OWNERSHIP CONTROL AND RIGHTS OFFERINGS IN CHINESE LISTED FIRMS

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Abstract

Most Chinese listed companies were transformed from state-owned enterprises (SOEs). Institutional transformation results in an ownership structure that is characterized by highly concentrated ownership and state-owned shares, which may exert an influence on corporate finance. In China, listed companies rely heavily on equity for capital needs, but the government blockholders often subscribe to no shares or to partial shares; they tunnel seasoned offering equity (SEO) capital to their nonprofit units through related party transactions. Therefore, we examine large shareholders' rights offering behavior and firms' subsequent operating performance. The results reveal that with a higher ratio of state-owned shares, large shareholders tend to give up all preemptive rights for new shares of stock. Evidence confirms a predicted positive relation between large shareholders' full rights subscription behavior and firms' subsequent operating performance.

Keywords: State ownership; Seasoned offering equity; Rights offerings subscription

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1. Introduction

The literature indicates that ownership structure is, unlike in the US and UK, highly concentrated in most countries of the world. Such a concentrated ownership structure induces a different agency problem. Rather than the agency problem between insider managers and outside shareholders in countries where corporate ownership structure is diverse, the agency problem in ownership concentrated firms is caused by the conflict of interests between minority shareholders and large shareholders (Shleifer and Visnhy (1997), La Porta et al. (1998, 2000, 2002), and Claessens et al. (2000, 2002)).

With higher stake of shareholdings, large shareholders often actively pursue the control over corporate capital resources by controlling the company boards and appointing relatives or close friends as executives. Consequently, these controlling shareholders are likely to expropriate the minority shareholders because the tiny shareholdings of outside shareholders provide them with limited power to effectively monitor the controlling shareholders (Zingales, 1994; 1995; Nenova, 2000; Dyck and Zingales, 2004). The appropriation of private benefits is particularly possible in cases wherein there is a large divergence between control and cash flow rights of the controlling shareholders, who often expropriate company resources through related party transactions (La Porta et al., 2000; and Claessens et al., 2000).

This study proposes a new evidence of the expropriation of minority shareholders by controlling shareholders in a sample of Chinese listed firms. We contend that the low subscription of large shareholders in rights offerings is an example of expropriation because the large shareholders (often the state) still enjoy the benefits of control with or without participation in rights offerings.

Unlike in other socialism countries, China has developed its own pravatization approach by moving from a centrally planned economy to a market planned economy, and has gradually privatized state-owned enterprises (SOEs). In order to prevent the mass privatization of SOEs and maintain their dominant role, about two thirds of a listed firm's shares are ultimately controlled by the State Council and are not tradable. The high proportion of shares owned by the state, which is usually among the top three shareholders in most privatized firms, characterizes the Chinese ownership structure. Majority control serves as an

incentive for state shareholders and also gives them control over important decisions.

Due to the fact that listed companies were transformed from former SOEs in China, the State Councile initially classified the SOEs into two parts, with the most profitable assets being carved out to become the initial investment in the newly listed company and non-performing/less profitable assets being retained. However, the parent company still needs to provide working capital to nonprofitable units; that is, these units still share personnel functions, capital, and assets with their parent companies. In addition, most listed firms demand substantial capital investments and face the risk of cash shortage in the growing stage. In this case, many listed firms gain capital by issuing new shares. However, to assure stable stock market development, the government has set stringent quotas and requires tough screening of all the financial transactions on the stock market; therefore, a listed firm has to meet several requirements for rights offering imposed by the China Securities Regulation Committee (CSRC). For example, during the period 1996–1998, a key criterion was that there should be a minimum of a 10% return on equity (ROE) for each of the last three years. Since they strongly desire capital, listed firms have an incentive to manage the ROE in order to obtain capital on the basis of seasoned equity offerings (SEO). Prior studies reveal that firms whose earnings are just above certain thresholds have unusually high discretionary items such as accounts receivables, abnormal accruals, and non-core earnings (Haw et al., 1998; Chen et al., 2000). Chen and Yuan (2004) show that Chinese firms often use excessive amount of non-operating income for meeting an ROE threshold.

After finally attaining the threshold for the issuing of rights, significant phenomena emerge: instead of subscribing to no shares or subscribing to partial shares, government blockholders tunnel SEO capital through related party transactions to their non-profitable units. Why do they give up their full subscription? On the one hand, during this transition period, most firms have a highly concentrated ownership; thus, large shareholders are not afraid that their ownership may become diluted, even if they forfeit all their preemptive rights. Although government blockholders do not subscribe to full new shares of rights offering (RO), they still are the controlling shareholders in the context of highly concentrated ownership existing in China. On the other hand, from the viewpoint of private benefit, state shareholders obtain their shares at a lower cost of net assets per share, which is even lower than the subscription price. If they do not subscribe to full shares, their book value per share will increase, thus increasing their wealth. Therefore, in this paper, we first intend to examine large shareholders' expropriation of minority shareholders through their (the large shareholders') giving up of their full subscription.

As stated by the Chinese government, the original purpose of the stock market was to help SOEs raise funds and improve their operating performance. Most listed companies originated from restructured SOEs and are still controlled by the state and/or other non-listed SOEs. As the controlling shareholders of the listed firms, it is probable that they will get what they need from the listed firms. Liu and Lu (2003) provide many anecdotes suggesting that controlling shareholders treat listed firms as cash machines from which they can withdraw money for as long as they wish. They mention the example of the largest shareholder of Meierya, a then-profitable company, who colluded with other insiders to embezzle US$44.6 million, 41% of the firm's total equity in 2001. In addition, Jian and Wong (2003, 2006) show that group-controlled firms in China are highly likely to use related party transactions to manipulate earnings and tunnel firm value. Therefore, capital from the RO can be inefficiently allocated for firms' investment activities, but is instead tunneled into the pockets of holders of state-owned shares, often resulting in minority shareholders being expropriated. As a result, next, we investigate the subsequent operating performance of firms not only in terms of their earnings management before RO but also with regard to large shareholders' subscription behavior.

This paper examines large shareholders' subscription behavior and firms' subsequent operating performance in China. The purpose of this study is not limited to adding another piece of evidence to the literature on SEOs; rather, we would like to investigate the manner in which the rights issue is affected by some institutional factors in China's emerging market during its transition from a centrally planned economy to a market economy. We find that in the presence of a high proportion of state-owned shares, large shareholders tend to forfeit all their preemptive rights to new shares. Moreover, the evidence confirms the predicted positive relation between large shareholders' attitude and firms' subsequent operating performance. That is, firms with partial subscription by large shareholders subsequently underperformed compared to those with full subscription by large shareholders. The results also contribute to a growing body of research evidence corroborating the claim that concentrated ownership causes the expropriation of minority shareholders by the controlling owners (La Porta et al., 2000; Claessens et al., 2000).

The remainder of this paper is organized as follows. Section 2 describes the characteristics of the Chinese equity offering market, for example, ownership characteristics and regulations for equity offering. Section 3 develops the hypotheses. Section 4 presents the research methodology and discusses the empirical results. Section 5 presents the conclusions of

the study.

2. Characteristics of the Chinese Equity Offering Market

2.1. Ownership Characteristics of Chinese Listed Firms

The establishment of the Shanghai Stock Exchange in December 1990 was a major landmark in the development of stock markets in China, followed by the establishment of the Shenzhen Stock Exchange in 1991. Since moving away from the former centrally planned economy to a market economy, most listed companies were transformed from state-owned enterprises. In the process of privatization, profitable SOEs are listed first; however, the state still needs to supply working capital to non-profitable SOEs. Moreover, in order to prevent the mass privatization of SOEs and maintain their dominant role, ownership structure is divided into state-owned shares, institutional shares, employee shares, A shares, B shares, H shares, and other shares. The majority of shares (65%) is still controlled by the state and institutional shareholders, and the shares are non-tradable. The resulting institutional transformation is characterized by the emergence of highly concentrated ownership and state-owned shares, which may exert an influence on corporate finance. The final third of a firm's equity consists of individual person shares (A shares, B shares, and H shares) that can be traded by private investors and institutions.

Such a highly concentrated ownership determines the nature of the agency problem in Chinese corporations; furthermore, it has become one of the key corporate governance problems in China (Xu and Wang, 1999). When ownership is diffused, as is typical in developed markets like those of the US and UK, the agency problem arises from the conflicts of interest between managers and outside shareholders (Jensen and Meckling, 1976). On the other hand, when ownership is concentrated in the hands of a few controlling owners, as is the case in most countries around the world (La Porta *et al.*, 1999; Claessens *et al.*, 2000; Faccio and Lang, 2002), the nature of the agency problem turns into conflicts between the controlling and minority shareholders. If insiders are the controlling shareholders, and if outsiders hold much smaller shares on average, it is likely that controlling shareholders will expropriate minority shareholders (La Porta et al., 2000 and Claessens et al., 2000).

2.2. Regulation for Rights Offerings

Although there are two flotation methods in China's seasoned equity offerings including rights offerings and public offerings, in order to investigate large shareholders' subscription behavior, we focus on the ROs. In addition, only the RO method was allowed before 1999. The CSRC has set stringent qualification requirements for ROs. Although changed several times, the criteria have always been closely related to the ROE. The CSRC has set and changed the standard for listed firms to issue rights a number of times (Table 1). In 1993, for instance, firms were only required to show two successive years of profits before issuing rights. In September 1994, the CSRC, for the first time, specified that a firm must have had an average ROE of more than 10% over the prior three years before it could issue rights. In January 1996, the CSRC toughened the requirement, stating that a firm must have more than a 10% ROE for each of the previous three years. In March 1999, the CSRC lowered the standard, stating that firms should have had an average ROE of above 10% over the past three years, with the annual ROE not having been lower than 6% in any one of these years. In March 2001, the CSRC further lowered its standards, stating that firms must have had an average ROE of above 6% over the past three years. Given that Chinese listed firms strongly desire capital and that issuing rights is the most popular way to raise funds, managers of such firms have a strong incentive to manipulate earnings to meet the ROE thresholds.

[Insert Table 1 about here]

3. Development of the Hypotheses

During the period of transition, most Chinese listed firms demand substantial capital investments to fuel the development of the listed firms and strongly desire capital to support their parent company. In this case, an RO is a vital source of funds for such firms after their initial public offering. However, there exists a unique phenomenon in China wherein large shareholders vote in favor of decisions to issue rights at shareholders meetings; however, they subsequently give up their subscription rights. Although they subscribe to no shares or partial shares, they can still benefit from the ROs[5].

However, the question remains as to why other minority shareholders choose to subscribe to new shares when they know that they might be expropriated by large shareholders. These minority

[5] We use a simple numerical example. If the total number of shares is 1,000,000, which comprises 700,000 state-owned shares and 300,000 other tradable shares of a $1 par value, and the net asset is $3,000,000, the book value per share would be $3. If the rate of rights issuing is 25%, the issuing price is $10, state shareholders give up subscription rights, and other shareholders subscribe to 75,000 shares. The book value per share thus becomes $3.49 (3,000,000 + 75,000*10)/(1,000,000 + 75,0000), and the benefit of large shareholders increases to $ 343,000 (($ 3.49-$ 3)* 7000,000).

investors buy shares from the stock exchange at the market price, which is often two to ten times higher than the net asset per share (Xue, 2001). Since the investment amount of minority investors is dramatically higher than the rights issuing price and these tradable shares are mostly held by individual investors, they would seek short-term capital gains by selling stocks rather than awaiting the return of a long-term investment. In addition, the Chinese financial markets remain poorly developed and fail to meet the demand of public investors for alternative investment choices. In order to guarantee a full subscription, the issuing price is far below the price that the market would be willing to pay. In general, the price of ROs is mostly below the market price, although it is higher than the book value. Hence, public investors subscribe to new shares for the purpose of speculation, but holders of non-tradable shares often do not.

Moreover, because, institutionally, Chinese listed firms have grown out of SOEs, their ownership is highly concentrated in the hands of the government. In addition, the subscription ratio was capped by the CSRC to 30% in 1996. On average, state-owned shares and institutional shares account for over 65% of the total number of shares in listed companies. The largest shareholder (usually the government) controls around 44% of the listed companies' shares, whereas the second largest shareholder typically owns less than 10%. As the controlling shareholder, the largest shareholder does not lose its position of control even after forfeiting all its subscriptions. Moreover, because state-owned shares are non-tradable, unlike individual investors, their holders cannot obtain capital gains by selling off the stock. Therefore, the large shareholder tends to forfeit full subscription rights in firms with a higher proportion of state-owned shares.

$H_{1\text{-}1}$: The large shareholder tends to give up the full subscription right in firms with a higher number of state-owned shares.

However, in the context of corporate organization, there exists an information asymmetry between insiders and outside investors, which is especially serious in Chinese listed firms as a result of unsound information disclosure systems. Since the holders of state-owned shares hold most shares and have more seats on the board of directors, their privileges include access to inside information in addition to voting power on important issues such as the selection of management personnel and decisions regarding financial policy. If large shareholders could know that a corporation's future performance was going to be good, they would not give up their subscription rights. Instead, they would fully subscribe to new shares with the expectation of obtaining future investment revenue in the form of, for example, cash dividends. Further, Yuan (2004) reveals that the subscription decision of large shareholders involves considering the future growth opportunity of companies. Hence, the large shareholder tends to fully subscribe to new shares of RO in firms posting better performances.

$H_{1\text{-}2}$: The large shareholder tends to fully subscribe to new shares of RO in firms posting better performances.

While having both control rights and ownership vested in one individual minimizes the agency problem that arises from the separation of ownership and control (Jensen and Meckling, 1976), concentrated ownership can easily be employed to expropriate other investors in a firm by facilitating tunneling resources out of the firm to maximize the welfare of large shareholders (Johnson et al., 2000). Zingales (1994, 1995), Nenova (2000), and Dyck and Zingales (2004) note that the accumulation of private benefits by controlling shareholders is due to the fact that they are less likely to be challenged by other shareholders; consequently, controlling shareholders tend to expropriate minority shareholders. La Porta et al. (1999) state that the theory of corporate finance for most countries should focus on the incentives and opportunities of controlling shareholders in the case of benefiting and expropriating minority shareholders.

As listed companies originated as SOEs, many firms belong to the government, which maintain substantial business ties with other state-controlled firms or legal persons. The parent company still needs to provide working capital to these non-profitable units. However, because holders of non-tradable, state-owned shares cannot get this necessary money by selling their shares, they force the listed firm to use capital from rights issue to pay cash dividends in order to meet the parent company's needs or to tunnel through related transactions. Further, Jian and Wong (2006) state that as controlling shareholders, local governments have increased incentives to extract resources from listed firms for the purpose of achieving political and social goals. Thus, capital from ROs might not be used on good investment opportunities; instead, they might be tunneled to large shareholders through related party transactions or by paying out cash dividends. Lee and Xiao (2004) find that because state-owned shares are non-tradable, large shareholders give up their subscription rights, and firms use receipts from ROs to pay out cash dividends. They interpret such dividend paying practice as evidence of tunneling.

Many studies also point out that conflicts between the goals of the government and shareholders are a source of inefficiency. Boycko et al. (1996) suggest that the government might pursue political objectives such as increasing employment rather than maximizing profit. As Chinese listed firms are mostly controlled by the state, this might be perceived as an indicator of bureaucratic control and operating inefficiency. Xu and Wang (1999) and Wei, Xie, and

Zhang (2005) find that a firm's profitability is negatively related to the proportion of state-owned shares in China. Thus, we predict a negative relationship between the ratio of state-owned shares and post-rights offering operating performance:

$H_{2\text{-}1}$: Post-rights offering operating performance of firms with a higher ratio of state-owned shares is worse than for firms with a lower ratio of state-owned shares.

According to Jensen's (1986) free cash flow theory and inference on the basis of H1.1, which posits that large shareholders tend to give up their full subscriptions, when listed firms get capital from SEOs, expropriation by large shareholders is more severe, which negatively affects a firm's performance. Furthermore, Eckbo and Masulis (1992) reveal that uninsured rights create severe adverse selection effects when shareholder take-up is low. A lower subscription by a large shareholder ownership is associated with high adverse selection cost in RO, resulting in a worse signal with regard to firm value. Thus, we expect post-RO operating performance of firms with full subscription by large shareholders to be better than that of firms with partial rights subscription.

$H_{2\text{-}2}$: Post-rights offering operating performance of firms with full rights subscription by large shareholders is better than that for firms with partial rights subscription by large shareholders.

4. Empirical Analysis

4.1. Sample and Data

This study examines the relation between ownership structure, large shareholder rights offering subscription, and post-RO operating performance. We use the data of RO listed companies during 1994–2003. All financial, ownership structure, and RO data are taken from the Taiwan Economic Journal (TEJ) and the China Center for Economic Research (CCER). In order to examine the subscription behavior of large shareholders, we focus on rights issuing. After excluding the required firm-years missing data, our final sample comprised 614 firm-year observations [6].

Summary statistics for the relevant variables are presented in Table 2. We find that, on average, the mean proportion of state-owned shares is around 35%, which is higher than that observed in other developed capital markets. Large shareholders tend to give up their rights to full subscription and subscribe only partially to new shares of RO. The results also indicate that the performance of ROE is worse post RO. That is, PREROE is 13.56%, which is higher than both ROE (9.66%) and AF1ROE (8.55%).

[Insert Table 2 about here]

Table 3 presents the Pearson and Spearman correlation coefficients for important variables in our regression analysis. As expected, BEHAVIOR shows a significant positive correlation with operating performance both pre and post RO. On the other hand, BEHAVIOR is negatively correlated with CRITICAL. Such results reveal that large shareholders tend to subscribe to more shares showing a relatively good performance. CRITICAL is negatively related to post-RO operating performance. In the cases of the other independent variables in our models, the correlation coefficients are no greater than 0.6, revealing no problem of collinearity. However, we also test this by using the variance inflation factor (VIF).

[Insert Table 3 about here]

As stated earlier, this study examines large shareholders' rights subscription behavior. Therefore, we compare variables relating to this in Table 4. We classify the results in Panel A as full subscription, partial subscription, and no subscription. We categorize the data into full subscription and no or partial subscription groups in Panel B. Consistent with the results above, large shareholders tend to give up their full subscription. That is, the number of "Full subscription" groups is 115, which is lower than that in the two other groups. In addition, large shareholders tend to fully subscribe to new shares in firms with better performance and then those firms have better post-RO operating performance. The values of ROE-related variables are better for the "Full subscription" group. The results portend that large shareholders subscribe less in order to increase their wealth. That is, BV is higher for the "No subscription" and "Partial subscription" groups. In addition, large shareholders tend to give up their full subscription rights in firms with a higher proportion of state-owned shares**.** The results in Table 5 stand the test of our hypothesis initially, and we further test our hypothesis using regression models that control for other variables.

[Insert Table 4 about here]

4.2 Large Shareholders and Rights Subscription Behavior

For historical reasons, highly concentrated ownership and government ownership characterize the Chinese corporate ownership structure. Such a special ownership structure has an impact on firms' financial policy. In this paper, we focus on large shareholders' rights subscription behavior and subsequent firm performance. There seems to be a contradiction between the fact that large shareholders positively

[6] In some models, in order to compute the rate of change or for different variables, the sample may change.

approve of ROs, but forfeit their subscription rights. We explain this contradiction from the viewpoint of state ownership strongly desiring capital, although their shares are not tradable. If the state understands that its companies are performing very well, the contradiction can be mitigated. We test ***H1-1*** and ***H1-2*** by using a logistic regression model:

$$BEHAVIOR_i = \alpha_0 + \alpha_1 GOV_i + \alpha_2 PREROE_i\,(ROE_i) + \alpha_3 SIZE_i + \alpha_4 ROAMT_i + \alpha_5 TOBINQ_i + \alpha_6 DEBT_i + \varepsilon \quad (1)$$

The dependent variable is BEHAVIOR, which is a dummy variable that denotes whether large shareholders give up their full subscription: 1 denotes full subscription and 0 otherwise. As we discussed above, most listed firms originate from SOEs and are still controlled by the state and/or other non-listed SOEs; thus, government ownership (GOV) is the primary explanatory variable, which is defined as the ratio of state-owned shares to total shares. We predict the coefficient of GOV to be negative for two reasons. First, because state-owned shares are non-tradable, they cannot generate money by being sold to support the parent companies; therefore, their holders attempt to expropriate minority investors through related party transactions. The other reason is that in order to increase book value per share, which increases their wealth, the holders of state-owned shares tend to give up their full subscription.

In order to test ***H1-2*** according to which large shareholders tend to fully subscribe to new shares in firms with comparatively better performances, we use PREROE and ROE to proxy for firm performance. PREROE is return on equity in the year prior to RO. We predict that the coefficient of PREROE (ROE) will be positive. We include other control variables. ROAMT is the RO amount adjusted by total assets. SIZE denotes firm size. TOBINQ refers to growth opportunity, measured by means of Tobin's Q ratio. DEBT is the liability ratio.

Table 5 shows the results of the logistic regression to explain large shareholders' rights subscription behavior. The negative coefficients for GOV support our argument that the state prefers to give up full subscription and instead subscribes to no shares or subscribes to partial new shares. This relationship may be explained as follows. In the absence of a sound capital market and a well-developed legal framework in China, an extraordinarily high ratio of state shares can increase expropriation through related party transactions. With regard to the perceived performance of firms, large shareholders tend to subscribe more in firms with comparatively better performances. Both PREROE and ROE are significant and positively related to BEHAVIOR, supporting ***H1-1***. In addition, this result reflects the specificity of the negative relation between TOBINQ and BEHAVIOR. That is, large shareholders do not subscribe more in firms with higher growth opportunities.

[Insert Table 5 about here]

4.3. Post-RO Operating Performance

This section discusses firm performance subsequent to ROs. We further use regression models to test post-RO performance in China. In the accounting literature, performance is measured by either accounting profits or stock returns. Both methods have limitations and are even more inappropriate for measuring China's listed firms. Accounting profits, as shown earlier, are subject to manipulation; on the other hand, the measurement of stock returns involves a major difficulty. Rights issues in China are usually conducted with a substantial discount (more than 40% of the current market price), which varies widely across firms. This makes it difficult to compare the post-RO stock performance among firms. Therefore, we employ either AF1ROE (ROE in the year following the SEO) or ROE (ROE in the year of RO) as a dependent variable to measure subsequent performance. Our model can be expressed as follows:

$$AF1ROE_i\,(ROE_i) = \alpha_0 + \alpha_1 CRITICAL + \alpha_2 BEHAVIOR_i + \alpha_3 GOV_i + \alpha_4 DA + \alpha_5 TOBINQ_i + \alpha_6 SIZE_i + \alpha_7 ROAMT_i + \varepsilon \quad (2)$$

We speculate that state ownership affects managers' decisions and these listed companies have a strong incentive to manage their earnings above the statutory ROE thresholds for ROs, which negatively affects performance. Therefore, we include not only state ownership (GOV) and large shareholders' rights offering behavior (BEHAVIOR) but also variables for earnings management (CRITICAL and DA) in order to investigate post-RO performance. CRITICAL is a dummy variable to denote firms with ROEs that are close to meeting the threshold for ROs. DA is discretionary accruals, and BEHAVIOR is a dummy variable denoting whether large shareholders give up their full subscription, the value of which is 1 for full subscription and 0 otherwise. GOV is the ratio of state-owned shares. We also include other control variables in the models. TOBINQ refers to growth opportunity, measured by means of Tobin's Q ratio. SIZE denotes the firm size. ROAMT is the rights issue amount adjusted by total assets.

Our empirical results are presented in Table 6. In Panel A, the dependent variable is AF1ROE. CRITICAL and DA are negatively related to AF1ROE. The results imply that the post-RO performance of firms that have managed their ROE by means of discretionary accruals is worse, especially for firms with an ROE close to the critical value for RO. The results are consistent with the predicted positive relation between large shareholders' subscription rights

behavior and subsequent performance. BEHAVIOR is significantly and positively related to AF1ROE. However, on the contrary, the post-RO operating performance is worse for firms with a higher ratio of state-owned shares (GOV). This finding indicates that state ownership negatively impacts post-RO operating performance. In Panel B, the dependent variable is ROE. The predicted signs of the coefficients are similar to those in Panel A. However, some do not reach a statistically significant level.

[Insert Table 6 about here]

5. Conclusion

By the end of the 1990s, moving away from a centrally planned to a market economy, most Chinese listed firms were transformed from SOEs, which made their ownership structure very different from that of firms in other countries. Although the government has gradually tried to privatize SOEs, it still controls the majority of shares on the stock markets. We argue that the special characteristics of a highly concentrated ownership with regard to state-controlled shares and share tradability may affect rights subscription behavior and the subsequent performance of privatized firms. However, most studies that refer to Chinese equity offerings focus on ROE thresholds, or earnings management, and few emphasize ownership structure and large shareholders' rights subscription behavior. In contrast with existing studies, we are not only interested in the ROE threshold of rights offerings but also in investigating the relationship between the proportion of state-owned shares, large shareholders' subscription behavior, and post-RO operating performance, using a sample of Chinese privatized firms.

The CSRC imposes strict regulations on the qualifications for rights offerings, one of which is the ROE threshold. Having to contend with strict quotas in the IPO process and institutional transformation, many listed firms strongly desire capital and have an incentive to manage their ROE figures to obtain the capital. On the basis of this institutional background, we find that there seems to be a contradiction between large shareholders' positive approval of rights offerings and the fact of their giving up subscription rights. By examining the impact of state ownership on large shareholders' subscription decisions and performance, we demonstrate that the ratio of state-owned shares is negatively related to large shareholders' full subscription and subsequent operating performance. However, in firms with a better performance, large shareholders tend to subscribe more to new shares. The evidence also confirms the expected positive relation between large shareholders' subscription behavior and firms' subsequent performance. That is, firms with full rights subscription by large shareholders outperform those with partial rights subscription by large shareholders. Our results reveal not only an impact of ownership structure on rights offerings but also the way in which controlling shareholders expropriate minority shareholders in an emerging economy. In the future, one may further investigate how investors react when large shareholders subscribe to more new shares, and vice versa.

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Appendices

Table 1. China Securities Regulatory Commission's (CSRC) Guidelines Regulating Rights Issue Activities: 1993–2001

The CSRC has set and changed the standards for listed firms to issue rights a number of times. Although changed several times, the criteria have always been closely correlated with the ROE.

Regulation Date	Profitability Requirement
Nov. 17, 1993	Two years' profits
Sept. 28, 1994	1. Three years' profits 2. Three-year average ROE of 10%
Jan. 24, 1996	1. ROE must exceed 10% in each of the previous three years. 2. The three-year average ROE must exceed 9% and the ROE must exceed 6% in each of the previous three years in the energy, raw material, and infrastructure sectors.
Mar. 17, 1999	1. The three-year average ROE must exceed 10% and the ROE must exceed 6% in each of the previous three years. 2. The three-year average ROE must exceed 9% and the ROE must exceed 6% in each of the previous three years in the energy, raw material, and infrastructure sectors.
Mar. 15, 2001	The three-year average ROE must exceed 6%

Table 2. Summary of Descriptive Statistics

GOV is the ratio of state-owned shares. BEHAVIOR represents large shareholders' RO behavior. CRITICAL is a dummy variable denoting firms with ROEs that are close to meeting the ROE threshold for the ROs. DA is discretionary accruals. PREROE is the return on equity in the year before the RO. ROE is the return on equity in the year of the RO. AF1ROE is the return on equity in the year following the RO. CAP is capital expenditure. ROAMT is the RO amount adjusted by total assets. TOBINQ refers to growth opportunity, measured by means of Tobin's q ratio. SIZE is firm size.

Variables	N	Mean	Std Dev	Medium	Minimum	Maximum
GOV	614	0.3463	0.2533	0.3813	0.0000	0.8478
BEHAVIOR	614	1.8583	0.7050	2.0000	1.0000	3.0000
CRITICAL	614	0.1759	0.3810	0.0000	0.0000	1.0000
DA	368	0.0369	0.1378	0.0241	–0.2908	1.7283
PREROE	470	0.1356	0.0561	0.1195	0.0565	0.4142
ROE	614	0.0966	0.0548	0.0957	–0.2894	0.5514
AF1ROE	478	0.0855	0.0863	0.0915	–1.0748	0.3503
CAP	594	0.0950	0.1191	0.0541	–0.2253	1.0402
ROAMT	614	0.1792	0.1145	0.1564	0.0311	1.3259
TOBINQ	614	1.4533	0.4712	1.3517	0.6468	5.1969
SIZE	614	9.1036	0.3608	9.0868	8.1274	11.1608

Table 3. Correlation Matrix

In the correlation table, the upper triangle presents the Pearson correlations and the lower triangle presents the Spearman correlations of variables. Boldfaced data denote a correlation that is significant at the 10% level. GOV is the ratio of state-owned shares. BEHAVIOR represents large shareholders' RO behavior. CRITICAL is a dummy variable denoting firms with ROEs that are close to meeting the ROE threshold for the ROs. DA is discretionary accruals. PREROE is the return on equity in the year before the RO. ROE is the return on equity in the year of the RO. AF1ROE is the return on equity in the year following the RO. CAP is capital expenditure. ROAMT is the RO amount adjusted by total assets. TOBINQ refers to growth opportunity, measured by means of Tobin's q ratio. SIZE is firm size.

	GOV	BEHAVIOR	CRITICAL	DA	PREROE	ROE	AF1ROE	CAP	ROAMT	TOBINQ	SIZE
GOV	1.000	0.039	0.050	–0.022	–0.016	0.003	**–0.093**	**0.104**	–0.009	**–0.114**	**0.176**
BEHAVIOR	0.041	1.000	**–0.144**	0.044	**0.159**	**0.155**	0.066	**0.156**	**0.291**	–0.041	**–0.121**
CRITICAL	0.045	**–0.145**	1.000	–0.033	**–0.385**	**–0.180**	–0.036	–0.006	**–0.161**	**–0.182**	**0.258**
DA	–0.013	0.018	–0.023	1.000	0.088	–0.016	**–0.150**	0.053	0.074	0.061	0.027
PREROE	–0.034	**0.174**	**–0.477**	0.036	1.000	**0.570**	**0.454**	**0.111**	**0.149**	**0.132**	0.016
ROE	–0.055	**0.156**	**–0.228**	–0.011	**0.633**	1.000	**0.391**	0.049	**0.153**	**0.152**	–0.013
AF1ROE	**–0.112**	**0.103**	**–0.090**	**–0.140**	**0.487**	**0.680**	1.000	**0.095**	–0.009	0.004	0.037
CAP	**0.076**	**0.105**	–0.017	–0.021	**0.109**	**0.140**	**0.182**	1.000	**0.090**	**–0.167**	0.060
ROAMT	**–0.074**	**0.265**	**–0.261**	0.079	**0.217**	**0.096**	–0.053	0.007	1.000	**0.316**	**–0.295**
TOBINQ	**–0.086**	–0.058	**–0.229**	**0.050**	**0.138**	**0.110**	–0.059	**–0.155**	**0.456**	1.000	**–0.315**
SIZE	**0.169**	**–0.109**	**0.278**	0.007	**–0.078**	**–0.097**	–0.025	0.037	**–0.404**	**–0.382**	1.000

Table 4. Summary of Variables Relating to Large Shareholder's Rights Subscription Behavior

We compare variables relating to large shareholder's rights subscription behavior. The results in Panel A are classified into three groups: full subscription, partial subscription, and no subscription. The results in Panel B are divided into two groups: full subscription and no subscription or a lower ratio of subscription. PRE3ROE to AF2ROE are the returns on equity for the period covering the three years before the two years following the RO. GOV is the ratio of state-owned shares. TOBINQ refers to growth opportunity, measured by means of Tobin's q ratio. CAP is capital expenditure. ROAMT is the RO amount adjusted by total assets. SIZE is firm size. BV is book value per share. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Classified into three groups

	No Subscription				Partial Subscription				Full Subscription				Diff. test
Variables	N	Mean	Std Dev	Median	N	Mean	Std Dev	Median	N	Mean	Std Dev	Median	Kruskal-Wallis Test
PRE3ROE	76	0.129	0.062	0.106	88	0.149	0.141	0.132	34	0.167	0.081	0.165	13.205***
PRE2ROE	114	0.122	0.057	0.107	149	0.126	0.043	0.116	52	0.167	0.086	0.145	17.635***
PREROE	162	0.129	0.057	0.115	231	0.132	0.050	0.116	77	0.160	0.064	0.141	19.029***
ROE	202	0.093	0.047	0.089	297	0.089	0.051	0.090	115	0.122	0.068	0.105	31.089***
AF1ROE	149	0.084	0.055	0.086	239	0.080	0.108	0.087	90	0.103	0.058	0.101	6.641**
AF2ROE	111	0.082	0.062	0.085	205	0.067	0.097	0.071	72	0.093	0.038	0.099	11.445***

GOV	202	0.301	0.266	0.282	297	0.394	0.229	0.452	115	0.303	0.268	0.305	18.450***
TOBINQ	202	1.496	0.505	1.382	297	1.423	0.376	1.321	115	1.456	0.609	1.326	2.041
CAP	198	0.076	0.099	0.039	295	0.094	0.109	0.062	101	0.134	0.167	0.082	6.585**
ROAMT	202	0.152	0.080	0.141	297	0.167	0.079	0.153	115	0.257	0.188	0.211	51.215***
SIZE	202	9.144	0.369	9.117	297	9.113	0.334	9.096	115	9.010	0.397	9.007	9.357***
BV	202	3.280	1.042	3.064	297	3.223	1.012	3.078	115	3.037	1.126	2.813	6.122**

Table 4. Summary of Variables Relating to Large Shareholder's Rights Subscription Behavior (Continued)

Panel B: Classified into two groups

	No or Partial Subscription				Full Subscription				Diff. test
Variables	N	Mean	Median	Std Dev	N	Mean	Median	Std Dev	t-test
PRE3ROE	164	0.139	0.121	0.112	34	0.167	0.165	0.081	–1.69*
PRE2ROE	263	0.124	0.112	0.049	52	0.167	0.145	0.086	–3.44***
PREROE	393	0.131	0.116	0.053	77	0.160	0.141	0.064	–3.68***
ROE	499	0.091	0.089	0.049	115	0.122	0.105	0.068	–4.66***
AF1ROE	388	0.081	0.087	0.091	90	0.103	0.101	0.058	–2.84***
AF2ROE	316	0.072	0.074	0.086	72	0.093	0.099	0.038	–3.07***
GOV	499	0.356	0.399	0.249	115	0.303	0.305	0.268	1.95*
TOBINQ	499	1.453	1.354	0.434	115	1.456	1.326	0.609	–0.06
CAP	493	0.087	0.050	0.105	101	0.134	0.082	0.167	–2.68***
ROAMT	499	0.161	0.149	0.080	115	0.257	0.211	0.188	–5.37***
SIZE	499	9.125	9.113	0.349	115	9.010	9.007	0.397	2.87***
BV	499	3.246	3.068	1.023	115	3.037	2.813	1.126	1.94*

Table 5. Logistic Regressions to Explain Large Shareholder's Rights Subscription

The dependent variable is BEHAVIOR, which is a dummy variable denoting whether large shareholders give up their full subscription: 1 denotes full subscription; 0, otherwise. GOV is the ratio of state-owned shares to total shares. PREROE is the return on equity in the year before the RO. ROAMT is the RO amount adjusted by total assets. SIZE is firm size. TOBINQ refers to growth opportunity, measured by means of Tobin's q ratio. DEBT is the liability ratio. The t-statistics are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10%, levels, respectively.

Variable	**Model1**	**Model2**	**Model3**	**Model4**	**Model5**
Intercept	–1.163***	–2.693***	–2.528***	–1.029	1.764
	(49.405)	(69.366)	(101.257)	(0.063)	(0.291)
GOV	–0.878**			–0.780	–0.983**
	(4.589)			(2.095)	(4.377)
PREROE		7.527***		7.025***	
		(14.556)		(10.220)	
ROE			10.288***		11.295***
			(24.382)		(22.192)
SIZE				–0.226	–0.536
				(0.267)	(2.313)
ROAMT				9.578***	9.727***
				(24.611)	(39.930)
TOBINQ				–1.244***	–1.105***
				(8.079)	(13.394)
DEBT				1.719	1.312
				(2.332)	(1.961)
Model χ^2	4.589**	14.556***	24.382***	40.469***	68.032***
Pseudo R^2	0.012	0.051	0.074	0.199	0.251
N	607	462	607	462	607

Table 6. Regression Results for Rights Subscription behavior and Post-RO Operating Performance

The dependent variable is AF1ROE, which is the return on equity in the year following the RO, in Panel A and is ROE (the ROE in the year of the RO) in Panel B. CRITICAL is a dummy variable denoting firms with ROEs that are close to meeting the ROE threshold for the ROs. BEHAVIOR represents large shareholders' RO behavior. GOV is the ratio of state-owned shares to total shares. DA is discretionary accruals. ROAMT is the RO amount adjusted by total assets. SIZE is firm size. TOBINQ refers to growth opportunity, measured by means of Tobin's q ratio. DEBT is the liability ratio. SIZE is firm size. The t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Dependent Variable is AF1ROE (N = 327)

Variable	Model1	Model2	Model3	Model4	Model5	VIF
Intercept	0.025	0.034	0.037	0.025	0.006	
	(0.280)	(0.380)	(0.410)	(0.280)	(0.070)	
CRITICAL	–0.014*				–0.014*	1.046
	(–1.930)				(–1.900)	
BEHAVIOR		0.018*			0.015*	1.307
		(1.950)			(1.690)	
GOV			–0.021**		–0.019*	1.060
			(–2.070)		(–1.820)	
DA				–0.050**	–0.052***	1.012
				(–2.670)	(–2.800)	
TOBINQ	–0.005	–0.002	–0.006	–0.003	–0.004	1.357
	(–0.800)	(–0.300)	(–0.930)	(–0.460)	(–0.580)	
SIZE	0.008	0.006	0.007	0.007	0.011	1.321
	(0.850)	(0.700)	(0.800)	(0.810)	(1.180)	
ROAMT	–0.013	–0.034	–0.009	–0.008	–0.026	1.432
	(–0.610)	(–1.360)	(–0.420)	(–0.340)	(–1.080)	
F value	1.50	1.52	1.64	2.36*	2.99***	
Adj R2	0.006	0.006	0.008	0.016	0.041	

Panel B: Dependent Variable is ROE (N = 327)

Variable	Model1	Model2	Model3	Model4	Model5
Intercept	–0.245***	–0.234***	–0.232***	–0.235***	–0.252***
	(–3.480)	(–3.320)	(–3.270)	(–3.310)	(–3.580)
CRITICAL	–0.015***				–0.015***
	(–2.610)				(–2.580)
BEHAVIOR		0.012			0.011
		(1.600)			(1.490)
GOV			–0.005		–0.002
			(–0.580)		(–0.280)
DA				–0.014	–0.016
				(–0.960)	(–1.060)
TOBINQ	0.014***	0.016***	0.015***	0.015***	0.015 ***
	(2.830)	(3.270)	(2.910)	(3.090)	(3.030)
SIZE	0.033***	0.031***	0.031***	0.031***	0.034***
	(4.540)	(4.290)	(4.270)	(4.300)	(4.630)
ROAMT	0.090***	0.077***	0.092***	0.093***	0.078***
	(5.140)	(3.910)	(5.230)	(5.270)	(3.930)
F value	13.15***	11.94***	11.31***	11.47***	8.03***
Adj R2	0.130	0.118	0.112	0.114	0.131