Trust and Investment Corporation to obtain loans. He also committed malfeasance and caused huge losses of government assets worth RMB1.2 billion. He forced Ningbao Daily to purchase Huahong International Center building from a private owner businessman Zhong. It caused a huge economic loss for Ningbao Daily. In return, his son accepted bribes that were worth RMB5,690,000, HK\$120,000, US\$25,000, and a villa that was worth RMB850,000. He was sentenced to 10 years of imprisonment in 2000.

Appendix 3

Additional Robustness Tests

We run battery of sensitivity analyses to check the robustness of our key results. First, we redefine our event firms. If a firm is identified as a briber or a connected firm in a corruption case, the firm is classified as an event firm in every other corruption case occurred in the same province. Previously, it is classified as an event firm only in the corruption case that it is involved. The new definition gives us 102 event firms, of which 51 are connected firms. Our analyses based on the new definition give qualitatively similar results.

We next examine whether different degrees of punishment in the corruption cases would affect the event firms' financing behaviors differently. We include those cases in which bureaucrats are sent to prison or death role, while exclude those cases ended up with less serious punishment such as expel from service or party. Our overall results remain similar.

Firms may be delisted from trading and hence creating survivorship bias in our analysis. We find only five firms are delisted 1 year or 2 years after the events. Among the five firms, two firms are event firms, while the other three are non-event firms. The small number of the delisted firms has not caused systematic bias in our analysis.

To check if our results are sensitive to the choice of scaling factor, we use total sales as an alternative scaling factor. The results remain intact. We also perform regression analysis on the percentage changes in the level of total debt, long-term debt and short-term debt. Similar results are obtained.

We also choose different event windows to examine the changes in firms' financing. We rerun the financing regressions (Tables 4-6) using paired data of year -1 with year +1, year -2 with year +2, or year -3 with year +3. Again, the results are similar and consistent.

Figure 1

Leverage and Corruption

Figure 1.1 Mean Total Debt/Assets
(The event firms and the non-event firms)

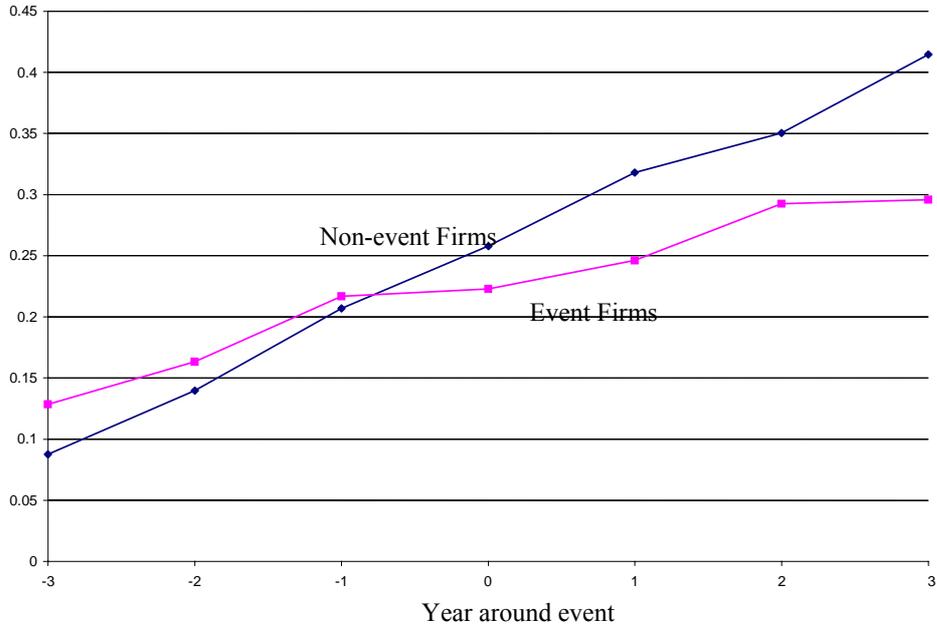


Figure 1.2 Mean Total Debt/Assets
(The connected firms and the non-event firms)

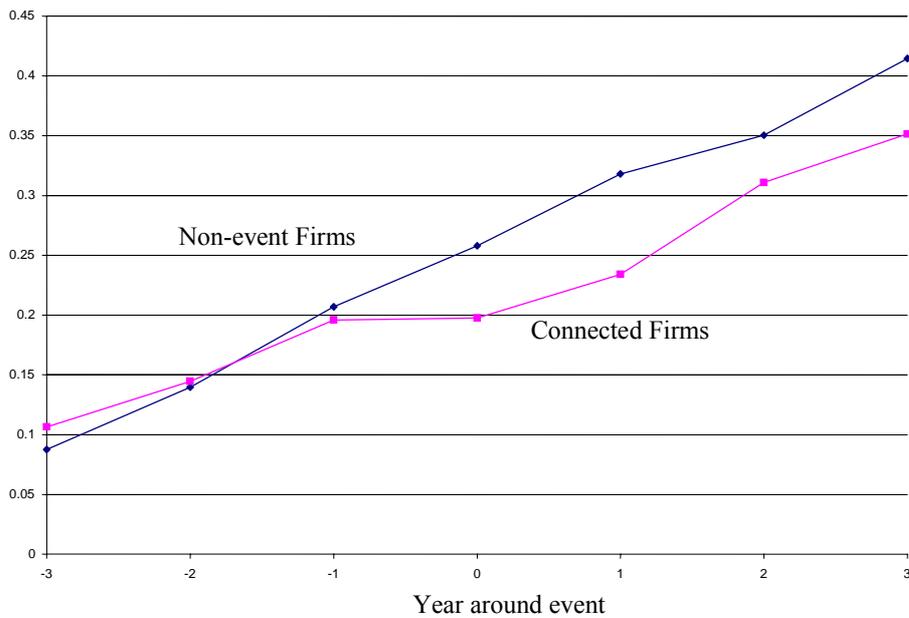


Figure 2 Debt Maturity and Corruption

Figure 2.1 Mean Long Term Debt/Total Debt
(The event firms and the non-event firms)

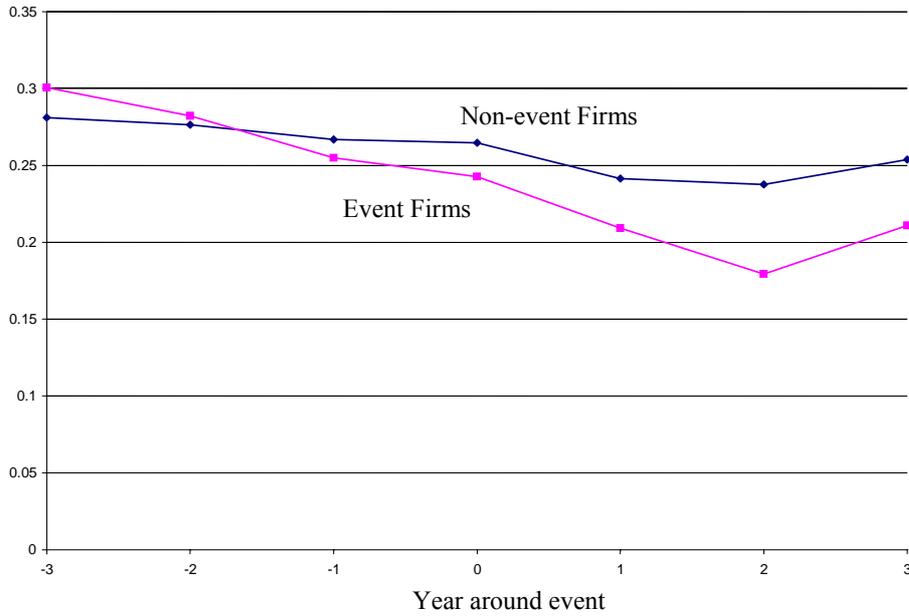


Figure 2.2 Mean Long Term Debt/Total Debt
(The connected firms and the non-event firms)

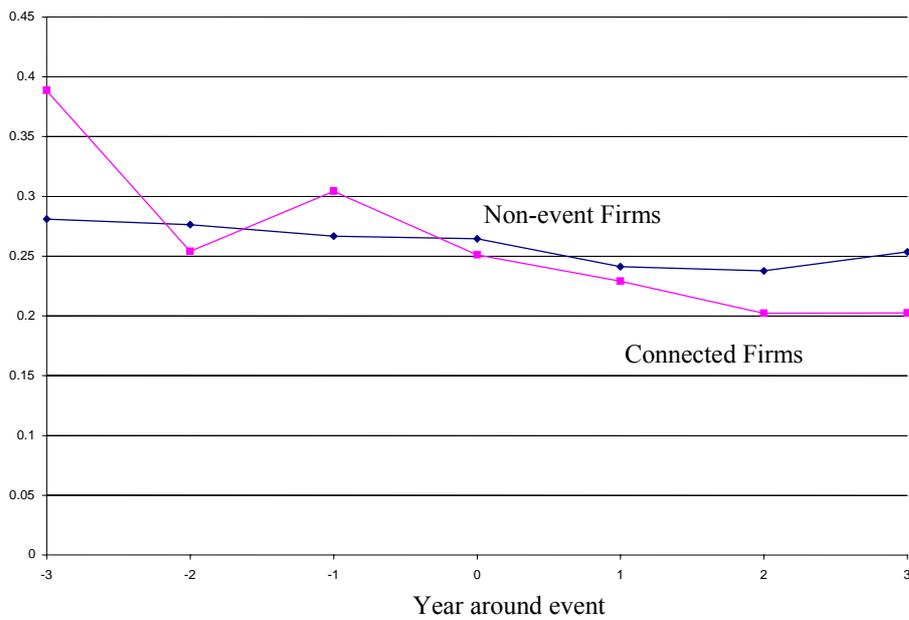
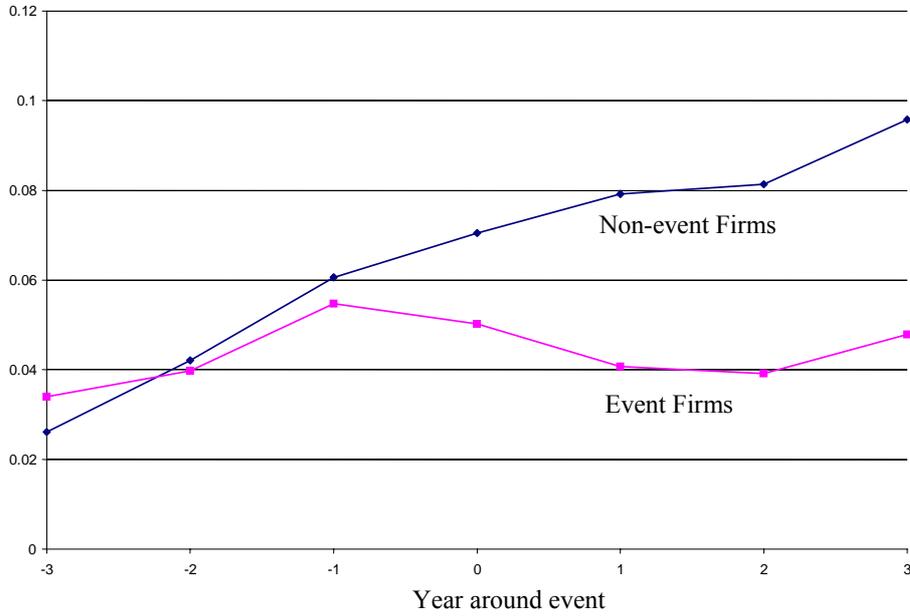


Figure 3
Long-term leverage and Corruption

**Figure 3.1 Mean Long Term Debt/Assets
(The event firms and the non-event firms)**



**Figure 3.2 Mean Long Term Debt/Assets
(The connected firms and the non-event firms)**

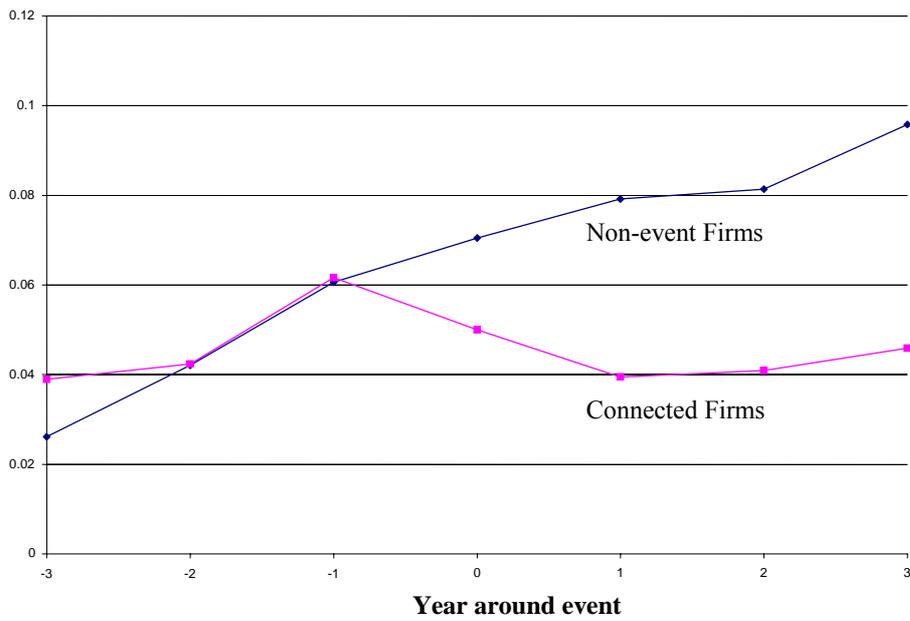


Figure 4
Mean Cumulative Abnormal Returns around Corruption Events

This figure plots the mean daily cumulative abnormal stock returns of the event firms, the non-event firms, and the connected firms, from 60 days before to 60 days after the corruption event day (day 0). The abnormal stock return is the stock return of a firm net of the value-weighted market return on the same day. Day 0 is the first day of public disclosure of the bureaucrat's wrongdoings. Such disclosures can be *Shuang Gui* (a detention measure that orders the bureaucrat to confess his/her crime at specific location), arrestment, or removal from current position.

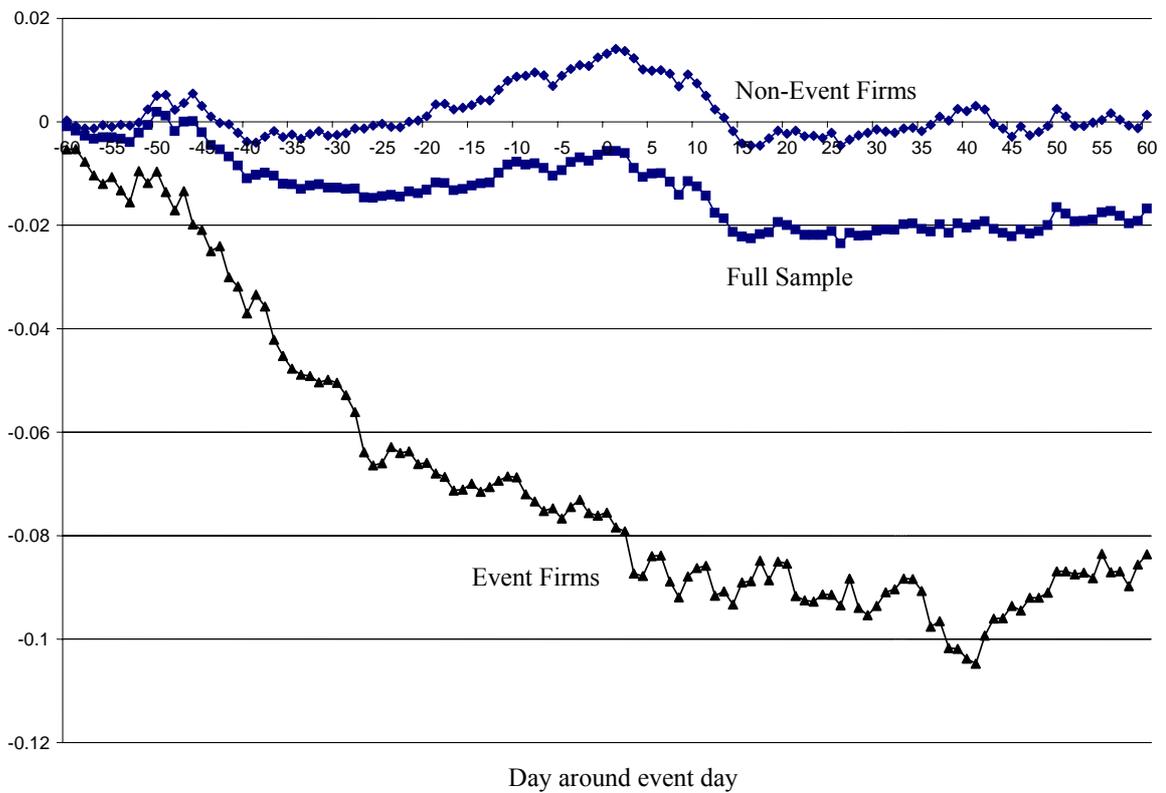


Table 1 The Corruption List

This table reports 23 corruption cases that involve high level bureaucrats in China. Some names are collected from *Excerpts of Discipline Cases of the Communist Party of China* and *Villains of the Communist Party of China*; others are collected from news disclosures by the Central Commission for Discipline Inspection of CPC. The event day is the first day of the public disclosure of a bureaucrat's wrongdoings. Such disclosures can be *Shuang Gui* (one detention measure that orders the person to confess his/her crime at a specific location), arrestment, or removal from current position. The sentence day is the day when the final adjudication is announced. CPC denotes Communist Party of China. PC denotes People's Congress. PPCC denotes People's Political Consultative Congress. The bribing firms are the ones whose senior managers or directors have engaged in bribing the bureaucrats. The connected firms are the ones whose senior managers or directors are connected with the bureaucrats through current or past job affiliations, but are not involved in the corruption cases. The unconnected firms are all other firms in the corrupt bureaucrats' jurisdiction.

Province	Name	Position	Event Day	Sentence Day	Sentence	Number of firms in the province	The Bribing Firms	The Connected Firms	The Non-event Firms
Anhui	Wang Huizhong	Vice-Province Governor	20010407	20031229	Death penalty	27	1	2	24
Bank	Liu Jinbao	Vice-Chairman & CEO of Bank Of China (HK)	20030525	20050812	Suspended death penalty	5	5	0	0
Bank	Wang Xuebin	CEO of China Construction Bank	20020111	20031210	12 years of imprisonment	5	5	0	0
Beijing	Chen Xitong	CPC Secretary	19950426	19980731	16 years of imprisonment	11	5	3	3
Central	Li Daqiang	Vice-Province Governor	20000925	20000925	Dismissal from the service and CPC	2	2	0	0
Central	Xu Penghang	Vice chairman of national defense technology commission and national economics and trade commission	20001011	20001011	Dismissal from the service	1	1	0	0
Fujian	Shi Zhaobin	Vice-CPC Secretary	19990818	20010927	Dismissal from the service and CPC	34	5	3	26
Guangxi	Xu Binsong	Vice-Chairman of Municipality	19980523	19990827	Life imprisonment	6	0	1	5
Guangxi	Chen Kejie	Chairman of Municipality	20000111	20000731	Death penalty	10	2	1	7
Guangxi	Liu Zhibin	Vice-Chairman of Municipality	20000319	20020624	15 years of imprisonment	10	2	2	6
Guangxi	Wang Qinglu	Vice-Chairman of PPCC	20010222	20010222	Dismissal from the service and CPC	13	0	1	12
Guizhou	Liu Changgui	Vice-Province Governor	20030417	20040430	11 years of imprisonment	12	1	3	8
Guizhou	Liu Fangren	CPC Secretary & PC Chairman	20030422	20040629	Life imprisonment	12	1	1	10
Hainan	Xin Yejiang	Vice-PC Chairman	19961227	19980526	5 years of imprisonment	10	2	0	8
Hebei	Jiang Dianwu	Vice-PC Chairman	19971101	19981207	10 years of imprisonment	13	0	0	13
Hebei	Chen Weigao	CPC Secretary & PC Chairman	20000301	20030809	Dismissal from CPC	25	1	3	21
Hebei	Cong Fukui	Vice-Province Governor	20000627	20010518	Dismissal from the service and CPC	24	0	2	22
Hubei	Meng QingPing	Vice-Province Governor	19980410	19991201	10 years of imprisonment	33	1	4	28
Jiangxi	Hu Changqing	Vice-Province Governor	19990808	20000215	Death penalty	12	0	2	10
Liaoning	Mu TuoXing	Vice-Province Governor	20010321	20011113	Death penalty	51	5	6	40
Xingjiang	Aman.Haji	Vice-Province Governor	20031015	N/A	N/A (Still under investigation)	25	1	1	23
Yunnan	Li Jiating	Vice CPC Secretary & Province Governor	20010620	20030509	Death penalty	17	1	4	12
Zhejiang	Xu Yunhong	Vice-Province Governor	19990922	20001017	10 years of imprisonment	35	2	3	30
Total						393	43	42	308

Table 2
Financing Policies and Other Firm Characteristics around the Corruption Events

This table reports pre-event three-year mean (Panel A) and median (Panel B) values of leverage, debt maturity, firm asset, sales, and profitability for the sample firms and several sub-samples – the event firms, the connected firms, and the non-event firms. “Change” is measured as the three-year mean (median) value of a variable after the event minus the three-year mean (median) before the event. The event firms include the bribing firms and the connected firms. The bribing firms are the ones whose senior managers or directors have engaged in bribing the bureaucrats in the corruption cases. The connected firms are the ones whose senior managers or directors are connected with the corrupt bureaucrats through current or past job affiliations, but have not been involved in the corruption cases. The non-event firms are other non-bribing, non-connected firms within the bureaucrats’ jurisdiction (province). Financial leverage is measured as total debt divided by total assets, or total debt plus accounts payable divided by total assets. Debt maturity is measured as long-term debt divided by total debt, or long-term debt divided by total debt plus accounts payable. We further define long-term leverage as long-term debt divided by total assets, and short-term leverage as short-term debt divided by total assets or short-term debt plus accounts payable divided by total assets. The scaling factor (assets) of the leverage and debt maturity measures is lagged by one period. Assets and Sales are in million RMB where US\$1=RMB8.2. *** denotes significant at 1%; ** significant at 5%; and * significant at 10%.

Panel A. Mean Value

	The Event Firms		The Connected Firms Only		The Non-Event Firms		The Full Sample	
	Pre-event	Change	Pre-event	Change	Pre-event	Change	Pre-event	Change
Assets	1352.56	242.77	1140.21	267.97**	1,335.08	648.53***	1338.97	567.96***
Sales	680.62	179.05	471.05	247.07***	747.46	515.49***	732.54	451.70***
Total Debt / Assets	0.169	0.106***	0.149	0.147***	0.145	0.214***	0.150	0.191***
(Total Debt+Accounts Payable) / Assets	0.224	0.135***	0.207	0.187***	0.194	0.263***	0.201	0.236***
Long-term Debt / Total Debt	0.277	-0.077***	0.310	-0.098***	0.273	-0.029**	0.274	-0.039***
Long-term Debt / (Total Debt+Accounts Payable)	0.203	-0.056***	0.222	-0.079***	0.209	-0.021*	0.208	-0.027***
Long-term Debt / Assets	0.043	-0.000	0.048	-0.008	0.043	0.042***	0.043	0.033***
Short-term Debt / Assets	0.125	0.096***	0.099	0.142***	0.100	0.160***	0.105	0.146***
(Short-term Debt+Accounts Payable) / Assets	0.231	0.149***	0.198	0.192***	0.190	0.190***	0.199	0.181***

Table 2 (Continued)**Panel B. Median Value**

	The Event Firms		The Connected Firms Only		The Non-Event Firms		The Full Sample	
	Pre-event	Change	Pre-event	Change	Pre-event	Change	Pre-event	Change
Assets	925.49	93.74**	908.96	313.46***	844.72	413.14***	856.69	356.24***
Sales	338.05	82.24	307.70	161.09***	397.36	197.99***	385.20	169.68***
Total Debt / Assets	0.130	0.102***	0.086	0.158***	0.118	0.197***	0.169	0.176***
(Total Debt+Accounts Payable) / Assets	0.167	0.154***	0.145	0.200***	0.178	0.233***	0.176	0.216***
Long-term Debt / Total Debt	0.219	-0.133***	0.301	-0.217***	0.164	-0.012	0.178	-0.039***
Long-term Debt / (Total Debt+Accounts Payable)	0.131	-0.071***	0.162	-0.103***	0.096	0.009	0.105	-0.012**
Long-term Debt /Assets	0.009	-0.003	0.020	-0.006	0.003	0.038***	0.004	0.022***
Short-term Debt / Assets	0.089	0.098***	0.057	0.136***	0.072	0.148***	0.074	0.136***
(Short-term Debt+Accounts Payable) / Assets	0.198	0.110***	0.159	0.166**	0.171	0.156***	0.176	0.147***

Table 3**Differences in the Change in Financing Variables around the Corruption Events between the Event Firms and Control Firms**

Panel A. This panel reports the mean and median differences in the changes in leverage and debt maturity ratios between the event firms and the non-event firms, and between the connected firms and the non-event firms. The event firms include the bribing firms and the connected firms. The bribing firms are the ones whose senior managers or directors have engaged in bribing the bureaucrats in the corruption cases. The connected firms are the ones whose senior managers or directors are connected with the corrupt bureaucrats through current or past job affiliations, but have not been involved in the corruption cases. The non-event firms are other non-bribing, non-connected firms in the bureaucrats' jurisdiction (province). The changes in leverage and debt maturity variables are measured as three-year mean values after the corruption event minus three-year mean values before the events. t-statistics to test the significance of variables are reported in parentheses. *** denotes significant at 1%; ** significant at 5%; and * significant at 10%.

Difference in the Change in Leverage / Debt Maturity	Between the event firms and the non-event Firms		Between the connected firms and the non-event Firms	
	Mean	Median	Mean	Median
Total Debt / Assets	-0.108*** (-4.50)	-0.095*** (-4.56)	-0.067*** (-2.62)	-0.039*** (-2.54)
(Total Debt+Accounts Payable) / Assets	-0.127*** (-4.73)	-0.079*** (-4.81)	-0.075** (-2.58)	-0.033*** (-2.38)
Long-term Debt / Total Debt	-0.048 (-0.42)	-0.120 (-1.28)	-0.069 (-0.59)	-0.205 (-1.12)
Long-term Debt / (Total Debt+Accounts Payable)	-0.036 (-1.32)	-0.080* (-1.70)	-0.058* (-1.68)	-0.112 (-1.53)
Long-term Debt / Assets	-0.043*** (-4.25)	-0.041*** (-3.71)	-0.048*** (-3.76)	-0.028*** (-2.66)
Short-term Debt / Assets	-0.064*** (-3.72)	-0.050*** (-3.79)	-0.018* (-1.78)	-0.012* (-1.70)
(Short-term Debt+Accounts Payable) / Assets	-0.042** (-2.02)	-0.047*** (-2.69)	-0.001 (-1.07)	0.009 (1.03)

Table 3 (continued)

Panel B. This panel reports the mean and median difference in the changes in leverage and debt maturity ratios between the event firms and their matching firms, and between the connected firms and their matching firms. The event firms include the bribing firms and the connected firms. The bribing firms are the ones whose senior managers or directors have engaged in bribing the bureaucrats in the corruption cases. The connected firms are the ones whose senior managers or directors are connected with the corrupt bureaucrats through current or past job affiliations, but were not involved in the corruption cases. The matching firms are firms outside the corrupt bureaucrats' jurisdiction (applicable to provincial corruption cases) but have similar firm size (measured as book value of assets) as the event firms. The changes in leverage and debt maturity variables are measured as three-year mean values after the corruption events minus three-year mean values before the events. t-statistics to test the significance of variables are reported in parentheses. *** denotes significant at 1%; ** significant at 5%; and * significant at 10%.

Difference in the Change in Leverage / Debt Maturity	Between the event firms and their matching firms		Between the connected firms and their matching firms	
	Mean	Median	Mean	Median
Total Debt / Assets	-0.037 (-1.13)	-0.076* (-1.88)	-0.045 (-0.14)	-0.036 (-1.21)
(Total Debt+Accounts Payable) / Assets	-0.053 (-1.53)	-0.083*** (-2.12)	-0.045 (-0.95)	-0.025 (-0.93)
Long-term Debt / Total Debt	-0.007 (-0.18)	-0.064 (-1.21)	-0.032 (-0.57)	-0.065 (-1.30)
Long-term Debt / (Total Debt+Accounts Payable)	-0.0040 (-1.32)	-0.041** (-2.02)	-0.058 (-1.57)	-0.029* (-1.67)
Long-term Debt /Assets	-0.023*** (-2.25)	-0.001*** (-2.26)	-0.032*** (-2.32)	-0.003* (-1.77)
Short-term Debt / Assets	-0.019 (-0.73)	-0.047* (-1.85)	-0.016 (-0.44)	-0.046 (-1.02)
(Short-term Debt+Accounts Payable) / Assets	-0.027 (-0.54)	-0.052 (-1.12)	-0.001 (-0.20)	-0.012 (-0.23)

Table 4
Mean Regression Results of the Effects of Corruption Cases on the Event Firms' Leverage and Debt Maturity Ratios

This panel reports the mean regression results of the impact of the corruption events on firm's leverage and debt maturity. The ordinary least squared method is employed in the regressions. For each variable included, we compute its three-year mean value before and after the event. Panel A reports regression results based on the event firms and the non-event firms. Panel B reports results based on the event firms and the matching firms. The matching firms are firms outside the corrupt bureaucrats' jurisdiction but have similar firm size (measured as book value of assets) as the event firms. The dependent variables are the various measures of leverage and debt maturity as defined in Table 2. The independent variables include the following: a dummy variable "Corrupt" equal 1 if the firm is an event firm, and otherwise 0; a dummy variable "Post" equal 1 if it is after the event year, and 0 if it is prior to the event year; "Lass" measured as log of assets; the interaction term of "Corrupt" and "Post", tangible assets as a ratio of assets ("Tangible"); "Growth" measured as the market value of equity over book value of equity; and return on assets ("Profit"). Industry dummy variables are included in the regressions but their coefficients are not reported in this table. N is the number of observations. t-statistics are in parentheses. *** denotes significant at 1%; ** significant at 5%; and * significant at 10%.

Panel A. Benchmarked against the Non-event Firms

Dependent Variable	Total Debt/Assets	(Total Debt+Accounts Payable)/Assets	Long-term Debt/Total Debt	Long-term Debt/(Total Debt+Accounts Payable)	Long-term Debt/Assets	Short-term Debt/Assets	(Short-term Debt+Accounts Payable)/Assets
Intercept	-0.644*** (-3.78)	-0.879*** (-4.64)	-0.908*** (-5.03)	-0.744*** (-5.04)	-0.475*** (-7.23)	-0.097 (-0.71)	-0.380** (-2.06)
Corrupt	0.038* (1.66)	0.046* (1.76)	0.025 (1.01)	0.018 (0.88)	0.005 (0.58)	0.034* (1.79)	0.025 (1.00)
Post	0.176*** (11.04)	0.221*** (12.47)	-0.033* (-1.95)	-0.027* (-1.94)	0.019*** (3.02)	0.152*** (11.75)	0.182*** (10.60)
Corrupt*Post	-0.100*** (-3.04)	-0.118*** (-3.22)	-0.038* (-1.78)	-0.039* (-1.66)	-0.031*** (-2.47)	-0.070*** (-2.64)	-0.068* (-1.91)
Lass	0.038*** (4.55)	0.054*** (5.82)	0.041*** (4.62)	0.032*** (4.47)	0.021*** (6.60)	0.014** (2.03)	0.036*** (4.01)
Tangible	0.179*** (4.07)	0.107*** (2.18)	0.528*** (11.28)	0.466*** (12.17)	0.170*** (9.97)	-0.029 (-0.82)	-0.172*** (-3.61)
Sales Growth	0.172*** (4.70)	0.203*** (4.98)	0.018 (0.46)	0.011 (0.36)	0.025* (1.74)	0.130*** (4.38)	0.168*** (4.25)
Profit	-0.450*** (-3.28)	-0.312** (-2.05)	0.045 (0.31)	-0.107 (-0.90)	-0.171*** (-3.23)	-0.220** (-1.98)	-0.394*** (-2.66)
N	746	739	721	739	746	746	739
Adj R-squared	29.0%	32.7%	24.0%	25.3%	25.2%	26.7%	26.1%

Table 4 (continued)**Panel B. Benchmarked against the Matching Firms**

Dependent Variable	Total Debt/Assets	(Total Debt+Accounts Payable)/Assets	Long-term Debt/Total Debt	Long-term Debt/(Total Debt+Accounts Payable)	Long-term Debt/Assets	Short-term Debt/Assets	(Short-term Debt+Accounts Payable)/Assets
Intercept	-0.266 (-1.19)	-0.443* (-1.73)	-0.393 (-1.31)	-0.167 (-0.70)	-0.191*** (-2.41)	-0.059 (-0.30)	-0.171 (-0.50)
Corrupt	0.028 (1.19)	0.026 (0.96)	0.048 (1.51)	0.054*** (2.16)	0.014* (1.68)	0.016 (0.80)	-0.018 (-0.50)
Post	0.117*** (4.94)	0.153*** (5.63)	-0.048 (-1.49)	-0.027 (-1.08)	0.016* (1.95)	0.097*** (4.73)	0.117*** (3.22)
Corrupt*Post	-0.019 (-0.56)	-0.024 (-0.63)	-0.035* (-1.77)	-0.053* (-1.69)	-0.023*** (-2.26)	-0.002 (-0.07)	0.015 (0.29)
Lass	0.024*** (2.19)	0.037*** (2.94)	0.026* (1.75)	0.012 (1.00)	0.009*** (2.35)	0.014 (1.48)	0.030* (1.76)
Tangible	0.029 (0.44)	0.005 (0.06)	0.342*** (3.88)	0.284*** (4.09)	0.104*** (4.46)	-0.099* (-1.75)	-0.266*** (-2.65)
Sales Growth	0.143*** (2.72)	0.157*** (2.60)	-0.094 (-1.32)	-0.035 (-0.63)	0.023 (1.21)	0.105*** (2.31)	0.138* (1.71)
Profit	-0.219 (-1.06)	-0.063 (-0.27)	-0.134 (-0.48)	-0.197 (-0.90)	-0.065 (-0.89)	-0.161 (-0.90)	-0.540* (-1.71)
N	304	302	294	300	304	304	302
Adj R-squared	20.10%	24.40%	8.28%	9.23%	10.15%	18.78%	12.64%

Table 5
Mean Regression Results of the Effects of Corruption Cases on the Connected Firms' Leverage and Debt Maturity Ratios

This panel reports the mean regression results of the impact of the corruption events on firm's leverage and debt maturity. The ordinary least squared method is employed in the regressions. For each variable included, we compute its three-year mean value before and after the event. Panel A reports regression results based on the connected firms and the non-event firms. Panel B reports results based on the connected firms and the matching firms. The matching firms are firms outside the corrupt bureaucrats' jurisdiction but have similar firm size (measured as book value of assets) as the event firms. The dependent variables are the various measures of leverage and debt maturity as defined in Table 2. The independent variables include the following: a dummy variable "Corrupt" equal 1 if the firm is a connected firm, and otherwise 0; a dummy variable "Post" equal 1 if it is after the event year, and 0 if it is prior to the event year; "Lass" measured as log of assets; the interaction term of "Corrupt" and "Post", tangible assets as a ratio of assets ("Tangible"); "Growth" measured as the market value of equity over book value of equity; and return on assets ("Profit"). Industry dummy variables are included in the regressions but their coefficients are not reported in this table. N is the number of observations. t-statistics are in parentheses. *** denotes significant at 1%; ** significant at 5%; and * significant at 10%.

Panel A. Benchmarked against the Non-event Firms

Dependent Variable	Total Debt/Assets	(Total Debt+Accounts Payable)/Assets	Long-term Debt/Total Debt	Long-term Debt/(Total Debt+Accounts Payable)	Long-term Debt/Assets	Short-term Debt/Assets	(Short-term Debt+Accounts Payable)/Assets
Intercept	-0.540*** (-2.95)	-0.798*** (-3.91)	-0.988*** (-5.23)	-0.787*** (-5.11)	-0.488*** (-6.95)	0.011 (0.07)	-0.256 (-1.34)
Corrupt	0.011 (0.35)	0.021 (0.62)	0.019 (0.58)	0.009 (0.36)	0.004 (0.38)	0.007 (0.28)	0.006 (0.18)
Post	0.174*** (10.74)	0.219*** (12.13)	-0.041*** (-2.43)	-0.033*** (-2.41)	0.017*** (2.65)	0.152*** (11.70)	0.183*** (10.79)
Corrupt*Post	-0.064 (-1.48)	-0.071 (-1.47)	-0.049* (-1.70)	-0.058* (-1.74)	-0.041*** (-2.46)	-0.025 (-0.72)	-0.015 (-0.33)
Lass	0.033*** (3.67)	0.051*** (5.04)	0.044*** (4.72)	0.034*** (4.46)	0.022*** (6.31)	0.009 (1.22)	0.030*** (3.19)
Tangible	0.193*** (4.10)	0.110*** (2.10)	0.562*** (11.61)	0.501*** (12.66)	0.178*** (9.85)	-0.023 (-0.60)	-0.159*** (-3.24)
Sales Growth	0.202*** (4.98)	0.242*** (5.35)	0.049 (1.17)	0.033 (0.98)	0.035*** (2.27)	0.145*** (4.46)	0.187*** (4.42)
Profit	-0.517*** (-3.45)	-0.393*** (-2.35)	0.076 (0.49)	-0.085 (-0.67)	-0.167*** (-2.89)	-0.279*** (-2.32)	-0.513*** (-3.27)
N	674	670	652	672	674	674	670
Adj R-squared	30.50%	34.20%	27.25%	28.70%	26.49%	28.80%	28.11%

Table 5 (continued)
Panel B. Benchmarked against the Matching Firms

Dependent Variable	Total Debt/Assets	(Total Debt+Accounts Payable)/Assets	Long-term Debt/Total Debt	Long-term Debt/(Total Debt+Accounts Payable)	Long-term Debt/Assets	Short-term Debt/Assets	(Short-term Debt+Accounts Payable)/Assets
Intercept	-0.004 (-0.01)	-0.409 (-1.00)	-0.250 (-0.53)	0.141 (0.40)	-0.165 (-1.38)	0.186 (0.59)	-0.188 (-0.47)
Corrupt	0.011 (0.32)	0.019 (0.50)	0.073* (1.68)	0.066** (2.03)	0.017 (1.52)	-0.006 (-0.20)	-0.008 (-0.21)
Post	0.125*** (3.65)	0.152*** (3.94)	-0.065 (-1.46)	-0.041 (-1.24)	0.008 (0.76)	0.115*** (3.92)	0.135*** (3.59)
Corrupt*Post	-0.006 (-0.12)	0.005 (0.10)	-0.057* (-1.94)	-0.094** (-2.06)	-0.034*** (-2.19)	0.021 (0.52)	0.045 (0.87)
Lass	0.013 (0.71)	0.038* (1.83)	0.012 (0.49)	-0.008 (-0.46)	0.006 (1.07)	0.005 (0.33)	0.033 (1.62)
Tangible	0.086 (0.88)	0.043 (0.39)	0.565*** (4.44)	0.511*** (5.39)	0.178*** (5.57)	-0.105 (-1.25)	-0.256*** (-2.38)
Sales Growth	0.319*** (3.82)	0.358*** (3.83)	-0.064 (-0.59)	0.032 (0.40)	0.070*** (2.59)	0.226*** (3.15)	0.250*** (2.74)
Profit	-0.324 (-1.04)	-0.171 (-0.49)	-0.014 (-0.03)	-0.068 (-0.22)	-0.016 (-0.16)	-0.335 (-1.25)	-0.636* (-1.86)
N	160	160	152	160	160	160	160
Adj R-squared	31.56%	36.27%	14.51%	19.55%	22.44%	31.52%	31.10%

Table 6
Mean Regression Results of the Effects of Corruption Cases on the Non-event Firms' Leverage and Debt Maturity Ratios

This table reports the mean regression results of the impact of corruption on firm's leverage and debt maturity based on the non-event firms and their matching firms. The non-event firms are non-bribing and non-connected firms in the corrupted bureaucrats' jurisdiction (province). The matching firms are formed based on firm size (measured as book value of assets). Observations included in this analysis are averages three years before and three years after the event for both the event firms and the matching firms. The ordinary least squared method is employed in the regressions. The dependent variables are the various measures of leverage and debt maturity as defined in Table 2. The independent variables include the following: a dummy variable "Corrupt" equal 1 if the firm is an unconnected firm, i.e. non-event firm, and 0 for its matching firm; a dummy variable "Post" equal 1 if it is after the event year, and 0 if it is prior to the event year; "Lass" measured as log of assets; the interaction term of "Corrupt" and "Post", tangible assets as a ratio of assets ("Tangible"); "Sales Growth" measured as percentage changes in annual sales; and return on assets ("Profit"). Industry dummy variables are included in the regressions but their coefficients are not reported in this table. N is the number of observations. t-statistics are in parentheses. *** denotes significant at 1%; ** significant at 5%; and * significant at 10%.

Dependent Variable	Total Debt/Assets	(Total Debt+Accounts Payable)/Assets	Long-term Debt/Total Debt	Long-term Debt/(Total Debt+Accounts Payable)	Long-term Debt/Assets	Short-term Debt/Assets	(Short-term Debt+Accounts Payable)/Assets
Intercept	-0.370*** (-3.29)	-0.519*** (-4.14)	-1.007*** (-6.96)	-0.827*** (-7.07)	-0.394*** (-9.79)	0.079 (0.86)	-0.049 (-0.37)
Corrupt	-0.006 (-0.52)	-0.007 (-0.52)	0.030* (1.92)	0.035*** (2.77)	0.006 (1.48)	-0.011 (-1.12)	-0.007 (-0.51)
Post	0.148*** (11.90)	0.188*** (13.56)	-0.075*** (-4.67)	-0.058*** (-4.50)	0.008* (1.80)	0.133*** (13.12)	0.183*** (12.44)
Corrupt*Post	0.041*** (2.38)	0.051*** (2.66)	-0.018 (-0.80)	-0.020 (-1.12)	0.011* (1.74)	0.030*** (2.15)	0.019 (0.92)
Lass	0.024*** (4.29)	0.035*** (5.69)	0.050*** (7.09)	0.039*** (6.86)	0.018*** (8.95)	0.004 (0.90)	0.018*** (2.78)
Tangible	0.146*** (4.20)	0.072* (1.85)	0.503*** (11.26)	0.485*** (13.42)	0.166*** (13.36)	-0.070*** (-2.47)	-0.221*** (-5.42)
Sales Growth	0.173*** (5.89)	0.202*** (6.16)	-0.049 (-1.29)	-0.034 (-1.12)	0.021** (1.97)	0.135*** (5.64)	0.147*** (4.26)
Profit	-0.435*** (-3.62)	-0.278** (-2.08)	-0.355*** (-2.29)	-0.535*** (-4.28)	-0.137*** (-3.19)	-0.195** (-1.99)	-0.356*** (-2.52)
N	1188	1186	1169	1172	1188	1188	1186
Adj R-squared	35.40%	39.73%	19.63%	23.79%	30.65%	32.35%	28.15%

Table 7**Changes in Leverage and Stock Market Reactions around the Corruption Events**

This table reports mean and median cumulative abnormal returns (CARs) over various event windows for three sub-samples (the bottom tercile, middle tercile and top tercile). Difference in the mean CAR between the top tercile and bottom tercile are also reported. CARs are estimated by cumulating daily abnormal stock returns within various event windows ranging from 60 days before to 60 days after the corruption event day. The event day is the first day of public disclosure of the bureaucrat's wrongdoings. The abnormal stock return is the stock return of a firm net of the value-weighted market return on the same day. The terciles are ranked by change in total leverage measured as three-year mean leverage (debt to assets ratio) after the corruption event minus three-year mean leverage before the event. *** denotes significant at 1%; ** significant at 5%; and * significant at 10%.

		Bottom Tercile	Middle Tercile	Top Tercile	Difference between Top and Bottom Tercile
Change in Total Leverage	Mean	-0.049	0.153	0.445	0.445***
	Median	-0.002	0.173	0.386	0.388***
CAR (-60,60)	Mean	-0.036	-0.057	0.043	0.080***
	Median	0.004	-0.025	0.019	0.015***
CAR (-40,40)	Mean	-0.036	-0.042	0.044	0.081***
	Median	-0.008	-0.051	0.033	0.041***
CAR (-20,20)	Mean	-0.013	-0.025	0.021	0.034**
	Median	-0.003	-0.034	0.003	0.006**
CAR (-10,10)	Mean	-0.014	-0.008	0.011	0.025*
	Median	-0.001	-0.024	-0.005	-0.004
CAR (-60,0)	Mean	-0.022	-0.009	0.015	0.036*
	Median	-0.003	-0.007	-0.001	0.002
CAR (-40,0)	Mean	-0.012	-0.001	0.022	0.033*
	Median	-0.001	-0.017	0.010	0.011
CAR (-20,0)	Mean	-0.001	0.007	0.018	0.019*
	Median	-0.002	0.004	-0.003	0.001
CAR (-10,0)	Mean	-0.004	0.008	0.005	0.009
	Median	-0.004	-0.004	-0.009	-0.005
# of firms in each tercile		124	124	125	
% of the event firms		33.07%	19.9%	10.0%	-23.1%***

Table 8
Regression Results of the Effects of Changes in Firm Leverage on CARs around the Corruption Events

The events are the initial public announcements of the corruption cases. The ordinary least squared method is employed in the regressions. The dependent variable is the cumulative abnormal returns (CARs) estimated by cumulating daily abnormal stock returns within various event windows ranging from 60 days before to 60 days after the corruption event day. The event day is the first day of public disclosure of the bureaucrat's wrongdoings. The abnormal stock return is the stock return of a firm net of the value-weighted market return on the same day. The independent variables include the following. "Chglev" is change in leverage (total debt to total assets ratio), measured as three-year mean leverage after the corruption event minus three-year mean leverage before the events. "Corrupt" equals to one if the firm is an event firm, and zero otherwise. Industry dummy variables are included in the regressions but their estimated coefficients are not reported. N is the number of observations. t-statistics are in the parentheses. *** denotes significant at 1%; ** significant at 5%; and * significant at 10%.

	Intercept	Chglev	Corrupt	Adj-R ²	Intercept	Chglev	Corrupt	Chglev *Corrupt	Adj-R ²	N
CAR (-60,60)	0.003 (0.07)	0.117*** (2.41)	-0.081*** (-2.94)	5.46%	0.008 (0.20)	0.079 (1.49)	-0.108*** (-3.45)	0.236* (1.79)	6.00%	373
CAR (-40,40)	0.002 (0.05)	0.117*** (2.96)	-0.059*** (-2.64)	6.23%	0.007 (0.22)	0.077* (1.79)	-0.087*** (-3.43)	0.247*** (2.32)	7.29%	373
CAR (-20,20)	-0.035 (-1.54)	0.056* (1.89)	-0.016* (-1.94)	4.84%	-0.035 (-1.52)	0.053* (1.66)	-0.017 (-0.90)	0.013 (0.16)	4.59%	373
CAR (-10,10)	-0.046 (-2.45)	0.046* (1.89)	-0.023* (-1.66)	5.15%	-0.047*** (-2.50)	0.054** (2.04)	-0.017 (-1.10)	-0.050 (-0.77)	5.05%	373
CAR (-60,0)	0.037 (1.17)	0.016 (0.40)	-0.090*** (-3.91)	4.31%	0.040 (1.28)	-0.011 (-0.25)	-0.109*** (-4.18)	0.169 (1.54)	4.66%	373
CAR (-40,0)	0.032 (1.37)	0.024 (0.80)	-0.055*** (-3.25)	2.05%	0.035 (1.50)	0.000 (0.01)	-0.071*** (-3.71)	0.143* (1.78)	2.60%	373
CAR (-20,0)	0.004 (0.29)	0.015 (0.74)	-0.021* (-1.86)	0.50%	0.005 (0.34)	0.008 (0.35)	-0.026** (-2.01)	0.043 (0.80)	0.41%	373
CAR (-10,0)	-0.016 (-1.31)	0.014 (0.88)	-0.014 (-1.47)	0.68%	-0.015 (-1.22)	0.006 (0.34)	-0.019* (-1.84)	0.050* (1.68)	0.76%	373

Table 9**Regressions of Long-term Changes in Performance on Changes in Financial Policy around the Corruption Scandals**

This table reports regression results of the impact of changes in debt and maturity ratios on long-term changes in firm performance. Panel A reports results based on the full sample. Panel B reports results excluding the bribing firms. Ordinary least square method is employed in the regressions. Both changes in performance and changes in debt as well as maturity ratios are measured as the changes from three years prior to the corruption event to three years post the corruption event. The dependent variables are change in return on sales and change in market-to-book ratios. The independent variables include change in total debt/assets, change in long-term debt/assets, change in short-term debt/assets, change in long-term debt/total debt, a dummy variable (Corrupt) equal one if the firm is either an event firm (Panel A) or connected firm (Panel B), and otherwise zero, and the interaction terms of Corrupt with the above change variables in debt and maturity ratios. N is the number of observations. t-statistics are in parentheses. *** denotes significant at 1%; ** significant at 5%; and * significant at 10%.

Panel A Full Sample

	Change in ROS				Change in Market-to-Book ratio			
Intercept	0.036 (0.68)	0.032 (0.68)	0.029 (0.55)	-0.123*** (-3.08)	-0.109 (-0.79)	0.163 (1.20)	0.038 (0.26)	0.393*** (2.17)
Intercept	0.080 (1.20)				1.650*** (9.44)			
Change in total leverage		0.394*** (2.20)				3.595*** (7.08)		
Change in long-term debt			0.129 (1.44)				1.741*** (6.89)	
Change in short-term debt				0.074 (1.20)				1.108*** (3.93)
Change in debt maturity	-0.124*** (-2.12)	-0.113*** (-2.36)	-0.108* (-1.86)	-0.034 (-0.74)	-0.054 (-0.35)	-0.062 (-0.46)	-0.108 (-0.66)	-0.202 (-0.97)
Corrupt	0.049 (0.30)				0.505 (1.15)			
Corrupt* Change in total leverage		0.398 (0.86)				1.200 (0.91)		
Corrupt* Change in long-term debt			-0.042 (-0.20)				0.417 (0.71)	
Corrupt* Change in short-term debt				0.268*** (2.18)				0.608 (1.09)
N	334	334	334	334	334	334	334	334
Adj R-squared	4.54%	6.34%	4.56%	5.51%	29.70%	19.83%	19.47%	12.89%

Table 9 (Continued)**Panel B Sub-sample Excluding the Bribing Firms**

	Change in ROS				Change in Market-to-Book ratio			
Intercept	0.046 (0.86)	0.042 (0.85)	0.039 (0.73)	-0.119*** (-3.00)	-0.045 (-0.32)	0.235* (1.78)	0.117 (0.80)	0.502*** (2.92)
Change in total leverage	0.081 (1.22)				1.627*** (9.48)			
Change in long-term debt		0.387*** (2.15)				3.542*** (7.32)		
Change in short-term debt			0.134 (1.48)				1.689*** (6.80)	
Change in debt maturity				-0.066 (-1.09)				1.023*** (3.92)
Corrupt	-0.122 (-1.55)	-0.091 (-1.50)	-0.101 (-1.27)	0.072 (1.02)	-0.133 (-0.66)	0.006 (0.03)	-0.189 (-0.86)	-0.095 (-0.31)
Corrupt* Change in total leverage	0.058 (0.29)				0.251 (0.48)			
Corrupt* Change in long-term debt		0.602 (0.93)				4.199*** (2.42)		
Corrupt* Change in short-term debt			0.048 (0.20)				0.060 (0.09)	
Corrupt* Change in debt maturity				0.275* (1.65)				0.154 (0.21)
N	304	304	304	304	304	304	304	304
Adj R-squared	3.11%	4.80%	3.20%	9.35%	29.38%	23.81%	18.96%	19.57%

Table 10**Mean and Median Differences in Performance between the Event Firms and the Non-event Firms before and after the Corruption Scandals**

This table reports mean and median performance differences between event firms and non-event firms (Panel A), connected firms and non-event firms (Panel B), at the third year prior to the corruption event year and the third year after the corruption event year. ROA is return on assets; ROE is return on equity; Operating margin is operating income divided by sales; ROS is return on sales; and Market-to-book ratio is market value of equity divided by book value of equity. *** denotes significant at 1%; ** significant at 5%; and * significant at 10%.

Panel A Differences Between the Event Firms and the Non-event Firms

	Three years before the scandal		Three years after the scandal	
	Mean	Median	Mean	Median
ROA	0.012 (1.06)	0.042 (1.08)	-0.021*** (-2.39)	-0.007* (-1.95)
ROE	0.024 (0.98)	0.293 (1.02)	-0.041*** (-2.26)	-0.018* (-1.74)
Operating Margin	0.042 (1.27)	0.216 (1.15)	-0.091*** (-3.06)	-0.037*** (-2.44)
ROS	0.049 (1.36)	0.168 (1.09)	-0.077*** (-2.66)	-0.014 (-1.55)
Market-to-Book	0.244*** (2.88)	0.230*** (2.43)	0.046 (0.34)	0.140 (0.16)

Panel B Differences between the Connected Firms and the Non-event Firms

	Three years before the scandal		Three years after the scandal	
	Mean	Median	Mean	Median
ROA	-0.004 (-0.28)	-0.004 (-0.29)	-0.020*** (-2.20)	-0.007* (-1.67)
ROE	-0.008 (-0.25)	0.108 (-0.29)	-0.033 (-1.45)	-0.024 (-1.55)
Operating Margin	-0.006 (-0.14)	-0.052 (-0.00)	-0.078** (-1.96)	-0.037* (-1.71)
ROS	0.004 (0.08)	-0.057 (-0.13)	-0.084*** (-2.18)	-0.019 (-0.16)
Market-to-Book	0.144 (1.31)	0.133 (0.76)	-0.031 (-0.18)	-0.060 (-0.19)