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Corporate Ownership, Dept, and Expropriation: Evidence from China

Yunxia Bai, Bing-Xuan Lin, Yaping Wang, Liansheng Wu

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Office of the Dean
College of Business Administration
Ballentine Hall
7 Lippitt Road
Kingston, RI 02881
401-874-2337
www.cba.uri.edu

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Yunxia Bai
School of Economics and Management
Tongji University
Shanghai 200092, China
E-mail: okbai2001@yahoo.com.cn
Tel: 8621-6598-3383

Bing-Xuan Lin*
College of Business Administration
University of Rhode Island
Kingston, RI 02881, USA
E-mail: blin@uri.edu
Tel: 401-874-4895

Yaping Wang
Guanghua School of Management
Peking University
Beijing 100871, China
E-mail: ywang@gsm.pku.edu.cn
Tel: 8610-6275-4805

Liansheng Wu
Guanghua School of Management
Peking University
Beijing 100871, China
E-mail: wuls@gsm.pku.edu.cn
Tel: 8610-6275-7925

* Corresponding author

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Abstract

We provide direct evidence on the dark side of leverage and offer new insights regarding the role of debt in corporate governance. Using a sample of Chinese state-owned enterprises that have experienced a transfer of controlling rights, we find a positive and significant relationship between expropriation and debt usage. Firms controlled by private block shareholders tend to have higher leverage due to excessive expropriation via debt. The evidence we document also suggests that in a weak legal environment, privatization alone will not resolve the agency problem faced by minority shareholders. On the contrary, the agency problem between the controlling shareholder and minority shareholders escalates after privatization.

JEL classification: G32; G34; L33; M21

Keywords: Debt; Expropriation; Privatization; Controlling rights transfer; China.

1. Introduction

The disciplinary role of debt is a key issue in corporate finance research. The extant literature has studied extensively the role of debt when the company has diversified ownership. Starting with the seminal work of Jensen and Meckling (1976) and then advanced by Jensen (1986), studies on the disciplinary role of debt suggest that debt helps to ensure management achieves the goal of value maximization by imposing a fixed stream of debt repayments on the firm and reducing the amount of “free cash flow” available to managers. In turn, the existence of debt reduces the likelihood of over-investment. Empirical evidence that supports the role of debt in reducing the company’s over-investment incentive can be found in the work of Lang et al. (1996), Kim and Sorensen (1986), and Titman and Wessels (1988). In addition, the disciplinary role of debt may also arise as an upshot of financial distress. Management concerns about losing their jobs and having their reputations tarnished due to financial distress might constraint them from engaging in self-serving behavior (Aghion and Bolton, 1992; Gilson, 1990).

It is worth noting that the disciplining role of debt discussed above mainly addresses the agency problem between shareholders and management. This is the classical agency problem that arises as a result of the separation of ownership and management when ownership is widely dispersed. However, another type of agency problem exists when the cash flow rights of the firm’s owners are not proportional to their control rights. Specifically, ownership and control can be separated to the benefit of the large shareholders (La Porta et al., 1999). This problem is more prevalent in countries with pyramid structures and cross-holdings among firms. Claessens et al. (2000) find that voting rights regularly exceed cash flow rights in East Asian countries. Faccio et al. (2001) and Harvey et al. (2004) point out that the agency problem between the controlling shareholder and minority shareholders precedes conflicts of interest between shareholders and

professional managers. Hence, the controlling shareholder will find that it is in his interests to issue more debt (Ellul et al., 2006; Faccio et al., 2001; Grullon and Kanatas, 2001) and accumulate more resources in the firm. Faccio et al. (2001) argue that higher leverage grants the controlling shareholder more resources with which to expropriate the firm's assets without diluting his controlling stake or directly assuming more liabilities. Holding capital constant, higher debt also allows the controlling shareholder to increase his voting rights and consolidate his control in the firm (Harris and Raviv, 1988; Stulz, 1990).

In contrast to the rich empirical literature that investigates the role of debt in mitigating the agency problem between shareholders and professional managers, only a handful of empirical studies examine the impact of debt on the agency problem between the controlling shareholder and minority shareholders (e.g. Faccio et al., 2001; Du and Dai, 2005; Boubaker, 2007; Sarkar and Sarkar, 2008). The results of the few studies conducted in this stream tend to point to the absence of a disciplining role of debt and instead to the presence of expropriation through debt. For example, Faccio et al. (2001) provide the first test of debt policy when the controlling shareholder has more controlling rights than ownership rights in a Europe and Asia context. They show that in Europe, the effective capital market restricts the leverage of corporations that appear more vulnerable to expropriation, whereas in Asia, the controlling shareholder is free to increase the firm's leverage and build up company resources to expropriate. In a similar vein, based on a sample of nine East Asian economies, Du and Dai (2005) find that controlling shareholders with relatively small ownership shares tend to increase leverage to acquire more resources without diluting their ownership dominance. Using a sample of French firms, Boubaker (2007) also provides evidence that external financing eases the expropriation of resources from minority stakeholders. However, Sarkar and Sarkar (2008) study the role of debt

in India and find limited evidence of debt being used as a mechanism for expropriation in group-affiliated firms that have more opaque ownership structures.

The stream of literature outlined above focuses mainly on the incentive of block shareholders when companies use more debt; however, none of them provide direct evidence on the relationship between debt and expropriation because they do not directly measure the latter. They instead use various proxies such as the separation of cash flow rights from the control rights of the largest shareholder (the O/C ratio) (Faccio et al., 2001; Du and Dai, 2005; Boubaker, 2007) and the ownership opacity of insiders (Sarkar and Sarkar, 2008). While these proxies might be highly indicative of the incentive to expropriate, they clearly do not measure the actual amount of expropriation. Even with a strong incentive to exploit minority shareholders, the social, legal, and economic environment, etc., will also influence the expropriating behavior of the block shareholder. Furthermore, due to the measurement issue, these proxies used to measure expropriation tend to be “sticky” across time for a particular company. For example, a firm’s O/C ratio and ownership opacity of insiders are likely to remain at the same levels for many years, making it difficult to explore the dynamics between leverage and expropriation over time. Finally, due to the potential problem of endogeneity, changes in other firm characteristics such as firm growth or corporate governance might lead to contemporaneous adjustments in the firm’s ownership structure, management incentives, and capital structure policy, resulting in a spurious correlation between debt and expropriation.

To gain a better understanding of the relationship between debt and expropriation, we focus solely on a sample of state-owned enterprises (SOEs) in China that transfer their controlling rights to either private or state shareholders. A distinctive feature of Chinese companies is that control is highly concentrated and the major shareholder’s proportion of controlling rights often

exceeds its proportion of cash flow rights. Consequently, the controlling shareholder often exploits company resources. Given that one of the most commonly used means of expropriation is non-operational loans (Ma et al., 2005; Huang, 2006; Jiang et al., 2009), we measure the amount of expropriation by aggregating the value of corporate loans made to the controlling shareholder.¹ While ownership rights and the incentive to expropriate clearly change after a controlling rights transfer (CRT), other firm characteristics should remain the same. This therefore allows us to examine changes in leverage and the level of expropriation before and after a CRT without any concern over the endogeneity problem arising due to specific firm characteristics. In addition, we are also able to examine the difference between private block shareholders and state block shareholders with respect to how these different types of owners might affect the interaction between debt and expropriation. On the one hand, private controlling shareholders have greater incentives to expropriate company resources than do state controlling shareholders (Qian, 2001). On the other hand, state controlling shareholders have greater access to debt than do private companies (Lardy, 1998; Brandt and Zhu, 2000). The incentive to disenfranchise minority shareholders and the ability to boost company resources through borrowing jointly determine the level of expropriation. How private and state controlling shareholders differ in the expropriation of company resources and the use of debt becomes an empirical question.

Our study also provides fresh insights into the nature of the agency problem after privatization. Although many studies have examined firm performance after privatization, few have focused on the heightened conflict between the controlling shareholder and minority

¹ This measure is likely to underestimate the level of expropriation because it does not include other activities such as cost allocation, etc. This is likely to result in a bias against finding support for expropriation by the block shareholder.

shareholders once the firm is in private hands. It has been argued that privatization mitigates the agency problem between management and stakeholders as managers become subject to the pressures of financial markets (Jensen and Ruback, 1983; Easterbrook and Fischel, 1991) and the monitoring of profit-oriented investors (Vickers and Yarrow, 1991; Lin et al., 1998). Privatization also helps to align corporate objectives with shareholder interests as the firm is no longer burdened with the social and political considerations of an SOE (Shleifer and Vishny, 1994; Boycko et al., 1996). However, Weiss and Nikitin (1998) show that some privatized firms might not experience an improvement in performance. One possible explanation for this finding may be that management engages in self-dealing. Cull et al. (2002) suggest that the poor performance of firms in the Czech Republic after privatization is related to excessive tunneling and expropriation by block shareholders. The outcome of privatization is therefore highly uncertain and depends on how different stakeholders interact with each other. By analyzing the relationship between debt and expropriation, we add to the understanding of how the agency problem evolves after privatization.

Our empirical analyses indicate that increased debt usage has a positive impact on expropriation. Furthermore, private shareholders are more active in expropriating company resources than their state counterparts. Consequently, we observe higher levels of debt in privately held companies. Our paper contributes to the literature in the following ways. First, to the best of our knowledge, our study is the first to provide direct evidence on the relationship between debt and expropriation by explicitly measuring the amount of expropriation by the controlling shareholder. Second, we provide evidence that the increased use of debt after privatization results in higher expropriation among private block shareholders than that among state block shareholders. Finally, we employ a unique sample of SOEs that have experienced

controlling rights transfers to mitigate the endogeneity problem that detracts from the findings of previous studies.

The remainder of the paper is structured as follows. Section 2 describes the institutional background to our research questions before we develop our hypotheses in section 3. Section 4 describes the research design adopted for this study. We report our empirical results in section 5 and present our conclusions in section 6.

2. Institutional Background

The major economic reforms in China took place in the late 1970s. However, the overall impact of privatization remained limited until the establishment of the Shanghai Stock Exchange in 1990. In an attempt to revitalize inefficient SOEs, the Chinese Government partially privatized over a thousand SOEs through share issue privatization. The Government retained control of only the very largest SOEs. Sun and Tong (2003) suggest that almost all of the listed firms at the end of 2000 were former SOEs. Partial privatization freed up about one-third of a company's shares, with the remaining two-thirds being owned by a combination of the state and "legal persons". State shares were held by government agencies such as the Bureau of State Property Administration or other non-privatized SOEs. Legal person shares were often held by representatives of the original SOEs who retained close ties with local governments (Qian, 1995). The remaining shares were sold to mainland Chinese investors (A shares), Hong Kong investors (H shares), and foreign investors (B shares).² Only individual shares could be traded on the exchanges and they accounted for a mere one-third of the total number of shares before 2006, when the Chinese stock market embarked on a large-scale reform to convert all non-tradable

² Sun and Tong (2003) and Guo and Yao (2005) discuss the history and development of Chinese economic reforms, the SOE ownership structure, and institutional arrangements.

shares into tradable shares. The initial stage of privatization allowed for more diversified ownership. However, complete privatization was not achieved until controlling rights were transferred to private entities at a later stage.

Green and House (2004) refer to the privatization process adopted in China as a two-step approach. In the first stage, an SOE sold a minority stake to obtain an exchange listing while maintaining control of the firm. Non-tradable shares were then transferred off-exchange from the state or a legal person to private entities to complete the privatization. There were very few transfers of non-tradable shares prior to 1996. Between 1996 and 2002, the number of transfers continued to increase as the government aggressively encouraged full privatization. To gain control of the SOE, a private shareholder would have to acquire controlling rights in the firm from the initial state shareholder. The combination of partial privatizations through IPOs and full privatizations through transfers of controlling rights resulted in highly concentrated ownership in Chinese listed companies. The average shareholding of controlling owners in Chinese listed companies is about 45% (Wang and Wong, 2003) and approximately 40% of the largest shareholders hold more than 50% of the total number of shares (Chen et al., 2009). A concentrated ownership structure allows a controlling shareholder to dominate the board and management with ease. Chen et al. (2006) find that almost half of the board members in Chinese listed firms once worked for the controlling shareholders and that almost all senior executives in such firms were appointed by the controlling shareholders. A concentrated ownership structure fueled by a weak governance mechanism makes it possible for the block shareholder to gain full control of a listed company and to engage in the active exploitation of company resources and minority shareholder interests.

The lack of minority shareholder protection in China is exacerbated by the agency problem between large and minority shareholders. China is often considered to be an investor-unfriendly country (La Porta et al., 1999; MacNeil, 2002). The low level of investor protection in China is attributed to a number of factors. First, China's Company Law and Securities Law both play a limited role in protecting minority shareholders. As these laws currently stand, minority shareholders can initiate a lawsuit against a listed company only when the company announces false information that results in a loss of shareholder wealth. Other types of large shareholder misconduct including tunneling or expropriation of company resources are not considered to be a valid basis on which shareholders can initiate a lawsuit if no false information is disseminated. Furthermore, due to the cost of litigation, individual investors are generally unable to take legal action in response to suspected infringements (Cheung et al., 2009). The second factor cited for the low standard of investor protection in China is that the China Securities Regulatory Commission (CSRC), the equivalent of the SEC in the U.S., lacks the investigation and prosecution powers required to fulfill its responsibility to supervise and regulate issuance and trading activities (Cheung et al., 2009). Third, institutional investors and other financial intermediaries in China rarely play an active role in monitoring companies (Clark, 2003). One reason for this might be the small number of financial intermediaries that currently participate in the market. Investment banks, brokerages, law firms, accounting firms, and stock exchanges are all subject to government review and approval. There remains a big gap between the number of institutional investors seeking authorization and the number of applications approved by the government. Finally, there is no real market for corporate control and the market for managerial talent is very limited (Clark, 2003).

3. Hypothesis Development

When ownership is highly concentrated, debt fails to serve its disciplinary role and becomes a means for large shareholders to expropriate company resources. There are two important sources of debt for Chinese publicly listed companies: from regular operations such as accounts payable, and from bank loans. A large block shareholder might dictate that the firm pays a premium price for goods and services in exchange for more favorable credit terms. The newly acquired resources would then be tunneled to the block shareholder, leaving the company with outstanding accounts payable. The weak legal environment in China makes it rather difficult for debtors to collect outstanding debt from borrowers. A more direct shareholder exploitation approach is the misappropriation of bank loans. It is worth noting that most of the listed companies in China have easy access to bank loans. Bank loans have been regulated by the central government for many years and banks often provide loans to companies with close ties to either local or central government.³ The majority of listed companies have a close government relationship because listing qualifications are given only to those firms that can secure government approval. Consequently, block shareholders are often able to use their political connections to secure large bank loans on favorable terms.

Prior studies (La Porta et al., 1999; Faccio and Lang, 2002; Claessens et al., 2002; Masulis et al., 2009) show that tunneling or expropriation activities by large shareholders often take place in firms in which there is a significant degree of divergence between cash flow rights and control rights. This is certainly the type of ownership structure that prevails in China, where public companies are often controlled by a single large block shareholder (Wang and Wong, 2003;

³ Lardy (1998) finds that Chinese banks are often under government pressure to provide loans to local businesses to improve local employment or local economic development. Tian and Estrin (2007) suggests that firms in financial distress often obtain new financing to ensure social stability. Hence, the financial distress cost of bank loans is minimal in China. The relaxed lending environment creates more opportunity for block shareholders to increase their borrowing.

Chen et al., 2009). Since their cash flow rights are well under 100%, controlling shareholders have a strong incentive to expropriate company resources. Together with the weak legal environment and minimal investor protection, the Chinese market has become a hotbed for the misappropriation of minority shareholder interests (Clark, 2003; Cheung et al., 2009; Deng et al., 2008; Berkman et al., 2009).

Based on the above discussion, we state our first hypothesis as follows:

H1: There is a positive relationship between leverage and expropriation.

Our second hypothesis deals with the difference between firms under private and state block shareholder control. In theory, divergence between cash flow rights and control rights will motivate large shareholders to expropriate firm resources. However, the strength of this incentive might differ between state block shareholders and private block shareholders. A state owner representing the largest shareholder in an SOE might not have a strong incentive to exploit company wealth because it often shares different goals from those of private block shareholders. State shareholders are likely to put more weight on the maximization of social welfare than on maximizing the wealth of block shareholders. However, given China's rapid economic growth and more stable political environment, there is a diminishing need to channel company resources to support social programs. The expropriation of resources is therefore likely to have become less common in SOEs.

At the same time, privatization may intensify conflicts between private block shareholders and other stakeholders. The privatization process in China often produces a single large private shareholder who has a significant degree of control over both management and the company. The goal for these private block shareholders is simply to maximize their personal wealth and the

mismatch between controlling rights and cash flow rights further aggravates the agency problem between the block shareholder and minority shareholders. In addition, managers of privatized firms are more likely to collude with private block shareholders and expropriate wealth from minority shareholders to protect their jobs. The weak legal system and the lack of investor protection exacerbate the situation for minority investors. Hence, large shareholders in private companies are likely to expropriate more of the firm's assets than are large shareholders in state-owned companies. Because debt is an important means of expropriation, we expect private companies to have higher leverage than state-owned companies. Hence, our second hypothesis is stated as follows:

H2: The degree of expropriation is greater for private block shareholders than for state block shareholders. Consequently, privatized companies have higher leverage than state-owned companies.

4. Research Design

Given the complex range of expropriation techniques used, it is difficult to come up with a direct measure of expropriation by a block shareholder within a firm. La Porta et al. (2002) and Claessens et al. (2002) suggest that Tobin's Q is negatively related to the likelihood of expropriation; Berkman et al. (2003) adopt this approach and interpret industry-adjusted Tobin's Q as a measure of expropriation. The approach taken by Berkman et al. (2003) is to examine the association between event-related abnormal returns and ownership variables that proxy for the extent of expropriation. Other studies (Jian and Wong, 2003; Kang and Kim, 2006; Berkman et al., 2009) argue that related party transactions or cross payment guarantees between the listed company and its block shareholder can serve as a proxy for minority shareholder expropriation.

Ma et al. (2005), Huang (2006), and Jiang et al. (2009) propose a more direct measure of expropriation in defining it as the value of corporate loans extended to block shareholders, which is measured as other receivables over total assets. One potential drawback of this measure is that other receivables include both transactions with block shareholders and transactions with others. This study therefore extends their measure and classifies other receivables according to their source. We are able to construct this measure because the China Securities Regulatory Commission (CSRC) issued a reporting guideline in 1993 that requires firms to give a detailed explanation of every annotation in their financial reports.⁴ Hence, for every transaction that is related to a firm's accounts receivable, the company is required to reveal the counterparty to the transaction, the value of the transaction, the event date, etc. We carefully read through the annual reports of the sample firms and identify whether the counterparty to a transaction is the largest block shareholder or an entity controlled by the largest block shareholder. The measure of expropriation (*Expro*) is thus equal to year-end other receivables owed by the block shareholder normalized by year-end total assets.

To overcome the endogeneity problem that arises from debt and ownership, we select firms that experienced controlling rights transfers between 1996 and 2001 instead of examining all publicly traded firms listed on the Chinese stock exchanges. The relationship between ownership, expropriation and debt can be a dynamic one. On the one hand, higher debt can be driven by controlling shareholders' incentive to loot. On the other hand, higher leverage also ensures dominant ownership by controlling shareholders, holding firm size equal. However, other corporate characteristics such as corporate governance and growth potential might affect a firm's ownership structure, leverage ratio, and the magnitude of expropriation by the controlling

⁴ Content and Format of Corporate Disclosures by Publicly Traded Companies: Guideline No. 2, 1993.

shareholder. This endogeneity problem might undermine the results of studies that use a large sample. In addition, because neither the controlling shareholder nor the debt ratio changes frequently, it will be difficult for time series analysis to capture the effect of controlling shareholders on corporate borrowing. Using a sample of firms that have experienced controlling rights transfers allows us to focus on the behavior of the new controlling shareholder and to study how they make capital structure decisions after taking control of the firm. The use of such a sample also reduces the endogeneity problem that arises from debt and ownership. It also allows us to determine the difference in the use of leverage to expropriate company resources between firms under state control and firms under private control.

To examine the relationship between leverage and expropriation and the impact of corporate ownership on expropriation and leverage, we run the following systems of equations in line with existing studies on the relationship between leverage and firm value (e.g., Driffield et al., 2007). We use simultaneous equations to mitigate further the endogeneity problem between debt and expropriation. While higher leverage might cause higher expropriation as argued above, higher expropriation might exert the opposite effect by increasing the cost of capital, which will in turn affect the leverage decision.

$$\begin{aligned} \Delta Expro = & \alpha_0 + \alpha_1 PRI + \alpha_2 \Delta Lev + \alpha_3 PRI \times \Delta Lev + \alpha_4 Exprolag + \alpha_5 Levlag + \alpha_6 Cash \\ & + \alpha_7 Gap + \alpha_8 Size + \alpha_9 Growth + \alpha_{10} OCF + \alpha_{11} Equity + \eta \end{aligned} \quad (1)$$

$$\begin{aligned} \Delta Lev = & \beta_0 + \beta_1 PRI + \beta_2 \Delta Expro + \beta_3 PRI \times \Delta Expro + \beta_4 Exprolag + \beta_5 Levlag + \beta_6 Cash \\ & + \beta_7 Gap + \beta_8 Size + \beta_9 Growth + \beta_{10} OCF + \beta_{11} Equity + \beta_{12} FAsset + \beta_{13} Vol + \varepsilon \end{aligned} \quad (2)$$

The dependent variables of the above two models are $\Delta Expro$ and ΔLev , respectively. $\Delta Expro$ is average expropriation between year 0 and year 5 minus average expropriation between year -2 and year -1. $Expro$ is a measure for expropriation by block shareholders which is defined as above. ΔLev is average Lev between year 0 and year 5 minus the average between year -2 and

year -1 where Lev is defined as year-end total debt over year-end total assets. PRI is a dummy variable that equals 1 if CRT results in full privatization and 0 otherwise. We expect α_2 to be significantly positive as suggested by Hypothesis 1, i.e., that there is a positive relationship between debt and expropriation. Hypothesis 2 proposes that the degree of expropriation is greater among private block shareholders than among state block shareholders. We expect α_1 to be significantly positive as well. Given our prediction of a higher level of expropriation in private companies and the greater use of debt as a means of expropriation, we expect private companies to have higher leverage than non-private companies. We therefore expect β_1 to be significantly positive.

Because Models (1) and (2) use the change in leverage (ΔLev) and expropriation ($\Delta Expro$), $Exprolag$ and $Levlag$ are included. $Exprolag$ is average expropriation over the two years prior to CRT normalized by year-end total assets. $Levlag$ is leverage prior to the transfer which is measured by the two-year average debt ratio defined as year-end total debt over year-end total assets.

In equation (1), $Cash$ and GAP are used to control for the incentive and entrenchment effects of large shareholders. Following the approach of Claessens et al. (2002), $Cash$ is constructed as the cash flow rights accruing to the ultimate owner of the firm and Gap as the gap between cash flow rights and control rights.⁵ The impact of $Cash$ on expropriation is difficult to predict. On the one hand, higher cash flow rights lead to entrenchment and give the dominant shareholder more power to expropriate. On the other hand, higher cash flow rights align the interests of the dominant shareholder more closely with those of the minority shareholders. The

⁵ These measures are computed using data from the year of the controlling rights transfer because the ownership structure stays roughly the same during the period of our analysis. La Porta et al. (1999), Bajaj et al. (1998), and Driffield et al. (2007) also assume that the ownership structure remains stable in their analyses.

coefficient of *Cash* (α_6) could therefore be negative if the alignment of interests dominates the entrenchment problem or could be positive if the opposite prevails (Bozec and Laurin, 2008). Divergence between control and cash flow rights provides the dominant shareholder with a strong incentive to extract private benefits of control (Claessens et al., 2002; Bozec and Laurin, 2008). As a result, we expect a positive coefficient of *Gap* (α_7).

We also include *Size*, *Growth*, *OCF*, and *Equity* as control variables in equation (1). *Size*, *Growth*, *OCF*, and *Equity* are measured by the average logarithm of year-end total assets, annual growth rate in sales, operating cash flows over total assets, and newly raised equity over year-end total assets between year 0 and year 5, respectively. In the Chinese market, the privatization process drew a lot of research attention to large firms and prior studies have found that the size of the firm is negatively correlated with the level of information asymmetry (Ge and Qiu, 2007; Cull and Xu, 2003). We therefore expect a negative relationship between *Size* and expropriation. For firms with higher free cash flows but fewer growth opportunities, managers are more likely to divert corporate funds outright for their own benefit (Harvey et al., 2004). We therefore expect *OCF* to have a positive coefficient and *Growth* to have a negative coefficient. Companies that raise new equity capital give their large shareholders more resources to exploit. We expect the coefficient for *Equity* to be positive.

Equation (2) also controls for *Cash* and *Gap*. The definitions of *Cash* and *Gap* are the same as those in equation (1). We expect *Cash* to be negatively related to debt ratio because when cash flow rights are large, the controlling shareholder is likely to be more concerned with the risk of default and will tend to avoid debt. The relationship between *Gap* and leverage, however, can be ambiguous. On the one hand, higher leverage might give the block shareholder more resources to exploit. On the other hand, higher leverage might also serve a disciplinary role and represent a

higher degree of monitoring by creditors (Faccio et al., 2001). Hence, firms with large *Gap* might use more debt if their dominant shareholders seek to expropriate firm resources. Meanwhile, firms with large *Gap* might choose to take on less debt if their controlling owners seek to avoid the monitoring role of debt.

Consistent with prior studies (Bradley et al., 1984; Titman and Wessels, 1988; Friend and Hasbrouck, 1988; Garvey and Hanka, 1999; Cull and Xu, 2003), we also include *Size*, *Growth*, *OCF*, *Equity*, *FAssets* and *Vol* in equation (2) to control for their possible impacts on leverage. The definitions of *Size*, *Growth*, *OCF*, and *Equity* are the same as those in equation (1). *FAssets* is measured by year-end fixed assets over year-end total assets between year 0 and year 5. *Vol* is the standard deviation of the percentage change in profit before tax over the past three years. The relationship between *Size* and *Lev* is not clear. Larger firms may favor equity financing because the cost of equity financing is lower for larger firms due to their lower degree of information asymmetry (Rajan and Zingales, 1995). However, firm size can also serve as an inverse proxy for unobservable credit risk. This argument suggests that larger firms should be more leveraged (Du and Dai, 2005). *Growth* might be positively related to leverage since the tendency to invest sub-optimally to expropriate wealth from a firm's debtholders is likely to be higher for firms in growing industries (Titman and Wessels, 1988). However, high-growth firms might have sufficient internal funds available for investment and consequently raise less debt. The relationship between *OCF* and debt is also unclear. On the one hand, *OCF* is expected to be negatively related to firm leverage since firms with higher *OCF* should have more internal capital and be less reliant on external debt. On the other hand, prior research also supports a positive correlation between *OCF* and leverage because creditors prefer to give loans to firms with high current cash flows (Rajan and Zingales, 1995). Because firms prefer to raise capital in

the form of debt, other than where they issue new equity (Myers and Majluf, 1984), we expect a negative coefficient for *Equity*. Tangible assets can serve as collateral, which makes it easier to obtain loans. Moreover, the asset substitution problem is less likely to occur when firms have more assets already in place (Myers, 1977). Thus, the higher the value of tangible assets (*FAssets*), the more likely it is that a firm will have a high leverage ratio. Volatility (*Vol*) is a proxy for business risk and the potential for bankruptcy inherent in the firm (Bradley et al., 1984). It is commonly argued that lenders are less willing to supply loans to firms subject to higher levels of business risk (Bathala et al., 1994). We therefore expect the coefficient for *Vol* to be negative. We also include dummy variables for industry in the regression.

5. Descriptive Statistics and Empirical Results

Our sample covers transfers of controlling rights between 1996 and 2001 because there were very few cases of control transfers before 1996. We include both CRTs from state to private ownership and CRTs from one state body to another.⁶ Following Wang et al. (2008) and Berkman et al. (2009), a firm is defined as state-owned if its ultimate owner is a state or local government agency. A firm is considered to be a private company if its ultimate owner is a non-government unit such as an entrepreneur or a foreign company. Information on CRTs and expropriation are manually collected from companies' annual reports. Company financial data are taken from the China Stock Market and Accounting Research (CSMAR) database. The full sample of CRTs includes 418 cases. Following the suggestion made by Aussenegg and Jelic (2006), data from the five years after a transfer are used to measure long-run leverage. As a result, to be included in the final sample, a firm is required to have financial information

⁶ CRTs from private shareholders to state shareholders are very rare in China, as are CRTs between private shareholders.

available for the five years after the CRT. Firms that experienced multiple CRTs during the sample period are rejected because it is difficult to isolate the impact of different transfers. The final sample includes 198 transfers of which 71 represent full privatizations in which controlling rights were transferred to private investors (PRI firms). The remaining 127 transfers were between two state owners in which the company remained under state control (NPRI firms).

Table 1 reports the sample distribution by year and industry. The annual trend in CRTs suggests that the number of CRTs increased throughout our sample period from five in 1996 to 55 in 2001. Another interesting phenomenon is the increasing number of full privatizations. While there were only two full privatizations in 1996, 26 occurred in 2001. Between 1996 and 1999, full privatizations accounted for about 26% of CRTs. However, between 2000 and 2001, over 44% of CRTs resulted in full privatization. A careful examination of Table 1 also reveals that full privatizations tended to take place in more competitive industries. Fewer full privatizations took place in monopoly or regulated industries such as utilities, mining, and petroleum. This is consistent with the state strategy of withdrawing from competitive industries and retaining monopoly control in key industries that are critical to economic growth.

Insert Table 1 Here

Table 2 reports the descriptive statistics for both the exogenous variables and the instrumental variables. Panel A reports the full sample statistics; Panels B and C report the statistics for privatized firms and non-privatized firms. We also report the difference between privatized firms and non-privatized firms in Panel D. We see that mean (median) ΔLev for the full sample is 0.065 (0.075). Privatized firms clearly use more debt than non-privatized firms. Mean (median) ΔLev for the privatized firms is 0.152 (0.141), while that for the non-privatized firms is 0.016 (0.010). The differences in the means and medians are 0.136 and 0.131,

respectively, both of which are significant at the 1% level. Mean (median) $\Delta Expro$ for the privatized firms is 0.069 (0.006), while that for the non-privatized firms is 0.004 (0.000), the difference of 0.065 (0.006) being significant at the 1% level. The above univariate tests seem to suggest that after a CRT, privatized firms are significantly more likely to increase their debt levels to support aggressive expropriation than are their non-privatized counterparts.

Insert Table 2 Here

Panels B, C, and D of Table 2 also show how privatized firms and non-privatized firms might differ in other dimensions. For example, privatized firms have lower cash flow rights (*Cash*) and a larger gap between cash flow rights and control rights (*Gap*). In comparison with non-privatized firms, privatized firms tend to have lower operating cash flows (*OCF*), less equity financing (*Equity*), less tangible assets (*FAssets*), and higher volatility (*Vol*), and to be smaller (*Size*).

We report statistics for $\Delta Expro$ and ΔLev in Panels A and B of Table 3, respectively, to examine whether there is any difference between the two sub-samples in terms of changes in expropriation and leverage from the year of the CRT until 5 years afterwards. We see that $\Delta Expro$ is positive and significant in all of the years for privatized firms and is insignificant for non-privatized firms. The difference in mean (median) six-year-average (from year 0 to year 5) $\Delta Expro$ between privatized firms and non-privatized firms is 0.065 (0.006) and is significant at the 1% level. The above finding suggests that block shareholders become more aggressive in exploiting minority shareholders after privatization. We can also see that means and medians for ΔLev among privatized firms between year 0 and year 5 are all significantly positive, while those for non-privatized firms are much lower and are insignificant in most of the years in our sample period. The differences in mean and median ΔLev between privatized firms and non-privatized

firms are significantly positive in all years. The difference in mean (median) six-year-average ΔLev between privatized firms and non-privatized firms is 0.136 (0.131) and is significant at the 1% level. The above results show that privatized companies taken on more debt after a CRT than their state-owned counterparts.

Insert Table 3 Here

The results for simultaneous equations are reported in Table 4. We use a two-step estimation procedure to estimate the model. The dependent variables are $\Delta Expro$ in Model 1 and ΔLev in Model 2. The results for Model 1 indicate that the coefficient for ΔLev is positive and significant, which indicates that a higher level of debt facilitates a greater amount of expropriation. This finding supports Hypothesis 1. Meanwhile, consistent with Hypothesis 2, the coefficient for PRI is also significantly positive, suggesting that expropriation is greater among block shareholders in privatized companies than it is among block shareholders in non-privatized companies. The coefficient for $PRI \times \Delta Lev$ is insignificant, suggesting that there is no difference between privatized companies and non-privatized companies in their use of debt to expropriate company resources.

For the controlled variables, we see that the coefficient for $Exprolag$ is negative and significant. This suggests that if the level of expropriation is high in the previous period, the level of expropriation will be low in the current period because the company has less resources available for expropriation. The coefficient for $Levlag$ is significantly positive. This shows that both current and prior leverage are important sources of expropriation for the block shareholder. The coefficient for $Growth$ is negatively significant, suggesting that large shareholders are less likely to expropriate assets from firms with high growth potential. This result is consistent with previous findings (Harvey et al., 2004). The coefficients for both OCF and $Equity$ are

insignificant, suggesting that operating cash flows and new equity issues are not major sources of expropriation.⁷

The results for Model 2 show that the coefficient for *PRI* is significantly positive, which is consistent with Hypothesis 2. However, the coefficient for $\Delta Expro$ is insignificant, suggesting that an increase in expropriation does not automatically cause the firm to increase its borrowing. $PRI \times \Delta Expro$ is also insignificant. For the control variables, leverage in the prior period is negatively related to leverage in the current period (i.e., *Levlag* is negative). Consistent with the pecking order theory, *OCF* and *Equity* are negatively related with leverage. Consistent with the results of Titman and Wessels (1988), high-growth firms use more debt. The coefficient for *Vol* is significantly positive, a result which contrasts with the view that lenders are less willing to lend to firms subject to a higher level of business risk (Bathala et al., 1994). This can be explained by the fact that banks controlled by the government often lend to firms with good political connections rather than to firms with low default risk. Finally, consistent with our expectation, the higher the value of a firm's tangible assets (*FAssets*), the more likely it is that the firm will have a high leverage ratio.

Insert Table 4 Here

We have defined leverage as all liabilities in the models described above. However, it is much easier to tunnel bank debt than it is to tunnel other types of liabilities. Lardy (1998) finds that Chinese banks are often under government pressure to provide loans to local businesses to improve local employment or give a boost to local economic development. Tian and Estrin (2007) suggest that firms in financial distress often obtain new financing to ensure social stability.

⁷ Because seasonal equity issuance is highly regulated by the government and requires consistently superior company performance, only a few listed companies are able to raise seasonal equity.

Hence, the financial distress cost of bank loans is minimal in China. The relaxed lending environment creates more opportunities for block shareholders to borrow more. More than half of the debt in our sample is made up of bank loans and more than 70% of the increase in leverage following a CRT can be attributed to the increase in bank lending. To ensure the robustness of our analysis, we replace ΔLev with $\Delta BLev$ and rerun the above models. $BLev$ is defined as the amount of bank lending scaled by year-end total assets. The regression results shown in Table 5 are consistent with the results in Table 4 in that the coefficients for PRI and $\Delta BLev$ in Model 1 are both positive and significant, while the coefficient for $PRI \times \Delta BLev$ is insignificant. The coefficient for PRI is also positive in Model 2. All the results for the rerun models are materially consistent with those reported in Table 4.

Insert Table 5 Here

6. Conclusion

When ownership of a company is highly diversified, debt might alleviate the agency problem between managers and shareholders by imposing on the firm an obligation to make periodic fixed payments. However, when ownership is heavily concentrated, debt can serve as a mechanism allowing block shareholders to exploit minority shareholders, especially for firms organized on the basis of a pyramid structure. We focus on a sample of firms that have experienced controlling rights transfers in China to assess whether debt exacerbates the agency conflict between block shareholders and minority shareholders. Our analysis indicates a positive and significant relationship between expropriation and debt usage. We also show how privately owned and state owned firms differ in terms of leverage and the magnitude of expropriation. Fully privatized firms are more highly leveraged and are more aggressive in disenfranchising minority shareholders than are government-controlled companies. Our results provide direct

evidence that links debt with expropriation. We would caution researchers examining the outcomes of privatization to be mindful of the problem whereby leverage can lead to greater expropriation by dominant shareholders.

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Table 1: Sample distribution

PRI firms are firms whose controlling rights are transferred from state shareholder to private shareholder. NPRI firms are firms whose controlling rights are transferred from one state shareholder to the other state shareholder.

<i>Panel A: Distribution by year</i>							
	1996	1997	1998	1999	2000	2001	Total
PRI firms	2	3	11	9	20	26	71
NPRI firms	3	19	21	27	28	29	127
Total	5	22	32	36	48	55	198

<i>Panel B: Distribution by industry</i>			
	PRI firms	NPRI firms	Total
Agriculture	3	0	3
Mining	0	3	3
Food	3	2	5
Textile	1	4	5
Paper/printing	0	2	2
Petroleum	3	19	22
Electronics	1	3	4
Metal/non-metal	7	6	13
Equipment	11	18	29
Pharmaceutical	3	6	9
Utilities	0	4	4
Construction	2	2	4
Transport	1	5	6
Information technology	6	11	17
Retailing	10	17	27
Property	3	5	8
Services	1	4	5
Media	3	1	4
Multi-industry	13	15	28
Total	71	127	198

Table 2: Descriptive statistics

ΔLev is the average Lev between year 0 and year 5 minus the average between year -2 and -1. Lev is year-end total debt over year-end total assets. $\Delta Expro$ is the average $Expro$ between year 0 and year 5 minus the average between year -2 and -1. $Expro$ is measured by year-end other receivables owed by the block shareholders normalized by year-end total assets. $Cash$ is the measure constructed as that in Claessens et al. (2002) to capture the cash flow rights to the ultimate owner of the firm. Gap is the measure constructed as that in Claessens et al. (2002) to proxy the gap between cash flow rights and control rights. $Exprolag$ is the average $Expro$ between year -2 and -1. $Levlag$ is the average Lev between year -2 and -1. $Size$, $Growth$, OCF , $Equity$, $FAssets$ and Vol are all measured as the average value between year 0 and year 5. Specifically, $Size$ is defined as logarithm of year-end total assets; $Growth$ is the annual growth rate in sales; OCF is operating cash flow over year-end total assets; $Equity$ is the amount of newly raised equity over year-end total assets; $FAssets$ is year-end fixed assets over year-end total assets; Vol is the standard deviation of the percentage change in profit before tax over the past three years. PRI firms are firms whose controlling rights are transferred from state shareholder to private shareholder. NPRI firms are firms whose controlling rights are transferred from one state shareholder to the other state shareholder. The test for mean difference is student's t-test, and the test for median difference is Wilcoxon test.

	Mean	Median	Standard Deviation	Minimum	Maximum
<i>Panel A: Full sample (n=198)</i>					
ΔLev	0.065	0.075	0.161	-0.465	0.431
$\Delta Expro$	0.027	0.002	0.098	-0.236	0.479
$Cash$	29.517	26.525	17.425	2.793	73.370
GAP	6.761	2.756	8.138	0.000	28.830
$Exprolag$	0.021	0.000	0.046	0.000	0.236
$Levlag$	0.450	0.458	0.165	0.070	0.974
$Size$	20.894	20.771	0.878	18.886	23.401
$Growth$	0.283	0.225	0.348	-0.736	1.990
OCF	0.041	0.040	0.057	-0.093	0.240
$Equity$	0.016	0.000	0.023	0.000	0.099
$FAssets$	0.318	0.288	0.181	0.013	0.831
Vol	1.850	1.235	2.121	0.159	12.203
<i>Panel B: PRI firms (n=71)</i>					
ΔLev	0.152	0.141	0.125	-0.201	0.431
$\Delta Expro$	0.069	0.006	0.130	-0.125	0.479
$Cash$	19.018	17.267	12.193	2.793	61.320
GAP	9.706	8.520	7.895	0.000	25.570
$Exprolag$	0.029	0.001	0.048	0.000	0.236
$Levlag$	0.452	0.455	0.150	0.080	0.816
$Size$	20.569	20.557	0.653	19.040	22.686
$Growth$	0.282	0.195	0.408	-0.736	1.990
OCF	0.012	0.006	0.046	-0.079	0.147

<i>Equity</i>	0.009	0.000	0.017	0.000	0.057
<i>FAssets</i>	0.249	0.244	0.124	0.013	0.556
<i>Vol</i>	2.556	1.722	2.437	0.190	10.572
<i>Panel C: NPRI firms (n=127)</i>					
<i>ΔLev</i>	0.016	0.010	0.159	-0.465	0.397
<i>ΔExpro</i>	0.004	0.000	0.064	-0.236	0.422
<i>Cash</i>	35.386	33.170	17.184	3.223	73.370
<i>GAP</i>	5.115	0.000	7.830	0.000	28.830
<i>Exprolag</i>	0.017	0.000	0.044	0.000	0.236
<i>Levlag</i>	0.448	0.468	0.173	0.070	0.974
<i>Size</i>	21.076	21.017	0.935	18.886	23.401
<i>Growth</i>	0.283	0.247	0.311	-0.340	1.636
<i>OCF</i>	0.058	0.050	0.056	-0.093	0.240
<i>Equity</i>	0.020	0.015	0.025	0.000	0.099
<i>FAssets</i>	0.357	0.335	0.196	0.028	0.831
<i>Vol</i>	1.455	0.874	1.815	0.159	12.203

Panel D: PRI firms- NPRI firms

	Mean Difference	t Value	Median difference	Z value
<i>ΔLev</i>	0.136	6.65***	0.131	5.90***
<i>ΔExpro</i>	0.065	3.96***	0.006	3.00***
<i>Cash</i>	-16.368	-7.79***	-15.903	-6.62***
<i>GAP</i>	4.591	3.95***	8.520	4.65***
<i>Exprolag</i>	0.012	1.64*	0.001	2.56***
<i>Levlag</i>	0.004	0.19	-0.013	-0.13
<i>Size</i>	-0.507	-4.47***	-0.460	-3.90***
<i>Growth</i>	-0.001	-0.01	-0.052	-0.53
<i>OCF</i>	-0.046	-6.14***	-0.044	-5.59***
<i>Equity</i>	-0.011	-3.76***	-0.015	-3.55***
<i>FAssets</i>	-0.108	-4.73***	-0.092	-3.65***
<i>Vol</i>	1.101	3.33***	0.848	4.76***

***: significant at the level of 1%; **: significant at the level of 5%; *: significant at the level of 10%

Table 3: Expropriation change and leverage change after CRTs

$\Delta Expro$ is the average $Expro$ between year 0 and year 5 minus the average between year -2 and -1. $Expro$ is measured by year-end other receivables owed by the block shareholders normalized by year-end total assets. ΔLev is the average Lev between year 0 and year 5 minus the average between year -2 and -1. Lev is year-end total debt over year-end total assets. PRI firms are firms whose controlling rights are transferred from state shareholder to private shareholder. NPRI firms are firms whose controlling rights are transferred from one state shareholder to the other state shareholder. Mean/Median Difference is the mean/median difference between PRI firms and NPRI firms. The test for mean is student's t-test. The test for median is Wilcoxon test.

	Mean			Median		
	PRI firms	NPRI firms	Difference	PRI firms	NPRI firms	Difference
<i>Panel A: Expropriation change ($\Delta Expro$)</i>						
0	0.025 (2.37**)	0.000 (-0.08)	0.025 (2.22**)	0.000 (210**)	0.000 (123.5)	0.000 (1.30)
1	0.022 (1.88*)	0.000 (-0.01)	0.022 (1.74*)	0.000 (152)	0.000 (143.5)	0.000 (0.50)
2	0.029 (2.67***)	0.003 (0.53)	0.026 (2.09**)	0.000 (240.5**)	0.000 (292.5)	0.000 (0.68)
3	0.044 (3.30***)	0.000 (0.01)	0.044 (2.97***)	0.000 (315***)	0.000 (11)	0.000 (1.65*)
4	0.105 (4.58***)	0.003 (0.48)	0.102 (4.34***)	0.006 (505.5***)	0.000 (240)	0.006 (2.87***)
5	0.188 (3.98***)	0.018 (1.27)	0.170 (3.46***)	0.000 (493.5***)	0.000 (43.5)	0.000 (2.90***)
0-5 Avg.	0.069 (4.47***)	0.004 (0.68)	0.065 (3.96***)	0.006 (613***)	0.000 (846.5***)	0.006 (3.00***)
<i>Panel B: Leverage change (ΔLev)</i>						
0	0.042 (2.96***)	-0.008 (-0.55)	0.050 (2.61***)	0.034 (485**)	-0.006 (-157)	0.040 (2.58***)
1	0.076 (4.91***)	-0.002 (-0.15)	0.078 (3.63***)	0.060 (741***)	0.005 (-1)	0.055 (3.47***)
2	0.120 (7.00***)	0.007 (0.45)	0.113 (4.63***)	0.130 (959***)	0.009 (269)	0.121 (4.42***)
3	0.181 (8.60***)	0.030 (1.79*)	0.151 (5.62***)	0.160 (1133***)	0.011 (714*)	0.149 (5.17***)
4	0.243 (10.63***)	0.033 (1.83*)	0.210 (7.18***)	0.225 (1158.5***)	0.023 (811**)	0.202 (6.29***)
5	0.255 (9.39***)	0.037 (1.83*)	0.218 (6.46***)	0.246 (1085.5***)	0.021 (803**)	0.225 (5.85***)
0-5 Avg.	0.152 (10.26***)	0.016 (1.14)	0.136 (6.65***)	0.141 (1176***)	0.010 (528)	0.131 (5.90***)

***: significant at the level of 1%; **: significant at the level of 5%; *: significant at the level of 10%

Table 4: Results for simultaneous regressions

The dependent variables of models 1 and 2 are $\Delta Expro$ and ΔLev , respectively. $\Delta Expro$ is the average $Expro$ between year 0 and year 5 minus the average between year -2 and -1. $Expro$ is measured by year-end other receivables owed by the block shareholders normalized by year-end total assets. ΔLev is the average Lev between year 0 and year 5 minus the average between year -2 and -1. Lev is year-end total debt over year-end total assets. PRI equals 1 if CRT results in full privatization and 0 otherwise. $Cash$ is the measure constructed as that in Claessens et al. (2002) to capture the cash flow rights to the ultimate owner of the firm. Gap is the measure constructed as that in Claessens et al. (2002) to proxy the gap between cash flow rights and control rights. $Exprolag$ is the average $Expro$ between year -2 and -1. $Levlag$ is the average Lev between year -2 and -1. $Size$, $Growth$, OCF , $Equity$, $FAssets$ and Vol are all measured as the average value between year 0 and year 5. Specifically, $Size$ is defined as logarithm of year-end total assets; $Growth$ is the annual growth rate in sales; OCF is operating cash flow over year-end total assets; $Equity$ is the amount of newly raised equity year-end over total assets; $FAssets$ is year-end fixed assets over year-end total assets; Vol is the standard deviation of the percentage change in profit before tax over the past three years.

	Model 1: $\Delta Expro$		Model 2: ΔLev	
	Estimate	t value	Estimate	t value
Intercept	0.047	0.26	-0.006	-0.02
PRI	0.040	1.73*	0.093	2.31**
$\Delta Expro$			-0.249	-0.48
$PRI \times \Delta Expro$			0.015	0.13
ΔLev	0.342	2.17**		
$PRI \times \Delta Lev$	0.035	0.38		
$Cash$	0.000	0.77	-0.001	-1.50
GAP	-0.001	-0.95	-0.002	-1.20
$Exprolag$	-0.406	-2.33**	-0.416	-1.06
$Levlag$	0.217	2.83***	-0.384	-5.56***
$Size$	-0.007	-0.81	0.012	1.06
$Growth$	-0.052	-2.23**	0.072	2.44***
OCF	0.076	0.37	-1.025	-4.18***
$Equity$	0.432	1.15	-1.325	-3.20***
$FAssets$			0.128	1.92*
Vol			0.009	1.99**
Industry effect	not controlled		controlled	
Adj. R^2	0.243		0.511	
F value	4.96***		9.96***	
N	198		198	

***: significant at the level of 1%; **: significant at the level of 5%; *: significant at the level of 10%

Table 5: Robustness Tests

The dependent variables of models 1 and 2 are $\Delta Expro$ and $\Delta BLEv$, respectively. $\Delta Expro$ is the average $Expro$ between year 0 and year 5 minus the average between year -2 and -1. $Expro$ is measured by year-end other receivables owed by the block shareholders normalized by year-end total assets. $\Delta BLEv$ is the average $BLev$ between year 0 and year 5 minus the average between year -2 and -1. $BLev$ is bank loan over year-end total assets. PRI equals 1 if CRT results in full privatization and 0 otherwise. $Cash$ is the measure constructed as that in Claessens et al. (2002) to capture the cash flow rights to the ultimate owner of the firm. Gap is the measure constructed as that in Claessens et al. (2002) to proxy the gap between cash flow rights and control rights. $Exprolag$ is the average $Expro$ between year -2 and -1. $Levlag$ is the average Lev between year -2 and -1. $Size$, $Growth$, OCF , $Equity$, $FAssets$ and Vol are all measured as the average value between year 0 and year 5. Specifically, $Size$ is defined as logarithm of year-end total assets; $Growth$ is the annual growth rate in sales; OCF is operating cash flow over year-end total assets; $Equity$ is the amount of newly raised equity over year-end total assets; $FAssets$ is year-end fixed assets over year-end total assets; Vol is the standard deviation of the percentage change in profit before tax over the past three years.

	Model 1: $\Delta Expro$		Model 2: $\Delta BLEv$	
	Estimate	t value	Estimate	t value
Intercept	0.082	0.45	-0.092	-0.40
PRI	0.043	1.73*	0.070	1.71*
$\Delta Expro$			0.310	0.59
$PRI \times \Delta Expro$			-0.050	-0.44
$\Delta BLEv$	0.367	1.95**		
$PRI \times \Delta BLEv$	-0.020	-0.23		
$Cash$	0.000	0.52	-0.001	-0.98
GAP	-0.001	-0.81	-0.001	-0.72
$Exprolag$	-0.497	-3.05***	0.026	0.07
$Levlag$	0.176	2.60***	-0.315	-4.54***
$Size$	-0.007	-0.80	0.012	1.06
$Growth$	-0.038	-1.83*	0.036	1.22
OCF	0.028	0.13	-0.894	-3.63***
$Equity$	0.156	0.47	-0.568	-1.36
$FAssets$			0.189	2.83***
Vol			0.002	0.32
Industry effect	not controlled		controlled	
Adj. R^2	0.233		0.374	
F value	4.73***		6.12***	
N	198		198	

***: significant at the level of 1%; **: significant at the level of 5%; *: significant at the level of 10%

Founded in 1892, the University of Rhode Island is one of eight land, urban, and sea grant universities in the United States. The 1,200-acre rural campus is less than ten miles from Narragansett Bay and highlights its traditions of natural resource, marine and urban related research. There are over 14,000 undergraduate and graduate students enrolled in seven degree-granting colleges representing 48 states and the District of Columbia. More than 500 international students represent 59 different countries. Eighteen percent of the freshman class graduated in the top ten percent of their high school classes. The teaching and research faculty numbers over 600 and the University offers 101 undergraduate programs and 86 advanced degree programs. URI students have received Rhodes, Fulbright, Truman, Goldwater, and Udall scholarships. There are over 80,000 active alumnae.



The University of Rhode Island started to offer undergraduate business administration courses in 1923. In 1962, the MBA program was introduced and the PhD program began in the mid 1980s. The College of Business Administration is accredited by The AACSB International - The Association to Advance Collegiate Schools of Business in 1969. The College of Business enrolls over 1400 undergraduate students and more than 300 graduate students.

Mission

Our responsibility is to provide strong academic programs that instill excellence, confidence and strong leadership skills in our graduates. Our aim is to (1) promote critical and independent thinking, (2) foster personal responsibility and (3) develop students whose performance and commitment mark them as leaders contributing to the business community and society. The College will serve as a center for business scholarship, creative research and outreach activities to the citizens and institutions of the State of Rhode Island as well as the regional, national and international communities.

The creation of this working paper series has been funded by an endowment established by William A. Orme, URI College of Business Administration, Class of 1949 and former head of the General Electric Foundation. This working paper series is intended to permit faculty members to obtain feedback on research activities before the research is submitted to academic and professional journals and professional associations for presentations.

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