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Government Ownership, Firm Value and Choice of SEO Methods--- Evidence from Privatized Chinese SOEs

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TABLE OF CONTENTS

ABSTRACT

In 1991, the Chinese government started the privatization process. A distinguishing feature of this privatization process is the presence of the government as a major shareholder in the privatized SOEs which creates a unique ownership structure that affects the firm performance, and, in turns its choice of equity issuing method.

This dissertation investigates the relation between ownership structure, firm value, and the choice of equity offering method of the Chinese semi-privatized former state-owned enterprises. The dissertation consists of two essays. The first essay examines this relationship during the period 1993-1998 when the Chinese stock exchanges were at the infancy stage. The second essay covers the period 1999-2003 when the Chinese government crafted many laws to modernize their stock exchanges and protect the investor.

In the first essay, we find that firms with higher government ownership under-perform relative to those with lower government ownership and prefer issuing rights offerings. The market reaction to the rights offering is lower than that to the public offering. Finally, the long-term market and operating performance of firms issuing rights offerings is poorer than their matched peer group.

In the second essay, we find that 1) firms with higher government ownership have still lower performance than firms with lower government ownership; 2) firms with higher government ownership still use rights offerings as equity issue method; 3) firms with the lowest government ownership issue equity using private placements; 4) the market reaction to the announcement of private placements is positive; and 5) the monitoring action provided by the placement buyer has a positive effect on the long-term performance of the firms issuing private placements.

Our results are consistent with previous findings about the effects of government ownership on firm value. Privatized firms with high government ownership do not necessarily maximize firm

value; instead the managers are more aligned with the political and social agenda of the government. However, firms with low government ownership and high institutional ownership are more profitable. A major contribution of the dissertation is to establish the linkage between ownership, performance, and the choice of equity methods.

I. Introduction

This dissertation consists of two essays:

1. Government ownership, firm value, and choice of SEO methods for Chinese firms during 1993-98; and

2. Government ownership, firm value, and choice of SEO methods for Chinese firms during 1999-2003.

The dissertation proceeds as follows. A brief history of the development of the rules and regulations pertaining to the privatization process of Chinese firms is provided in Chapter 1. This chapter provides rationale for dividing the 1993-2003 period into two sub-periods and serves as a common background for both essays. Chapter 2 presents the first essay, while Chapter 3 contains the second essay.

II. CHAPTER I

2.1 A Brief History of the Privatization Process of Chinese Firms

Since 1949 China was a centrally planned economy in which all enterprises were state owned or collectively owned. Investments were centrally planned and funded by government. In the late 1980s, as part of enterprise reforms that took place during China's gradual transition to a market economy, local governments in China started experimenting with selling shares of collectively owned enterprises directly to domestic individuals in order to raise equity capital. These trading of enterprise shares followed by over-the-counter (OTC) trading in more organized but still informal exchanges.

In 1991, two stock exchanges, one created by the Shanghai municipal government and the other by the Shenzhen municipal government, were launched, with the central government's formal approval. The two exchanges now have a modern infrastructure with a computerized automated trading system, a high-speed nationwide satellite communications system backed by digital data networks, and an efficient clearing and settlement system. Stock market development in China took off in the early 1990s, roughly at the same time as it did in other transitional economies (Pistor et al. 2000). But According to Pistor and Xu (2004), China's stock market is performing better than the markets of most other transitional economies in terms of standard measures of stock market performance, such as the number of listed firms, market capitalization, liquidity, and fundraising capacity. By the end of 2000, while many stock markets in transitional economies were plagued by low market capitalization and low liquidity, China's total stock market capitalization jumped to over US$507 billion. Consequently, China's stock market became the second largest in Asia, after Japan's. (Wong, 2005)

China's stock market had three unique features that made its rapid development unique and interesting. First, the government used it largely as a fundraising vehicle for funding state-owned enterprises (SOEs). As a result most listed enterprises were state controlled, with only one-third of the enterprises' equity capital sold to private shareholders during initial public offerings (IPOs). The other two-thirds of the equity capital raised, was held either by state asset management agencies or by SOEs themselves. In an effort to maintain its control over listed enterprises, the government forbade trading of state-owned shares on China's two exchanges, and the state-owned shares could be transferred only after approval from state-asset-management authorities had been obtained, which made these shares effectively non-tradable (Wong 2005). The transfer of state-owned shares to private shareholders was rare in the 1990s. At the end of the 1990s, more than 90% of the enterprises listed on China's two stock exchanges remained state controlled, with state-owned entities as their controlling shareholders.

Second, China's stock market developed under a repressed financial regime. Financial repression was created through a combination of capital controls on international capital flows and administrative measures imposed by the central government to soften potential competition among different financial assets (e.g., bank deposits, enterprise stocks, enterprise bonds, various kinds of government bonds) within the domestic financial sector. While the capital controls helped to prevent capital from flowing out of the country, the competition-mitigating administrative controls sought to avoid the driving up of returns on various financial assets and thus to allow the government to maintain a source of cheap capital for financing SOEs' investments (Li 1994, Li 2001, Gordon and Li 2003). Third, China's stock market was developed under a weak legal framework that offered shareholders little protection. On the widely used indicators for shareholder rights protection developed by La Porta et al. (1998), China scored 3, compared with the average score of 3.61 for all other transitional economies (Pistor and Xu 2004). Empirical studies also

indicate that in China, formal law and law enforcement have played at best a marginal role in protecting shareholders (Tenev and Zhang, 2002, Pistor and Xu 2004).

Until 1999, China didn't have a real securities law per se. As a result, the minority shareholders were not protected, thereby stymieing the development of a properly functioning capital market (Shleifer and Vishny 1997, La Porta et al. 1997 and 1998, Pistor and Xu 2004). To address this deficiency, the Securities Law of 1999 was enacted at the 6th Meeting of the Ninth National People's Congress on December 29, 1998, establishing the most important set of laws regarding the issuing and trading of securities in the People's Republic of China. The purpose of this law was to standardize the issuing and trading of securities, protect the lawful rights and interests of investors, safeguard the economic order and public interests of society and promote the development of the socialist market economy[1].

The most important features of the Securities Law of 1999 are as follows:

- The shares must be made available following approval of the State Council Securities Management Department.
- The company's total share capital must not be less than RMB 50 million.
- The company must be in business for more than 3 years and made profits over the last three consecutive years. This requirement applies also to former state-owned enterprises reincorporating as private or public enterprises. They can calculate the 3 years consecutively. The number of shareholders with holdings of value reaching in excess of RMB 1,000 must not be less than 1,000 persons. Shares offered must be more than 25 percent of the company's total share capital. In addition, the company total share capital must exceed RMB 400 millions, the ratio of publicly offered shares must be more than 15 percent.

[1] For complete listing of the Chinese Securities Law of 1999 please refer to the website www.csrc.gov.cn

- The company must not have committed major illegal activities or false accounting records in the last three years.

The new plan announced by the China Securities Regulatory Commission highlighted the government's mounting concern with the poor state of the Shanghai and Shenzhen stock markets, which had performed worse than any in the world over the past eight years, even as China's economy grew at nearly 9 percent annually during the same period.

Pursuant to the 1999 Securities Law, China started a new reform to free more than 1,300 largely state-owned companies to gradually sell shares of stock controlled by the government, putting nearly $270 billion worth of state assets on the trading block. This enhanced privatization process furthered the country's transition toward capitalism.

During this time period, new methods of issuing equity emerged in the Chinese stock market: in 1999, Chinese firms were allowed to issue private placement as a means of raising new equity in addition to the two methods (rights offering and public placement) that existed in the pre-1999 era. It is important to note that the Chinese government through its securities commission does not impose a restriction on the type of the equity offering method a firm may use. The choice of the method is left to the issuing company's discretion.[2]

[2] For complete listing of the Chinese Law please refer to the following website http://www.cclaw.net/default.asp

III. Chapter II - Government Ownership, Firm Value, and Choice of SEO Methods for Chinese Firms during 1993-98

3.1. Introduction

Several studies argue that private ownership and clearly defined property rights provide better incentives for the managers, and therefore, privately owned firms perform better than firms with state ownership and central planning (Alchian and Demsetz, 1972, Laffont and Tirole, 1993, Shleifer, 1998). In the 1980s, most of Central and Eastern European Countries initiated large-scale privatization programs to reform the poorly performing state-owned enterprises (SOEs). However, these mass privatization programs failed in the absence of a well-functioning financial infrastructure (Estrin, 1998, and Laporta, Lopez de-Salinas, Shleifer and Vishny, 2002).

The privatization process of Chinese SOEs stands in contrast to the process in the Central and Eastern Europe: the Chinese government, unlike others, continues to own a substantial stake in the company. Chinese privatization of state-owned enterprises (SOEs) started in 1991. In 1990, China had about 300,000 SOEs with about 75 million state employees (Cao, Qian and Weingast, 1997). These SOEs were heavily financed by the state owned banks. Most of these SEOs had oversupply of employees and were largely unprofitable. China adopted a unique privatization structure by partially selling state owned shares to the public. This partial-privatization encompassed all but the largest and strategically important SOEs, such as banks and financial institutions. The goals of the Chinese privatization policy were to raise revenue for the state, reduce government's interference in the economy and stimulate economic efficiency by introducing

competition and market discipline (Huyghebaert and Quan, 2004), and to end the reliance of the SOEs on government-owned financial resources[3].

The extent of state ownership varies among Chinese firms. The purpose of this essay is two-fold. The first objective is to show that the performance of Chinese firms is inversely related to the extent of state ownership. The second objective is to demonstrate that higher government ownership will lead these firms to choose rights offering in preference to public offering during the 1993-99 period during which only these two methods of SEO were available to these firms.

The paper is organized as follows. Section II provides motivation for this essay. Section III discusses pertinent literature in three subsections: 1) ownership structure and performance, 2) seasoned equity offerings—short-term performance, and 3) seasoned equity offerings—long-term performance. Section IV develops testable hypotheses. Section V explains the sample selection process and testing methodology. Section VI presents summary statistics, while Section VII reports empirical results. Finally, Section VIII provides summary and conclusions.

[3] Chinese government used to protect SOEs against bankruptcy by offering various forms of financing, such as budgetary subsidies, trade credit via other SOEs or loans from state-owned banks. (Gao and Shaffer, 1998)

3.2 Motivation and Contribution

According to the agency theory (Jensen and Meckling, 1976), higher managerial ownership better aligns the interest of managers with external stockholders and, therefore, is more conducive to the value maximization principle. However, this relationship between managerial ownership and firm value may not apply when the government is the largest shareholder as is the case of China. Indeed, state ownership is generally viewed as being inefficient (Vickers and Yarrow, 1988, and Megginson and Netter, 2001). Shleifer (1998) argues that state ownership fails to motivate managers to innovate, implement cost reductions and/or improve profitability. In addition, in semi-privatized firms, the goal of shareholders' wealth maximization might take a back seat to the government's political and social goals.[4]

The implication of the state ownership on firm value for Chinese firms has been investigated in several studies (Wei and Varela, 2003; Hassan, D'Souza, Wei and Varela, 2003; Wei, Xie and Zhang, 2005). Non-value maximization behavior of firms in the presence of high government ownership is evident from these studies. In this essay, I extend this line of research by investigating a potential link between the extent of the government ownership in a firm and the method of seasoned equity offering (SEO) a firm chooses. This essay covers the privatization period from 1993 through 1998, during which rights offerings and public offerings were predominant SEO methods. . Based on the finding of earlier studies that the level of firm performance is negatively related to the degree of government ownership, I argue that firms with higher government ownership (inferior performers) are more likely to choose the rights offering, while firms with lower government ownership (superior performers) are more likely to choose the public offering method.

[4] On the other hand, in countries where the markets are not well developed and corporate control is not well established, the government may be more efficient in monitoring the firm than other small investors (Lin, 2000).

The principal basis for this argument is that disclosure requirements are tougher for public offering than for rights offering and the latter does not require underwriter's certification..

In testing my proposition above, I follow three major steps. First, I confirm the findings of existing studies that, resulting from inefficiency, the greater the state ownership, the worse the performance. Step two tests the hypothesis that relatively poor performance, resulting from high government holdings, will encourage these firms to issue rights offering in preference to public offering. In the final step, I demonstrate that short- and long-term performance of rights-issuing firms will be lower than their matched peer groups since rights issuing firms are poor performers to begin with, additional money raised will exacerbate the cost associated with free cash flow problem. Thus, I expect these firms to do even worse than their peer group who opted not to issue external equity financing.

3.3. Literature Review

Below I present the relevant literature in three sections: A) on the relationship between ownership structure and firm value, B) on the market reaction to SEOs, and C) on long-term post-issuance performance of SEO firms.

3.3.1 Privatization and Ownership Structure

According to the property rights theory, private enterprises should perform better than either state-owned enterprises or enterprises with mixed ownership structure; Empirical evidence on the performance of enterprises with mixed ownership is scarce. Boardman and Vinning (1989) analyze a sample of the 500 largest non-US industrial firms and demonstrate that private enterprises outperform both state-owned enterprises and enterprises with mixed ownership. They explain this result by the conflict between private and public shareholders in mixed enterprises, which in turn decreases the effectiveness of the management monitoring. They conclude that partial privatizations may be worse than complete privatizations.

Boycko, Shleifer and Vishny (1996) do not find any benefits in the partial privatization of SOEs. They show that the higher the percentage of shares owned by the government, the lower is the performance of the firm. They conclude that to increase the success rate of the privatization, the government should reduce its ownership stake in the newly-privatized firms and not interfere with the management.

Megginson and Netter (2001) argue that government ownership of firms result in altering the shareholder-wealth maximizing model of the western corporations. They argue that the

government usually has social agenda that does not fit with the firm's shareholder-wealth maximizing model. Shleifer (1998) argues that even if the government agrees that profit maximizing is the goal of the firm, it is difficult for it to write complete contract that adequately ties mangers' incentives to that goal because of its social agenda. Shleifer (1998) concludes that there will always be differences in the performance between state-owned and privately held firms because there is a broader range of monitoring devices under private ownership. Shleifer and Vishny (1994) argue that privatization without allocation of residual rights to management is unlikely to guarantee more productive or profitable uses of resources. Moreover, when government's social objective prevails on the profit maximization of the firm, the privatization alone is unlikely to enhance the productivity of the firm.

In spite of drawbacks over its completely privatized counterpart, mixed ownership has advantages including the following two. First, state ownership can act as a signal that the government will commit to its current privatization policy and will not implement a re-nationalization in the future (Mok and Hui, 1998, Perotti, 1995). Second, in countries where the capital markets and corporate control are not well developed, the government may be more efficient in monitoring the firm than other small investors (Lin, 2000).

The studies on the Chinese firms' post-privatization performance confirm the general prediction that higher government ownership in firms result in lower performance. Wei, Xie and Zhang (2005) study the relation between ownership structure and firm value in the privatized Chinese firms during the period 1991-2001. They find that state ownership is negatively related to firm value. In addition, they report a convex relation between Tobin's Q and state ownership and a positive relationship between institutional ownership and Q. Overall, their results suggest that when a government privatizes firms that were previously state-owned and retains significant ownership after privatization, then conflicts of interest among different block shareholders may actually decrease firm value. D'Souza, Hassan, Wei and Varela (2003) examine pre and post privatization

financial and operating performance of 208 firms in China during 1990-1997. They find that higher state ownership in Chinese firms result in lower performance.

3.3.2. Market Reaction to Seasoned Equity Offerings

Announcement effects of SEOs by U.S. firms have been vigorously investigated over the years. Results of these investigations point to two near- unanimous observations. First, public placements bring about significantly negative market reaction[5]. Second, negative reaction, if any, to a rights offering is significantly smaller than that of a public offering[6].

A popular explanation for the differences in the market reaction to seasoned equity issues involves information effects. Researchers often attribute the well-documented negative effect of announcements of seasoned equity offerings to the adverse selection problem. Miller and Rock (1985) predict a negative stock price reaction to equity issues because the market perceives them as releasing negative information about the firm's cash flows. In a world where asymmetric information exists, firms should issue new shares under two situations: when they have highly profitable investments that cannot be financed by other means or when managers believe that the shares are overvalued.

Other explanations for negative price reactions include free cash flow hypothesis and price-pressure hypothesis. Jensen (1986) contends that the access to funds from issuing additional stock increases the amount of discretionary cash available to managers. Because investors recognize this, they attribute higher agency cost to the new issue and react negatively. According to Scholes

[5] Myers and Majluf, 1984 and Miller and Rock, 1985 provide theoretical explanations for the negative announcement effects of new SEOs. Bayless and Chaplinsky (1996) and Loughran and Ritter (1995) provide empirical evidence of the negative announcement effects.

[6] Asquith and Mullins (1986), Kolodny and Suhler (1985), Masulis and Korwar (1986), Mikkelson and Partch (1986) and Schipper and Smith (1986) provide comparative evidence of short-term reaction of different SEO issue methods in the order of -2.5% to -3.5%

(1972), the price-pressure hypothesis, selling pressure drives down a firm's share price when it announces plans to issue new shares. Thus, the market may respond negatively when mature firms with limited growth opportunities announce their intention to issue new shares.

The issue regarding the choice of SEO methods is also rooted in the event-study literature. Empirical evidence from the U.S. shows that, while the announcement effects of public placements are, on average, significantly negative, the announcement effects of rights issues are close to zero, or substantially less negative than in the case of public placements. For example, Smith (1986) and Eckbo and Masulis (1995) both document an average abnormal return of about –3.0 percent for U.S. industrial firms for a 2-day event window. In contrast, for rights issues, Smith (1977) reports zero abnormal returns in the announcement-month, and Eckbo and Masulis (1992) document an average abnormal return of about –1.0 percent for both industrials and utilities in the U.S. Despite lower direct and indirect floatation costs with rights issues, an overwhelming majority of firms have used the more expensive public placements.

Researchers have offered various explanations to help solve the puzzle. Smith (1977) advances a monitoring cost hypothesis. He suggests that managers gain personal benefits from using underwriters in public placements, but receive fewer benefits of this type from the more mechanical floatation method of rights offerings. Thus, the higher costs incurred in placements reflects a lower bound of monitoring costs.

Heinkel and Schwartz (1986) develop a model based on the information asymmetry between the firm seeking new equity and outside investors. The model assumes 3 choices of equity offering methods: fully underwritten offers, uninsured rights offers and standby rights offers. In their model, only highest quality firms are willing to pay the costs incurred with a rights offering; the exogenous fixed investigation costs associated with standby rights offerings. The intermediate quality firms pay the endogenously determined signaling costs incurred with the uninsured rights offerings. Finally, the low-quality firms remain undistinguished, using an uniformed underwriter to sell their

shares. Also, they assume that at the time of the announcement of the equity offer, the firm knows more about its future stock price (firm quality) than either investors or underwriters. Eckbo and Masulis (1992) empirically test the above model and show that the market reaction for the uninsured rights is positive, for standby rights is positive but close to zero, while for underwritten public offering is negative.

3.3.3. Long-Run Performance of SEO issuing firms

The long-run stock performance after a seasoned equity offering has been widely documented. Using matching firms, Loughran and Ritter (1995) and Spiess and Affleck-Graves (1995) find that issuers under-perform their benchmarks in the average proportion of 7% per year. However, the issue of measuring the long-term market performance has been a topic of debate in literature.

Fama (1998) points out the difficulty in clearly identifying and measuring the long-run stock price reaction to a specific event. Several researchers point out that measuring long-run abnormal performance after an event is subject to mispricing problems. More specifically, Conrad and Kaul, 1993; Barber and Lyon, 1997 and Kothari and Warner, 1997 point to time aggregation of abnormal returns, Jegadeesh, 1997 and Mitchell and Stafford, 1998 discuss the problem related to pricing model specification, and Eckbo, Masulis and Norli, 1999 identify the problem stemming from time dependence of events. One source of the mispricing problem is the size effect. A large part of the average post-SEO performance can be attributed to small firms (Brav, Geczy and Gompers, 1999).

Aside from the mispricing problems, Jeanneret (2005) underlines the impact of the issuing conditions and the institutional setting on the long-run stock performance. The issuance process differs from one market to another and is not neutral to the post-SEO performance. In European and

Asian countries, unlike the U.S., the predominant issuance process is rights offerings. Researchers offer two ways to avoid the limitations associated with investigating long-term abnormal returns. According to Conrad and Kaul (1993), accounting measures can provide a good alternative to market measures of long-term performance Loughran and Ritter, 1995 recommend buy-and-hold return (BHAR) as an alternative to long-term abnormal returns.

3.4. Predictable Hypotheses

Most researchers are in agreement that the presence of government ownership gives rise to inefficiencies and, consequently, poor performance (Megginson, Nash and Randenborgh, 1994, D'Souza and Megginson, 1999; and Megginson and Netter, 2001). The higher the government ownership, the higher the inefficiency as the value maximization motive will be compromised by other motives in the government agenda. The inefficiency increases as the government ownership increases as the monitoring activities by institutions and large non-government block holders decrease.

Consistent with this prediction, Wei, Xie and Zhang (2005) report that higher government ownership in the privatized Chinese firms decreases the firm's performance. To assess the relationship between government ownership and firm performance in our sample, we hypothesize the following:

Hypothesis 1: *The higher the government ownership, the higher the inefficiency.*

The higher the government ownership implies the higher the possibility that the interests of the government and non-government owners will conflict. Information asymmetry problem increases as government ownership increase. In addition, the higher the government ownership implies the lower the potential ownership by institutional and large non-government shareholders.

Potential co-existence of all these problems associated with high government ownership will deter these firms from divulging their true values. Consequently, these firms will resort to the right-offering method of SEO. On the other hand, firms with low government ownership are more likely to have less conflict between the interests of internal and external shareholders, more monitoring role played by institutions and large shareholders, and a lesser degree of information asymmetry. These firms are likely to enjoy better future investment opportunities and will aim to maximize the firm value by choosing the underwriter certification i.e., underwritten public offering. Based on the preceding premise, the following hypotheses are proposed:

Hypotheses 2*: The higher the government ownership, the higher the likelihood that the firm will choose rights offerings;*

Continuing the same argument as above, we add the following two hypotheses regarding the short-term and long-term performance of Chinese firms involved in seasoned equity offerings.

Hypothesis 3: *Short-term performance (abnormal return at announcement) for rights offering would be lower than that of a public offering.*

Hypothesis 4: A. *Long-term performance of firms that choose rights offering is inferior to that of their peer group.*

B. *Long-term performance of public-offering firms is superior to their peer group.*

3.5. Data and Methodology

In this section, we discuss the data source, research methodology, and how we test for price effects of announcements of rights offerings.

3.5.1. Data Source

We obtained the data needed for this study from CSMAR China Stock Market Trading Database and CSMAR China Seasoned New Issue and Rights Offerings Research Database. Our test period covered 1993 through 1998. During this period, the rights offering and public placements were the two predominant methods fof SEOs.

The sample consists of 400 announcements of seasoned equity offerings by firms listed in either Shanghai Stock Exchange or Shenzhen Stock Exchange. 378 of them were standby rights offerings and 22 were underwritten public offerings. The stock price data is obtained from the CSMAR trading database.

3.5.2. Methodology

In the methodology section we elaborate on the econometric techniques used to test each of the hypotheses presented in section IV.

To test Hypothesis 1 (t*he higher the government ownership, the higher the inefficiency)*, we perform both parametric and non-parametric tests. Since all the public offerings were done by firms

with below median government ownership, the Kruskal-Wallis test first divides the sample in terms of below and above median government ownership. Then, it shows the relationship between the extent of government ownership on the one hand and variables that measure and contribute to the inefficiency on the other. The variables we use to assess the inefficiency of the firms are: the non-essential expenses, NESSEX, the investment opportunity set of the firms, INVEX, the debt ratio, DB, the percentage of shares owned by the managers of the firm, MANOWN, and the percentage of shares owned by the institutional shareholders, INST.

Additionally, to test the hypothesis at 1, we use OLS regressions in which ROA and Tobin's Q serve as dependent variables. ROA measures operating performance, while Tobin's Q measures market performance. The regression equation with ROA as the dependent variable is as stated below.

$$ROA = \beta_0 + + \beta_1 NESSEX + + \beta_2 INVEX + \beta_3 DB + \beta_4 MANOWN + \beta_5 INST + \beta_6 GOV + \varepsilon$$

We expect the signs of the non-essential expenses, debt ratio and government ownership to be negative, while the sign of the investment opportunity set, managerial ownership and institutional ownership variables to be positive.

When Tobin's Q serves as the dependent variable, the model takes the following form:

$$Q = \beta_0 + \beta_1 NESSEX + + \beta_2 INVEX + \beta_3 DB + \beta_4 MANOWN + \beta_5 INST + \beta_6 GOV + \varepsilon$$

We expect the signs of the variables NESSEX, DB and GOV to be negative and INVEX, MANOWN and INST to be positive.

To test Hypotheses 2 (*the higher the government ownership, the higher the likelihood that the*

firm will choose rights offerings) we use a Logit model of firms' choice of alternative SEO methods. The dependent variable is 0 if a firm issues a rights offerings and 1 if the firm issues a public offering. The independent variables consist of proxies for agency costs, political costs and investment opportunities, leverage ratio.

To test Hypothesis 3 (*Short-term performance (abnormal return at announcement) for rights offering would be lower than that of a public offering),* we employ the event study methodology recommended by Brown and Warner (1985) to examine the effects of rights issues on stock returns. The abnormal return for firm i on day t is

$$AR_{i,t} = R_{i,t} - R_{m,i,t}$$

Where, $R_{i,t}$ is the return on day t for a firm in our sample, and $R_{m,i,t}$ is the market return on day t. Average abnormal returns for each trading day is:

$$AR_t = \frac{1}{N}\sum_{t=1}^{N} AR_{i,t}$$

Where, N is the number of stocks.

The Cumulative Abnormal Return from day K to L is

$$CAR_{K,L} = \frac{1}{N}\sum_{i=1}^{N}\sum_{t=K}^{L} AR_{i,t}$$

The t-statistics for the null hypothesis that $CAR_{K,L} = 0$ is

$$t_{CAR_{K,L}} = \frac{(\sqrt{N}.CAR_{K,L})}{\sqrt{T.Var(ARt) + 2(T-1)xCov(AR_t, AR_{t+1})}}$$

Where, T= K – L + 1; $Var(AR_t)$ and $Cov(AR_t,AR_{t+1})$ are estimated from 122 days to 11 days before the announcement day and from 11 days to 122 days after the announcement day. The Covariance term adjusts for possible first-order autocorrelation between the abnormal returns due to non-synchronous trading.

To check the robustness of our event study results, we employ a Generalized Least Squares (GLS) regression analysis with CAR as the dependent variable. GLS equation is shown below.):

$$CAR_{i,-1,0} = \alpha_1 + \beta_2 MANOWN_i + \beta_3 INSTi + \beta_4 GOV_i$$

$$+ \beta_5 NESSEX_i + \beta_6 DUMMY_i + \varepsilon_i$$

where, $DUMMY_i$ is a dummy variable that takes value one if the issue is a rights offering and zero if it is a public offering. The MANOWN is the percentage of shares owned by the senior managers. The INST is a variable representing the percentage of shares owned by the institutional shareholders. GOV is the percentage of shares owned by the government, NESSEX is the non-essential expenditure which is calculated as the total expenses minus costs of goods sold, wage expenses and interest expenses as a fraction of total expenses. We add several other variables to the base model to test for the interaction of those variables on the firm's stock price. The other variables chosen are: $SHARE_i$ is the ratio of the number of shares offered to the number of shares outstanding prior to the offering, a proxy for the extent of share dilution in the case for underwritten offerings and the degree of potential shareholder take-up in the case of rights issues, $CAR_{i,-10,-1}$ is the cumulative daily abnormal returns during a ten-day period beginning at 10 days before the issue announcement day, a proxy detecting possible stock price run-up prior to the event day, and STD_i is

standard deviation of stock returns calculated over a period from 125 days before the announcement day and 125 days after the announcement, a proxy for the risk of the issue.

Finally, to test Hypothesis 4 (*Long-term performance of firms that choose rights offerings is inferior to that of the public-offering firms*), we follow two procedures. First, we use Loughran and Ritter (1995) methodology to calculate the average buy and hold abnormal return (BHAR). The average buy-and-hold abnormal return, BHAR, for τ months is calculates as:

$$BHAR_{\tau} = \frac{1}{N}\sum_{i=1}^{N}[\prod_{t=1}^{\tau}(1+r_{i,t}) - \prod_{t=1}^{\tau}(1+r_{c,i,t})]$$

Where, $r_{i,t}$ is the monthly stock return for announcement firm i and $r_{c,i,t}$ is the monthly market return or the monthly return on matched portfolio firm i. The test statistic for the null hypothesis of no average buy-and-hold abnormal return is the skewness adjusted t-statistic calculated as:

$$t_{BHAR\tau} = t_{BHAR\tau} + (\frac{1}{3}\sqrt{N})(t_{BHAR\tau})^2 skew_{\tau} + (\frac{\sqrt{N}}{6})skew_{\tau}$$

Where, $t_{BHAR\tau}$ is the usual t-statistic for $BHAR_{\tau}$ and $skew_{\tau}$ is the skewness of the $BHAR_t$ series (t=1,…τ)

Second, we use long-term accounting performance to measure the profitability and operating efficiency of the firms post-issuance. The profitability performance measures that we use are: 1) ROA; and 2) Profit Margin. In addition, I use an operating performance measure. The profitability

and operating performance variables are calculated 1 and 2 years post-issuance and compared with a matched sample of firms. The firms in the matched sample are selected according to three criteria: industry affiliation, size and government ownership. In all the cases, we first select a firm that matches the same industry category as the issuing firm, controlling for the size and government ownership percentage. We follow the methodology described in Megginson, Nash and Randenborgh (1994) in a controlling for the government ownership in the matched sample firms selection process. We expect the rights issuing firms to perform worse than their matching group of firms since the inefficiency of the first group would be compounded by the free cash flow problem. On the other hand, we expect that the long-term performance of the public-offering firms would be superior to that of their peer group resulting from the reduction in information asymmetry. .

3.6. Descriptive Statistics

This section shows the summary statistics for the new equity issue method. The descriptive summary proceeds into two parts: First, we present the industry classification table of the sample of firms issuing rights offerings and public offerings. Second, we present the total number of issues per year and total proceeds from the issues. Third, we present a modified table where we use the median of the government ownership variable to divide the total sample in two sub-samples; above and below median.

Table 1 shows the total number of companies that issued new equity during the period 1993-1998 classified according to the major industry group.

Table 1: Industry Classification of a sample of 400 Seasoned Equity Offerings (SEOs) with 378 Standby Rights Offerings (ROs) and 22 Underwritten Public Offerings (Pos) during the period 1993-1998. The SEOs are identified from the Chinese Rights Offerings database. (CSMAR)

Industry Type	Rights Offerings (RO)	Public Offerings (PO)	RO %	PO %
Electrical, Electronic and Industrial Manufacturing Equipment	125	12	33.07%	54.55%
Mining and Metal Products	39	2	10.32%	9.09%
Information Technology	63	3	16.67%	13.64%
Consulting Services	18	0	4.76%	0.00%
Real Estate	28	0	7.41%	0.00%
Paper, Publishing and Consumer Goods	64	4	16.93%	18.18%
Transportation	14	0	3.70%	0.00%
Conglomerates	9	0	2.38%	0.00%
Retailing	5	0	1.32%	0.00%
Food and Beverages	7	0	1.85%	0.00%
Miscellaneous	6	1	1.59%	4.55%
Total	**378**	**22**	**100%**	**100%**

Table 2 reports the number of rights offerings and public offerings per year. During the period of 1993 to 1998 there has been a steady increase in the use of rights offerings as a primary method of equity issue. While for the case of public offerings, there isn't a steady increase in its usage. Table 2 reports also the total net proceeds per year from issuing new equity. The total net proceeds which is in billions of the Chinese currency Renminbi, is calculated as the total proceeds from the offering minus the total issuing expenses.

Table 2: Distribution of a sample of 400 Seasoned Equity Offerings (SEOs) with 378 Standby Rights Offerings (ROs) and 22 Underwritten Public Offerings (POs) during the period 1993-1998. The Total Net proceeds are in billions of Chinese Currency Renminbi (RMB), calculated as the total proceeds from the equity issue minus the total issuing expenses. The SEOs are identified from the Chinese Rights Offerings database. (CSMAR)

Year	Number of SEOs	Rights Offerings (Standby)	Underwritten Public Offerings	Total Proceeds from ROs	Total Proceeds from POs
1993	20	15	5	5.16	0.47
1994	35	31	4	5.79	0.38
1995	56	55	1	14.86	0.08
1996	41	41	0	96.48	0.00
1997	105	101	4	841.37	0.26
1998	143	135	8	965.15	1.48
Total	400	378	22	1,928.81	2.67

In Table 3 we report the number of seasoned equity offerings divided into two groups by the median of the percentage of government ownership variable, GOV, the median being 0.2091. The total sample of 400 firms is divided into two half, and there are only Rights offerings firms in the upper half, while all the 22 public offering firms are in the lower half of the sample. The interesting result to report from table 3 is the fact that all the underwritten public offerings were made by firms that have low government ownership. Therefore, just by comparing the two sub-samples, we notice that firms with higher government ownership rely exclusively on rights offerings as their equity issue

method, while firms issuing public offerings have lower government ownership concentration.

Table 3: Distribution of the total sample of 400 Seasoned Equity Offerings (SEOs) with 378 Standby Rights Offerings (ROs) and 22 Underwritten Public Offerings (Pos) during the period 1993-1998 divided by the median (0.2091).

Government Ownership	SEO Type	
	ROs	POs
Above Median	201	0
Below Median	177	22

In table 4 we report the correlation matrix of the variables that will be used in the regression analysis. The results clearly shows that correlation between ROA on the one hand and NESSEX, DB, and GOV on the other is negative, although only GOV's coefficient is statistically significant.. This provides indirect evidence of inefficiency when government ownership is relatively high.

Table 4: The correlation matrix of the variables used, the ROA, NESSEX, non-essential expenses, DB, the debt ratio, INVEX, the investment opportunity set, and the percentage of shares owned by the government, GOV, MANOWN, the managerial ownership percentage and the INST, the institutional ownership percentage.

Variable	NESSEX	INST	MANOWN	INVEX	DB	GOV	ROA
Non-Essential Expenditure (NESSEX)	1.00						
Institutional shareholders (INST)	-0.133[c]	1.00					
Managerial Ownership (MANOWN)	-0.042	0.173[c]	1.00				
Investment opportunity Set (INVEX)	-0.215[b]	0.272[b]	0.051	1.00			
Debt Ratio (DB)	0.114	-0.121	-0.069	-0.105	1.00		
Government Ownership (GOV)	0.513[a]	-0.214[c]	-0.072	-0.317[b]	0.216[c]	1.00	
ROA	-0.141	0.184[c]	0.056	0.271[a]	-0.108	-0.214[b]	1.00

[a] significant at 1%,[b] significant at 5% ,[c] significant at 10%

3.7. Empirical Results

The empirical analysis part is divided into 4 sections within which we test each of the hypotheses proposed in section IV of the essay. In the first section we establish the relationship between government ownership and firm efficiency. In the second section, we study the effect of the government ownership on the choice of the seasoned equity offering method. In the third section, we study the short-term performance of the firms issuing SEOs. Finally, in the last section, we study the long-term performance of the equity issuing firms post-SEO.

3.7.1. Government ownership and firm efficiency

The relationship between government ownership and firm efficiency is tested using parametric and non-parametric tests. Table 5 reports the results of the non-parametric, Kruskal-Wallis test.

Table 5: The sample of 400 firms issuing SEOs during the period 1993-1998 is divided by the median value of the government ownership variable, GOV into two sub-samples. For each independent variable, the median is calculated for each sub-sample; the Chi-square statistic is the Kruskal-Wallis test of medians.

Variable	Above Median	Below Median	Chi-Square statistic	Asymptotic Significance
Non-Essential Expenditure (NESSEX)	0.0684	0.0473	13.594	0.003
Institutional shareholders (INST)	0.0931	0.1431	14.485	0.001
Managerial Ownership (MANOWN)	0.0107	0.0195	2.667	0.314
Investment opportunity Set (INVEX)	0.0915	0.0597	11.391	0.005
Debt Ratio (DB)	0.1184	0.0513	18.284	0.001

The total sample of firms issuing SEOs is divided by the median value of government ownership, GOV (the median being 0.2091). The independent variables are the 1) NESSEX, the non-essential expenses which is computed as the total expenses

minus costs of goods sold, wage expenses and interest expenses divided by the total expenses; 2) INVEX, the Investment expenditure which is the long-term investment expenditure divided by the total assets; 3) DB, the debt-to-asset ratio; 4) MANOWN, the percentage of shares owned by the firms managers; 5) INST, the percentage of shares owned by the institutional shareholders of the firm.

For each of the independent variables in the table we find the median value for each sub-sample and use the Kruskal-Wallis test for the medians. The non-essential expense (NESSEX) and debt ratio (DB) are significantly larger for firms with high government ownership than their low government counterparts, while Institutional holdings (INST) variable of the former is significantly lower than the latter. These results attest to the inefficiencies of and lack of monitoring for firms with high government ownership This may explain why these firms were unable to take advantage of higher (than firms with low government ownership) investment opportunity set.

In order to test hypothesis 1, we use two OLS regressions. In the first regression, ROA is the dependent variable. The independent variables are: 1) the non essential expenses, NESSEX; 2) the investment opportunity set, INVEX; 3) The debt ratio, DB; and 4) the Government ownership, GOV. The results are presented in Table 6.

Table 6: The dependent variable is the ROA, the independent variables are NESSEX, non-essential expenses, DB, the debt ratio, INVEX, the investment opportunity set, and the percentage of shares owned by the government, GOV.

	Regression 1
Intercept	4.666[a]
	(8.380)
NESSEX	-0.752[b]
	(-1.990)
INVEX	0.027
	(0.347)
DB	-0.193[a]
	(-3.946)
GOV	-1.287[b]
	(-1.641)
MANOWN	-0.032
	(-0.405)
INST	0.915[c]
	(1.371)
R^2	0.398

[a] significant at 1%,[b] significant at 5% ,[c] significant at 10%

Table 6 demonstrates that the higher the government ownership, the lower the firm's operating performance (ROA). The coefficient of GOV is negative and significant at the 5% level. Consistent with this finding, the coefficients of NESSEX and DB are negative, while that of INST is positive. All three coefficients are statistically significant.

In Table 7, we use Tobin's Q as the dependent variable while independent variables are the same as in Table 6. Table 7 confirms the results in Table 6. Consistent with hypothesis 1, firms with higher government ownership, higher debt ratio and higher non-essential expenses are likely to have lower Q. A major conclusion that can be derived from Table 6 and 7 is that high government ownership adversely affects both the operating and market performance of a firm.

Table 7: OLS regression with the dependent variable being Tobin's q ratio, Q. The independent variables are the non-essential expenses, NESSEX, the investment opportunity set, INVEX, the debt ratio, DB, the government ownership percentage, GOV, the percentage of managerial ownership shares, MANOWN, and the percentage of institutional shares, INST.

	Regression 1
Intercept	11.369[a]
	(7.369)
NESSEX	-0.697[a]
	(-2.522)
INVEX	0.369
	(0.328)
DB	-0.295[a]
	(-7.946)
GOV	-0.532[b]
	(-2.179)
MANOWN	0.018
	(0.325)
INST	0.985[a]
	(3.647)
R^2	0.278

[a] significant at 1% [b] significant at 5% [c] significant at 10%

3.7.2. Government Ownership and Choice of SEO method

In Hypothesis 2, we argue that that higher government ownership and the resulting poor performance would likely render these firms to choose the rights offering method to raise external equity. To test this hypothesis, we perform a logistic regression in which we attempt to determine the variables that affect a firm's choice of one of the two available methods of seasoned equity offerings. When a firm chooses rights offering, the dependent variable takes on a value of 1, when it chooses underwritten public offering, its value is 0. Table 8 we report the results of the logistic regression.

Table 8: Binary logistic regression to explain the choice of the SEO method using a sample of 400 SEOs with 378 Standby Rights Offerings (ROs) and 22 Underwritten Public Offerings (POs) during the period 1993-1998. The dependent variable is the method of raising equity which takes on a value of 1 when a firm issues ROs and 0 for when it issues POs. MANOWN is the percentage shares held by managers, INST is the percentage of shares held by the Institutional shareholders including institutional and private investors but excluding the government. GOV is the percentage of shares held by the government. NESSEX is the ratio of non-essential expenditures over total expenses. MB is the market to book ratio. INVEX is the long-term investment expenditure to total asset ratio. DB is the total debt over total assets ratio. SEOP is the logarithm of the net proceeds from the SEO. ROE is the return on equity ratio. Industry dummy is a variable presenting the industry classification of the different firms.

	Regression 1	**Regression 2**	**Regression 3**	**Regression 4**
Intercept	-0.341	-0.298	-0.425	-0.384
	(0.418)	(0.441)	(0.517)	(0.418)
MANOWN	-1.845	-1.985	-1.136	-1.274
	(0.107)	(0.118)	(0.481)	(0.394)
INST	-0.759 [b]	-0.548 [b]	-0.948 [b]	-0.824 [b]
	(-1.978)	(-2.047)	(-1.917)	(-2.118)
GOV	0.895 [b]	0.721 [b]	0.687 [b]	0.597 [b]
	(1.895)	(1.958)	(2.130)	(1.985)
NESSEX	2.647 [c]	1.698 [c]	1.874 [c]	1.742 [c]
	(3.147)	(3.127)	(2.841)	(2.982)
MB	0.127	0.247	0.096	0.147
	(0.187)	(0.217)	(0.169)	(0.278)
INVEX	-0.547	-0.687	-0.519	-0.511
	(0.297)	(0.314)	(0.409)	(0.427)
DB	0.478	0.419	0.485	0.397
	(0.586)	(0.506)	(0.621)	(0.587)
ROA		-0.096		
		(0.547)		
SEOP			-1.487 [a]	
			(0.007)	
Industry dummy				3.047
				(0.317)
Pseudo R^2	0.294	0.305	0.275	0.297

[a] significant at 1% [b] significant at 5% [c] significant at 10

Table 8 reports four different models of binary logistic regression; in Equation 1, right-hand side variables are MANOWN, INST, GOV, NESSEX, MB, INVEX, and DB. Equation 2 adds to these ROA, while Equation 3 replaces ROA with SEO proceedings (SEOP) and in Equation 4, an industry dummy is added to assess the effect of different industries on the choice method. The industry dummy is a qualitative variable to account for the effect of different industry classifications among the firms issuing rights offerings and public offerings. In all three regressions, rights offering firms are characterized by high government ownership, high non-essential expenses, and low institutional holdings.

All three variables are statistically significant. The opposite is true when a firm issues public offering. The industry dummy does not have a significant coefficient in equation four, therefore the industry effect on the choice of the offering method is not affected by the firm's industry classification. The variable SEO proceeding shows that the higher the proceeding of the seasoned equity offering, the more likely the firm will issue public offering over rights offerings.

3.7.3. Short-Term Performance

Our third hypothesis is an extension of Hypothesis 2. Our logic proceeds as follows. High government ownership introduces inefficiencies which lead to poor performance. Because of the poor performance record, a firm with high government ownership will prefer the rights offering method to public placement. Consequently, the firms issuing rights offering will receive lower abnormal returns than their public-offering counterparts. To test this hypothesis, we examine the abnormal returns at the announcements of the issuance of the two offering methods. We apply the conventional event study methodology for this purpose. The abnormal returns are calculated using the market model parameters estimated over a 220-day period ending 21 days before the announcement date (as estimated by Eckbo and Masulis, 1992). The results are reported in Tables 9 and 10. Table 9 reports the abnormal returns for rights offering announcement, while Table 10 does the same for public placement announcements.

Table 9:Cumulative abnormal returns for a sample of 378 Rights offering firms during the period 1993-1998. The ROs are identified from the Chinese Rights Offerings database. (CSMAR). Abnormal returns are calculated using the market model parameters estimated over a 220-day period ending 21 days before the announcement date. The Chinese stock market's equally weighted index is used in the market model to compute betas. The abnormal returns are calculated in the intervals. The Wilcoxon signed rank test for the differences in medians appears in the last column.

	Cumulative abnormal returns for RO firms			
Interval	**Mean %**	**Z – statistic**	**Median %**	**Signed rank test**
-5 , -1	-0.74	-1.543	-0.45	-874.50
-1 , 0	-2.51	-10.369[a]	-1.54	-4589.50[a]
0	-2.19	-14.547[a]	-0.98	-4236.50[a]
-1 , +1	-3.54	-10.347[b]	-2.14	-5147.50[a]
+1 , +5	-0.27	-1.0551[d]	-1.05	-2365.50[c]
-10 , +1	-2.19	-7.364[a]	-3.54	-4572.50[a]
-10 , +10	-2.84	-8.254[a]	-4.58	-4258.50[a]

[a] significant at 0.1% [b] significant at 1% [c] significant at 5% [d] significant at 10%

Table 9 shows that announcement effects of the rights offering are consistently negative and statistically significant. The cumulative abnormal return (CAR) for the window of (-1, 0), a window often reported by researchers is -2.51% and is significant at the 0.1% level.

The results are quite opposite, as Table 10 demonstrates, when a firm chooses public offering. CARs are positive and significant for all windows. CAR for the (-1, 0) window is 7.58% and significant at the 0.1% level.

Table 10: Cumulative abnormal returns for a sample of 22 Public offering firms during the period 1993-1998. The POs are identified from the Chinese Rights Offerings database. (CSMAR). Abnormal returns are calculated using the market model parameters estimated over a 220-day period ending 21 days before the announcement date. The Chinese stock market's equally weighted index is used in the market model to compute betas. The abnormal returns are calculated in the intervals. The Wilcoxon signed rank test for the differences in medians appears in the last column.

	Cumulative abnormal returns for the PO firms			
Interval	**Mean %**	**Z – statistic**	**Median %**	**Signed rank test**
-5 , -1	5.12	14.214[a]	4.98	3541.50[b]
-1 , 0	7.58	71.547[a]	6.78	4102.50[a]
0	4.56	61.247[a]	3.41	4431.50[a]
-1 , +1	11.36	54.254[a]	9.68	5197.50[a]
+1 , +5	3.02	10.369[a]	2.11	2476.50[d]
-10 , +1	27.36	41.367[a]	18.54	7849.50[a]
-10 , +10	24.31	47.256[a]	17.63	7852.50[a]

[a] significant at 0.1% [b] significant at 1% [c] significant at 5% [d] significant at 10%

To summarize the results in Tables 9 and 10, investors in Chinese firms react negatively to rights offering and positively to underwritten public offerings. The results are consistent with our third hypothesis H3 and clearly indicate that the rights offering signals bad news, while public offering signals good news to investors. This finding is of particular interest because opposite finding appear to prevail for the non-Chinese firms. A large number of studies on U.S. firms have shown that SEOs are associated with negative abnormal returns, especially when the method used is firm commitment underwritten offer. On the other hand, studies (Kang and Stulz, 1996 and Bøhren, Eckbo and Michalsen, 1997) document positive abnormal returns to uninsured rights issues in other countries. The unique ownership structure of Chinese firms might explain this contradiction.

In Table 11, we validate our finding in Tables 9 and 10 that negative (positive) abnormal returns of rights offering firms (public offering firms) are related to the extent of government ownership in Chinese semi-privatized firms. To explain the abnormal returns surrounding SEO issue announcements, we estimate the cross-sectional regression using Generalized Least Squares (GLS) where the dependent variable is the cumulative abnormal return over the window (-1, 0). We estimate 3 different models of the equation to assess the effect of different variables on the stock price.

Table 11: GLS regression to explain the valuation effect of the SEO announcement a sample of 400 SEOs with 378 Standby Rights Offerings (ROs) and 22 Underwritten Public Offerings (POs) during the period 1993-1998. The dependent variable is an the cumulative abnormal return during the two-day announcement window CAR(-1,0). The independent variables are: MANOWN is the percentage shares held by managers, FIVEMAJ is the percentage of shares held by the five major shareholders including institutional and private investors but excluding the government. GOV is the percentage of shares held by the government. NESSEX is the ratio of non-essential expenditures over total expenses. SEOP is the logarithm of the net proceeds from the SEO. SHARE is the ratio of the number of shares offered to the number of shares outstanding prior to the offer. STD is the standard deviation of stock returns calculated over a period from 125 days before the announcement to 125 days after the announcement. DUMMY is an indicator variable equal to 1 if it is a RO and 0 if it is a PO. The p-values are reported under each coefficient in the parentheses.

	Regression 1	**Regression 2**	**Regression 3**
Intercept	0.759	0.187	0.107
	(0.211)	(0.164)	(0.157)
MANOWN	0.137	0.096	0.104
	(0.248)	(0.305)	(0.281)
INST	0.169 [c]	0.147 [b]	0.106 [b]
	(0.074)	(0.036)	(0.041)
GOV	-0.039 [b]	-0.024 [b]	-0.025 [b]
	(0.031)	(0.018)	(0.021)
NESSEX	-0.057	-0.007	-0.007
	(0.549)	(0.517)	(0.274)
SHARE		0.147	
		(0.194)	
STD			-0.687
			(0.247)
DUMMY	-0.516 [a]	-0.368 [a]	-0.321 [a]
	(0.000)	(0.000)	(0.000)
R^2	0.348	0.324	0.218

[a] significant at 1% [b] significant at 5% [c] significant at 10%

Three variables that affect announcement returns are the government ownership concentration, institutional holding, and the dummy variable representing the method of external equity financing. Government ownership and rights offering negatively affect, while institutional holding positively affect announcement returns. In summary, higher ownership by the government destroys value, but higher institutional ownership creates value. The results support hypothesis 3.

3.7.4. Long-term performance Analysis

Hypothesis 4 states that long-term post-announcement performance of rights issuing firms will be inferior to that of public offering firms. In this section, we examine both market and operating performance of Chinese firms that issued seasoned equity offering.

In examining long-term performance, it is necessary to select a benchmark against which the sample performance must be evaluated. Barber and Lyon (1997) find that results are influenced by the benchmark being selected. We select two benchmarks for the purpose of comparisons.

The first benchmark consists of firms which 1) did not issue new equity during the same period, 2) belonged to the same industry, 3) were of similar to post-issuance asset size, and 4) similar degree of government ownership as the SEO firms. If a matching company could not be found in the same industry, we select a company closest to the issuing company's industry with similar size. This benchmark is used to evaluate both operating and market performance. When evaluating market performance, we add the market return (weighted average of returns of stocks listed in the two exchanges in China) as a second benchmark..

Table 12 compares the market performance of the rights and public offering firms with that of the two benchmarks stated above. Panel A of Table 12 shows that the long-term market performance of the rights offering sample is significantly inferior to that of the benchmarks. This result is especially true for +2 and +3 years. Rights issuing firms significantly under-perform the market portfolio by 5.85% and 10.27% in year +2 and year +3 respectively. Compared to the matched sample, their levels of underperformance

are 13.58% and 12.08% in year +2 and year +3 respectively. Both differences are significant at the 5% level

Table 12: Long-term returns of Rights issuing firms and public issuing firms with their respective non-issuing matching firms using holding period return method. The sample of matching firms for the rights issuing firms consists of 200 firms matched in size and industry and government ownership concentration (The mean of the government ownership percentage is 30% while the median is 19%) with the Rights issuing firms. The sample of matching firms of the public issuing firms consist of 20 firms matched in size, industry and government ownership percentage with the Public issuing firms (The mean of the government ownership percentage is 11% while the median is 9%). The mean difference is tested using a two-tail t test while the median difference is tested using a nonparametric Wilcoxon Z test.

	1 year (+1)		2 years (+2)		3 years (+3)	
	Mean	Median	Mean	Median	Mean	Median
PANEL A. MARKET PERFORMANCE OF RIGHTS ISSUING FIRMS						
Comparison with market return						
Return of Rights Offering Firms	11.45	7.81	20.63	17.69	47.24	31.64
Market Return	11.87	6.23	26.48	19.32	57.51	41.94
Difference	-0.42	1.58	-5.85[b]	-1.63	-10.27[a]	-10.3[b]
Comparison with matched firms						
Return of Rights Offering Firms	11.45	7.81	20.63	17.69	47.24	31.64
Return of the matched firms	12.67	8.29	34.21	21.48	59.32	40.21
Difference	-1.22	-0.48	-13.58[b]	-3.79[c]	-12.08[b]	-8.57[b]
PANEL B. MARKET PERFORMANCE OF PUBLIC OFFERING FIRMS						
Comparison with market return						
Return of Public Offering Firms	16.75	10.12	24.36	18.34	57.91	40.56
Market Return	11.87	6.23	26.48	19.32	57.51	41.94
Difference	4.88[b]	3.89[b]	-2.12	-0.98	0.4	-1.38
Comparison with matched firms						
Return of Public Offering Firms	16.75	10.12	24.36	18.34	57.91	40.56
Return of the matched firms	10.68	3.69	17.42	15.11	36.79	24.37
Difference	6.07[b]	6.43	6.94[b]	3.23	21.12[a]	16.19[a]

[a] significant at 1% [b] significant at 5% [c] significant at 10%

Opposite results hold true for the public offering group. The group significantly outperforms the market in year +1. Compared to the matched sample, this group performs significantly better in all three of the post-issuance period. These results are consistent with our hypothesis that long-term market performance of the rights offering group is inferior to its public offering counterpart.

Table 13: Comparison of long-term accounting performance between firms issuing rights offerings and a matched sample firms. The sample of matched firms consists of 200 firms matched in size, industry and government ownership percentage with the Rights issuing firms (The mean of the government ownership percentage is 30% while the median is 19%). The mean difference is tested using a two-tail t test while the median difference is tested using a nonparametric Wilcoxon Z test. The ROA is calculated as the net income over total assets. The Operating performance is calculated as income from operations divided by the total assets. The profit margin is calculated as net income over revenue.

	Pre-offering year		Offering Year		1 Year after offering		2 Years after offering	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
PANEL A. ACCOUNTING PERFORMANCE OF RIGHTS ISSUERS								
a) ROA								
Rights Issuing Firms	2.36	1.2	2.11	1.03	1.95	0.87	2.09	1.41
Matched Sample	2.41	1.24	3.14	2.11	3.65	2.32	3.71	2.78
Difference	-0.05	-0.04	-1.03	-1.08	-1.7[c]	-1.45[b]	-1.62[c]	-1.37[b]
b) Operating Performance (EBIT/TA)								
Rights Issuing Firms	3.41	1.98	4.02	2.15	3.17	1.07	3.11	1.87
Matched Sample	5.47	2.36	5.21	2.34	5.11	2.41	4.89	2.13
Difference	-2.06[b]	-0.38	-1.19	-0.19	-1.94[b]	-1.34[c]	-1.78[b]	-0.26
c) Profit Margin								
Rights Issuing Firms	5.31	2.86	5.14	2.54	4.52	2.17	3.98	1.98
Matched Sample	7.13	3.25	8.04	3.21	5.69	3.18	6.02	3.52
Difference	-1.82[b]	-0.39	-2.9	-0.67	-1.17[c]	-1.01	-2.04[a]	-1.54[b]
PANEL B. ACCOUNTING PERFORMANCE OF PUBLIC PLACEMENT ISSUERS								
a) ROA	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Public Issuing Firms	4.23	2.05	5.03	2.12	5.29	2.35	5.87	2.47
Matched Sample	4.38	1.98	4.41	2.08	4.17	1.87	4.32	1.96
Difference	-0.15	0.07	0.62	0.04	1.12[c]	0.48	1.55[b]	0.51
b) Operating Performance (EBIT/TA)								
Public Issuing Firms	7.15	4.52	8.02	4.57	8.32	4.68	8.47	4.97
Matched Sample	7.25	4.17	7.11	3.68	7.21	3.67	7.23	3.48
Difference	-0.1	0.35	0.91	0.89	1.11[b]	1.01	1.24[b]	1.49[b]
c) Profit Margin								
Public Issuing Firms	10.14	7.11	11.03	7.86	11.89	8.01	10.34	7.25
Matched Sample	9.24	6.54	9.87	6.13	9.97	6.88	8.97	5.37
Difference	0.9	0.57	1.16[b]	1.73[b]	1.92[b]	1.13[b]	1.37[b]	1.88[b]

[a] significant at 1% [b] significant at 5% [c] significant at 10%

Table 13 compares the accounting performance of SEO issuers with the matching benchmark. Panel A concerns the rights offering group, while Panel B deals with the public offering group. The accounting performance of the two groups mirrors their market performance shown in Table 12. On all three measures of accounting performance, the rights issuers under-perform, while issuers of public offers out-perform their corresponding matching groups. Once again, the results are for +1 and +2 are significant. . The mean value of the difference between the ROA of the rights offering firms and its matched sample is -1.7 after 1-year and -1.62 after 2-years, both significant at the10% level. The mean value of the difference of the operating profit between the rights offering firms and its matched sample is -1.94 after 1-year and -1.78 after 2-years, both significant at the 5% level. Finally, the mean value of the difference of the profit margin between the rights offering firms and its matched sample is -1.17% after 1-year and -2.04% after 2-years, the first being significant at the 5% while the second at the 1% level. Median differences give similar results. To sum up, the post-issue performance of the rights- issuing firms deteriorates while the same for the public-offering firms further improves relative to their respective peer groups.

For the sample of public offering firms the accounting performance is better than the matched sample. The mean value of the difference between the ROA of the public offering firms and its matched sample is 1.12% after 1-year and 1.55% after 2-years, both significant at the10% level. The mean value of the difference of the operating profit between the public issuing firms and its matched sample is 1.11% after 1-year and 1.24% after 2-years, both significant at the 5% level. Finally, the profit margin of the public issuing firms exceeds that of the matched sample by 1.92% in year +1 and 1.37% in year

+2. Both results are significant at the 5% level. The median difference results are similar results to those of the means difference.

Table 14: Comparison of long-term accounting performance between firms issuing rights offerings and firms issuing public offerings; the sample of firms issuing rights offerings is 378 firms, while the sample of firms issuing public offerings is 22 firms. The mean difference is tested using a two-tail t test while the median difference is tested using a nonparametric Wilcoxon Z test.

	Pre-offering year		Offering Year		1 Year after offering		2 Years after offering	
Return on assets (ROA)	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**
Rights Issuing Firms	2.36	1.2	2.11	1.03	1.95	0.87	2.09	1.41
Public Issuing Firms	4.23	2.05	5.03	2.12	5.29	2.35	5.87	2.47
Difference	-1.87[b]	-0.85	-2.92[a]	-1.09[c]	-3.34[a]	-1.48[b]	-3.78[a]	-1.06[c]
Operating Performance (EBIT/TA)								
Rights Issuing Firms	3.41	1.98	4.02	2.15	3.17	1.07	3.11	1.87
Public Issuing Firms	7.15	4.52	8.02	4.57	8.32	4.68	8.47	4.97
Difference	-3.74[a]	-2.54[a]	-4.00[a]	-2.42[a]	-5.15[a]	-3.61[a]	-5.36[a]	-3.1[a]
Profit Margin								
Rights Issuing Firms	5.31	2.86	5.14	2.54	4.52	2.17	3.98	1.98
Public Issuing Firms	10.14	7.11	11.03	7.86	11.89	8.01	10.34	7.25
Difference	-4.83[a]	-4.25[a]	-5.89[a]	-5.32[a]	-7.37[a]	-5.84[a]	-6.36[a]	-5.27[a]

[a] significant at 1% [b] significant at 5% [c] significant at 10%

We confirm the results found about by comparing the long-term performance of the two samples together. In Table 14, we compare the long-term accounting performance of the two samples; rights offering firms with the public offering firms. The mean difference for the three accounting measure is negative and significant, confirming hypothesis 4. Table 15 reports the buy and hold abnormal returns of the two samples. Again, rights issuing firms under-perform public offering firms in all three post- issuance years

Table 15: Long-term returns of Rights offering firms compared to Public offering firms using holding period return method. The mean difference is tested using a two-tail t test while the median difference is tested using a nonparametric Wilcoxon Z test

	1 year		2 years		3 years	
	Mean	Median	Mean	Median	Mean	Median
Comparison of two samples together						
Return of Rights Issuing Firms	11.45	7.81	20.63	17.69	47.24	31.64
Return of Public Offering Firms	16.75	10.12	24.36	18.34	57.91	40.56
Difference	-5.3[a]	-2.31[a]	-3.73[a]	-0.65	-10.67[a]	-8.92[a]

[a] significant at 1% [b] significant at 5% [c] significant at 10%

To summarize, the evidence presented in Table 12 through Table 15 strongly supports our hypothesis that SEO firms that make rights offering significantly under-perform their public offering counterparts.

3.8. Conclusion

Privatization process in China that started in the early 1990's has created a unique ownership structure in which the central government continues to own a large portion of the company. However, the extent of government ownership varies from one firm to another. The primary purpose of this essay is to demonstrate that a) the higher the government ownership, the inferior the firm performance and the greater the probability that the firm will choose rights offering over public placement when making seasoned equity offering.

This study covers a period that spans from 1993 through 1998. During this period, two primary methods for the seasoned equity offering were rights offering and public offering. Four hypotheses that this study examines are:

1) Higher government ownership produces inefficiencies in the firm. The inefficiency results from agency conflicts as the wealth-maximization goal may be compromised by the social and political agenda of the government.
2) Inefficiency of a firm, due to high government ownership, would lead to inferior performance of this firm relative to a firm that has low government ownership.
3) Due to poor performance, a firm with high government ownership would prefer rights offering to public offering, as the latter process requires certification from the underwriter.

4) The market would perceive rights offering as signaling bad news and react accordingly. Consequently, the abnormal return to the announcement of rights offering would be lower (less positive or more negative) than that of the public offering announcement. Long-term performance of firms issuing rights offering would also be inferior to that of firms issuing public placement.

The results reported in this study are consistent with the above hypotheses. Higher government lead to greater inefficiency (higher unnecessary expenses and leverage). Pre-announcement market (Tobin's Q) and operating performance (ROA) of firms with high government ownership are significantly lower than firms with lower government ownership. A firm with high government ownership is more likely to choose rights offering as a way to issue seasoned equity. Both short-term and long-term (post-issuance) performance of the rights offering group are inferior to its public offering counterpart. The result regarding announcement returns associated with the issuance of seasoned equity is opposite of what is found for the U.S. firms, where abnormal returns are in general positive for rights offering and negative for public offering. The unique ownership structure for Chinese firms might explain this dichotomy.

3.9.References

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IV. Chapter III - Government Ownership, Firm value, and Choice of SEO Methods for Chinese Firms during 1999-2003

4.1. Introduction

The positive announcement effect of private placement is well documented in the finance literature. Usually, private placements are viewed differently from other types of equity issues such as rights offerings or underwritten public offerings. In rights offerings and public offerings, the potential equity buyer is considered a passive investor and therefore the adverse-selection model of Myers and Majluf (1984) applies to the equity financing. In contrast, in private placements, the investors can play more active role, either informational or organizational, in the firm's issuing the private placements.

Two hypotheses have been proposed to explain the positive announcement effect of private placements, changes in ownership concentration (Wruck, 1989) and mitigation of asymmetric information (Hertzel and Smith, 1993); both of them are based on the premise of active monitoring of the private placement investor is value enhancing for the firm. Wruck (1989) finds that the announcement returns are related to changes in ownership concentration, consistent with the non-linear relationship between firm value and ownership structure suggested by Morck, Shleifer and Vishny (1988). Wruck (1989) argues that new equity blocks placed causes a substantial change in the ownership concentration, therefore creating a monitoring effect. Using the same definition for announcement returns as introduced by Wruck (1989), Hertzel and Smith (1993) find that the announcement returns are related to placement price discounts and new block sizes. They argue that price discounts reflect information costs that the new investors incur in

private placement. As a result, the gain of firm value should be related to fraction placed (a proxy for the amount of valuation uncertainties to be mitigated). They hypothesize that in private placement new block-holders play role mitigating asymmetric information, or create a certification effect.

Starting the early 1990s, the Chinese government started the gradual privatization process of the Chinese State-Owned Enterprises (SOEs). However, until 1999, there weren't complete and clear laws regulating the stock markets operation, protecting the investor and reducing market manipulation and insider trading. Starting 1999, the Chinese government adopted major laws organizing and modernizing the two stock markets; Shanghai and Shenzhen. One of the major effects of the new rules was the introduction of private placements as a third method of raising equity capital. From the inception of the Chinese stock markets, Chinese firms were only using two methods to issue new equity: rights offerings and underwritten public offerings. However, starting 1999, more and more firms started using private placements as a third tool to issue new equity.

In the first essay of the dissertation, we establish that the government ownership is a major determinant in the choice of the seasoned-equity issue (SEO) in Chinese firms. Firms with higher government ownership concentration use rights offerings as their primary method of raising equity, while firms with lower government ownership use public offerings. Also, the firms with higher government ownership are less-efficient and their financial performance deteriorates after 2 years post-SEO. The large percentage of shares owned by the Chinese government well beyond the privatization of SOEs is explained by the social and political agenda of the government. The change in the

regulations and the introduction of private placements as a third equity issue method raises two important questions that need to be investigated.

The main purpose of the paper is twofold. First, we investigate whether the evidence from the U.S literature that the monitoring or certification effect of the private placements apply to the Chinese firms in other words, does the change in ownership concentration has a positive impact on firm value. Second, we study whether the government ownership affects firm value and its choice of the equity issue method. The next section highlights the motivation of the paper, its contribution to the current literature and its implications on the effects of ownership change in firms.

4.2. Motivation and Contribution

The objective of this paper is to study the relationship between the change in ownership concentration and firm performance in Chinese firms during the period of 1999-2003. The majority of Chinese SOEs were privatized early 1990s, however with a large percentage of shares still owned by the government. On 1998, the Chinese government undertook a major reform of the stock market by modernizing the rules and regulations that protects the investor and controls for market manipulation and insider trading. The main questions raised in this paper are divided into two categories. One section of the paper examines the relationship between the change in the ownership concentration and the performance of the firm. The second part of the paper focuses on effects of the government ownership on firm value and its choice of equity issuing method.

Therefore, the paper tries to answer the following three questions:

1. Do the private placements as a new equity issue method, affect firm value and performance due to the monitoring effects of the new ownership on the firm?
2. Does the monitoring effect of private placements as it is documented in the finance literature apply to the Chinese case: does the change in ownership concentration have positive effect on firm value?
3. Does the government ownership affect firm value and its choice of equity issuing method?

The paper is organized as follows: the next section expands on the literature that is related to the private placements and change in ownership concentration. Section four explains the predictable hypotheses. Section five elaborates on the sample selection and the methodology used followed by section six which highlights the summary statistics. The following section reports empirical results and relates them to the predictable hypotheses. Finally, the last section concludes and summarizes the paper.

4.3. Literature Review

The positive announcement effect of SEOs has been associated with private equity issues. The evidence applies for both U.S and international context (e.g., Wruck, 1989 and Hertzel and Smith, 1993, for the U.S.; Kato and Schallheim, 1993 and Kang and Stulz, 1996, for Japan; Cronqvist and Nilsson, 2005, for Sweden). The existing literature offers two widely cited hypotheses. First, Wruck (1989) argues that private equity sales are usually highly concentrated. Therefore, insiders' ownership structure is significantly

changed after the placement. Wruck (1989) finds a significant relationship between the announcement returns and ownership concentration changes. In particular, the relationship shows that private sales that cause managers to be more aligned with the interests of shareholders add value. Conversely, private sales that cause management entrenchment or less interest-alignment with shareholders destroy value. Thus, new private equity sales induce a nonlinear relationship between firm value and ownership, in line with the Morck, Schleifer and Vishny (1988) hypothesis. From this evidence, Wruck (1989) concludes that the monitoring/entrenchment effect can explain the positive announcement effect of private equity placements. Ownership structure effects have been studied by looking at the changes in the level of ownership concentration. The higher the level of ownership concentration the easier it is for a small group of shareholders to influence management behavior through their voting power. The more diverse the shareholding, the easier it is for management to pursue their own interests as the level of influence by non-management shareholders decreases (Mitchell, 1983). Wruck (1989) proposed an ownership structure hypothesis in her study of private placements in the U.S. Her ownership structure hypothesis states that bother the changes in and the resulting level of ownership concentration are important. She found positive abnormal returns surrounding private placements that are directly related to changes in ownership level when the firms are at low or at high level of ownership concentration after placements. An adverse-relationship is found for sample firms with moderate level of ownership concentration after placements.

Hertzel and Smith (1993) provide a second alternative hypothesis. They argue that private equity placements are a solution to the Myers-Majluf adverse selection problem.

They emphasize that private investors are not organizational active but instead are informational active. Private equity sales tend to reduce asymmetric information because managers can better communicate with a small number of private investors. It follows that placement discounts must reflect compensations for information costs borne by private investors. Using the same definition for announcement returns as introduced by Wruck (1989), Hertzel and Smith find a significant relationship between the announcement returns and new placed sizes. Thus, they interpret that the above relationship is consistent with a certification effect. The certification comes from the value-enhancing, informational involvement of private investors, which causes a positive shift in the market's assessment of the firm value of the issuers.

Both the two hypothesis above are premised on private investors' active involvement through new equity sales. However, Barclay, Holderness and Sheehan (2001) have recently challenged this premise directly. Using a U.S. data set much larger than used in previous studies, Barclay et al. find that private investors are actually not active. Thus, it is unlikely that private investors fulfill organizational and informational roles: as such, this finding casts doubt on the monitoring and certification hypotheses.

Hertzel et al. (2002) analyze the long-term performance of U.S. firms issuing private placements. They find that the long-term performance in the three-year period following private placements of equity is worse than an industry and size matched sample firms documenting the puzzling announcement effect: the positive announcement effect of the private placement as opposed to the negative long-term performance of the firms issuing them.

The interesting question to study in this essay is whether the private placements will have positive effect on the firm value through the certification and the monitoring provided by the private placement buyer.

Several recent articles study the relationship between ownership structure and firm value in emerging economies. Laporta, Lopez-de-Silanes, Sheifer and Vishny (1998) argue that agency problems in many emerging markets are relatively more severe due to the absence of strong legal protections and other government mechanisms. Claessens and Djankov (1999) examine firms in the Czech Republic and find that firm profitability is related to ownership concentration. They argue that the higher the ownership concentration among few shareholders, the better the performance of the firm. Anderson, Lee and Murrell (2000) study Mongolia's mass privatization and find that enterprises with residual state ownership appear to be more efficient than other enterprises. They argue that in an environment that lacks basic regulatory infrastructure protecting the investor. More recently, Dyck and Zingales (2004) study private benefits of control around the world and find that higher private benefits of control are associated with less developed capital markets and more concentrated ownership. Lins (2003) investigates whether managerial stock ownership and non-managerial block holdings are related to firm value in 18 emerging markets. He finds that firm values are lower in situations where a management owns large blocks of the firm's shares. Lemmon and Lins (2003) study the relationship between ownership structure and firm value in 8 East Asian economies. They find that the managers prefer to attract outside minority investors and by doing so, the firm value increases. Wei and Varela (2003) use shanghai-listed firms

during the period 1994-1996 to examine the relationship between the firm's market performance and ownership structure. They find that Tobin's Q is significantly negatively related to state shares and that institutional and foreign ownership have inconclusive effects on firm performance. Wei, Xie and Zhang (2005) study the ownership structure and firm value in China over the period 1991-2001. They find that the government ownership is negatively related to the firm's performance measured by Tobin's Q ratio. They also find that foreign ownership are positively related to Tobin's Q. Wei, Xie and Zhang (2005) use a large sample of 5284 firms over during the years 1991-2001 to study the conflicts of interest among different block shareholders affect firm value.

4.4. Predictable Hypotheses

In the first essay, it was reconfirmed what most researchers have found previously, that the presence of government ownership gives rise to inefficiencies and, consequently, poor performance (D'Souza and Megginson, 1999; Megginson and Netter, 2001; and Megginson, Nash and Randenborgh, 1994). The higher the government ownership, the higher the inefficiency as the value maximization motive will be compromised by other motives in the government agenda. The inefficiency increases as the government ownership increases as the monitoring activities by institutions and large non-government block holders decrease.

In this essay, we reassess the relationship between government ownership and firm performance in our sample, we hypothesize the following:

Hypothesis 1: *The higher the government ownership, the higher the inefficiency.*

The higher the government ownership implies the higher the possibility that the interests of the government and non-government owners will conflict. Information asymmetry problem increases as government ownership increase. In addition, the higher the government ownership implies the lower the potential ownership by institutional and large non-government shareholders. Potential co-existence of all these problems associated with high government ownership will deter these firms from divulging the true value (over-valued) their true values. Consequently, these firms will resort to the right-offering method of SEO. On the other hand, firms with low government ownership are more likely to have less conflict between the interests of internal and external shareholders, more monitoring role played by institutions and large shareholders, and a

lesser degree of information asymmetry. These firms are likely to enjoy better future investment opportunities and will aim to maximize the firm value by choosing the underwriter certification i.e., underwritten public offering. Moreover, firms with the lowest government ownership structure coupled with high institutional ownership will choose private placements to increase the monitoring certification of the institutional investors, therefore increasing firm value. Based on the preceding premise, the following hypotheses are proposed:

Hypotheses 2A*: The higher the government ownership, the higher the likelihood that the firm will choose rights offerings;*

Hypothesis 2B: *For firms with lower government ownership, the higher the institutional ownership the greater the likelihood the firm will choose private placements over public offerings*.

Continuing the same argument as above, we add the following four hypotheses regarding the short-term and long-term performance of Chinese firms involved in seasoned equity offerings.

Hypothesis 3a: *Short-term performance (abnormal return at announcement) for rights offering would be lower than that of a public offering or private placements.*

Hypothesis 3b: *Short-tem performance (abnormal return at announcement) for public offering firms would be lower than that of private placements.*

Hypothesis 4a: *Long-term performance of firms that choose rights offering is inferior to that of the public-offering firms or firms issuing private placements.*

Hypothesis 4b*: Long-term performance of firms issuing public offerings will be lower than that of firms issuing private placements. .*

4.5. Data and Methodology

In this section, we discuss the data source, research methodology, and how we test for price effects of announcements of rights offerings.

4.5.1. Data Source

We obtained the data needed for this study from CSMAR China Stock Market Trading Database and CSMAR China Seasoned New Issue and Rights Offerings Research Database. Our test period covered 1999 through 2003.The sample consists of 463 announcements of seasoned equity offerings by firms listed in either Shanghai Stock Exchange or Shenzhen Stock Exchange. 285 of them were standby rights offerings, 61 were underwritten public offerings and 117 private placements. The stock price data is obtained from the CSMAR trading database.

4.5.2. Methodology

In the methodology section we elaborate on the econometric techniques used to test each of the hypotheses presented in section IV.

To test Hypothesis 1 (t*he higher the government ownership, the higher the inefficiency)*, we perform both parametric and non-parametric tests. The firms issuing SEOs are divided into 3 categories depending on the percentage of shares owned by the government. 1) The government ownership percentage is above 30%, 2) The government ownership is from 29.99% to 15% and 3) The government ownership is below 15%, then we use the Kruskal-Wallis test to test for the equality of the medians among the 3 samples. Then, it shows the relationship between the extent of government ownership on the one hand and variables that measure and contribute to the inefficiency on the other. The variables we use to assess the inefficiency of the firms are: The non-essential expenses, NESSEX, the investment opportunity set of the firms, INVEX, the debt ratio, DB, the percentage of shares owned by the managers of the firm, MANOWN, and the percentage of shares owned by the institutional shareholders, INST.

Additionally, to test the hypothesis at 1, we use OLS regressions. In the first OLS model the percentage of government ownership GOV is the dependent variable, while the independent variables are 1) NESSEX, the non-essential expenses which is computed as the total expenses minus costs of goods sold, wage expenses and interest expenses divided by the total expenses; 2) INVEX, the Investment expenditure which is the long-term investment expenditure divided by the total assets; 3) DB, the debt ratio; 4)MANOWN, the percentage of shares owned by the firms managers; 5) INST, the percentage of shares owned by the institutional shareholders of the firm (Institutional shareholders are other local and regional government agencies, or government owned banks and mutual funds). Therefore the model is:

$$GOV = \beta_0 + \beta_1 NESSEX + + \beta_2 INVEX + \beta_3 DB + \beta_4 MANOWN + \beta_5 INST + \varepsilon$$

We expect the signs of the variables NESSEX, and DB, to be positive, while the sign of all the other variables to be negative since firms with higher government ownership would entail higher unnecessary expenses, higher use of debt, lower growth opportunities combined with lesser degree of monitoring.

To test Hypothesis 1B (*The higher the government ownership, the lower the firm Performance all else the same)***,** we use ROA and Tobin's Q as dependent variables. ROA measures operating performance, while Tobin's Q measures market performance.

When ROA is used as the dependent variable, the independent variables are 1) the non-essential expenses, NESSEX; 2) the investment opportunity set, INVEX; 3) the debt ratio, DB; and the Government ownership, GOV; 4) the managerial ownership variable, MANOWN; 5) the institutional ownership variable, INST.

$$ROA = \beta_0 + + \beta_1 NESSEX + + \beta_2 INVEX + \beta_3 DB + \beta_4 MANOWN + \beta_5 INST + \beta_6 GOV + \varepsilon$$

We expect the signs of the non-essential expenses, debt ratio and government ownership to be negative, while the sign of the investment opportunity set, managerial ownership and institutional ownership variables to be positive.

When Tobin's Q serves as the dependent variable the independent variables are 1) NESSEX, the non-essential expenses which is computed as the total expenses minus costs of goods sold, wage expenses and interest expenses divided by the total expenses; 2) INVEX, the Investment expenditure which is the long-term investment expenditure

divided by the total assets; 3) DB, the debt ratio; 4) MANOWN, the percentage of shares owned by the firms managers; 5) INST, the percentage of shares owned by the institutional shareholders of the firm and 6) GOV, the percentage of the government ownership. Therefore the model is:

$$Q = \beta_0 + \beta_1 NESSEX + + \beta_2 INVEX + \beta_3 DB + \beta_4 MANOWN + \beta_5 INST + \beta_6 GOV + \varepsilon$$

We expect the signs of the variables NESSEX, DB and GOV to be negative, while the sign of all the other variables to be positive since higher government ownership, unnecessary expenses, and debt ratio will affect Q negatively, while INVEX, MANOWN and INST are expected to have positive impact on Q. To test Hypotheses 2A (t*he higher the government ownership, the higher the likelihood that the firm will choose rights offerings*) and Hypothesis 2B (t*he higher the institutional ownership, the higher the likelihood that the firm will choose private placements*), we use multinomial Logit model of firms' choice of alternative SEO methods. The dependent variable equals to 0 if a firm issues rights offerings, 1 if the firm issues public offering and 2 if the firm chooses private placements. The independent variables consist of proxies for agency costs, political costs and investment opportunities, leverage ratio. The multinomial logit model is a powerful technique to analyze individual-level choice data.

To test Hypothesis 3A (*Short-term performance (abnormal return at announcement) for rights offering would be lower than that of a public offering)* and 3B *(Short-term performance of firms issuing private placements would be higher than that of public offering),* we employ the event study methodology recommended by Brown and Warner

(1985) to examine the effects of rights issues on stock returns. The abnormal return for firm i on day t is

$$AR_{i,t} = R_{i,t} - R_{m,i,t}$$

Where, $R_{i,t}$ is the return on day t for a firm in our sample, and $R_{m,i,t}$ is the market return on day t. Average abnormal returns for each trading day is:

$$AR_t = \frac{1}{N}\sum_{t=1}^{N} AR_{i,t}$$

Where, N is the number of stocks.

The Cumulative Abnormal Return from day K to L is

$$CAR_{K,L} = \frac{1}{N}\sum_{i=1}^{N}\sum_{t=K}^{L} AR_{i,t}$$

The t-statistics for the null hypothesis that $CAR_{K,L} = 0$ is

$$t_{CAR_{K,L}} = \frac{(\sqrt{N}.CAR_{K,L})}{\sqrt{T.Var(ARt) + 2(T-1)xCov(AR_t, AR_{t+1})}}$$

Where, T= K – L + 1; $Var(AR_t)$ and $Cov(AR_t,AR_{t+1})$ are estimated from 122 days to 11 days before the announcement day and from 11 days to 122 days after the announcement day. The Covariance term adjusts for possible first-order autocorrelation between the abnormal returns due to non-synchronous trading.

To check the robustness of our event study results, we employ a Generalized Least Squares (GLS) regression analysis with CAR as the dependent variable. GLS equation is shown below.):

$$CAR_{i,-1,0} = \alpha_1 + \beta_2 MANOWN_i + \beta_3 INSTi + \beta_4 GOV_i$$

$$+ \beta_5 NESSEX_i + \beta_6 DUMMY_i + \varepsilon_i$$

where, $DUMMY_i$ is a dummy variable that takes value one if the issue is a rights offering and zero if it is a public offering. The MANOWN is the percentage of shares owned by the senior managers. The INST is a variable representing the percentage of shares owned by the institutional shareholders. GOV is the percentage of shares owned by the government, NESSEX is the non-essential expenditure which is calculated as the total expenses minus costs of goods sold, wage expenses and interest expenses as a fraction of total expenses.

Finally, to test Hypothesis 4 (*Long-term performance of firms that choose rights offerings is inferior to that of the public-offering firms*), we follow two procedures. First, we use Loughran and Ritter (1995) methodology to calculate the average buy and hold abnormal return (BHAR). The average buy-and-hold abnormal return, BHAR, for τ months is calculates as:

$$BHAR_\tau = \frac{1}{N}\sum_{i=1}^{N}[\prod_{t=1}^{\tau}(1+r_{i,t}) - \prod_{t=1}^{\tau}(1+r_{c,i,t})]$$

Where, $r_{i,t}$ is the monthly stock return for announcement firm i and $r_{c,i,t}$ is the monthly market return or the monthly return on matched portfolio firm i. The test statistic for the null hypothesis of no average buy-and-hold abnormal return is the skewness adjusted t-statistic calculated as:

$$t_{BHAR\tau} = t_{BHAR\tau} + (\frac{1}{3}\sqrt{N})(t_{BHAR\tau})^2 skew_\tau + (\frac{\sqrt{N}}{6})skew_\tau$$

Where, $t_{BHAR\tau}$ is the usual t-statistic for $BHAR_\tau$ and $skew_\tau$ is the skewness of the $BHAR_t$ series (t=1,…τ)

Second, we use long-term accounting performance to measure the profitability and operating efficiency of the firms post-issuance. The profitability performance measures that we use are: 1) ROA; 2) Profit Margin. The operating efficiency measures are: 1) Operating performance. The profitability and operating performance variables are calculated 1 and 2 years post-issuance and compared with a matched sample of firms. The firms in the matched sample are selected according to three criteria: Industry, size and government ownership. In all the cases, we first select a firm that matches the same industry category as the issuing firm controlling for the size and government ownership percentage. We follow the methodology described in Megginson, Nash and Randenborgh

(1994) in a controlling for the government ownership in the matched sample firms selection process.

4.6. Descriptive Statistics

This section shows the summary statistics for the new equity issue method. The descriptive summary proceeds into two parts: First, we present the industry classification table of the sample of firms issuing rights offerings and public offerings. Second, we present the total number of issues per year and total proceeds from the issues. Third, we present a modified table where we divide the number of SEOs into 4 categories according to the percentage of shares owned by the government.

Table 1 shows the total number of companies that issued new equity during the period 1999-2003 classified according to major industry group.

Table 1: Industry Classification of a sample of 463 Seasoned Equity Offerings (SEOs) with 285 Standby Rights Offerings (ROs) and 61 Underwritten Public Offerings (Pos), 117 private placements (PPs) during the period 1999-2003. The SEOs are identified from the Chinese Rights Offerings database. (CSMAR)

Industry Type	**Rights Offerings (RO)**	**Public Offerings (PO)**	**Private Placements (PP)**	**RO %**	**PO %**	**PP %**
Electrical, Electronic and Industrial Manufacturing Equipment	88	22	61	30.88%	33.33%	52.14%
Mining and Metal Products	71	4	14	24.91%	6.06%	11.97%
Information Technology	8	4	22	2.81%	6.06%	18.80%
Consulting Services	9	8	5	3.16%	12.12%	4.27%
Real Estate	6	3	1	2.11%	6.06%	0.85%
Paper, Publishing and Consumer Goods	15	5	2	5.26%	7.58%	1.71%
Transportation	19			6.67%	0.00%	0.00%
Conglomerates	21	1	2	7.37%	3.03%	1.71%
Retailing	23	3	3	8.07%	4.55%	2.56%
Food and Beverages	18	6	4	6.32%	9.09%	3.42%
Miscellaneous	7	5	3	2.46%	12.12%	2.56%
Total	**285**	**66**	**117**	**100%**	**100%**	**100%**

Table 2 reports the number of rights offerings, public offerings and private placements per year. During the period of 1999 to 2003 there has been a steady increase in the use of private placements as a new method of equity issue. The use of private placements as a third equity issue method started in 1999 after the enactment of the Chinese securities law of 1999. Table 2 reports also the total net proceeds per year from issuing new equity. The total net proceeds which is in billions of the Chinese currency Renminbi, is calculated as the total proceeds from the offering minus the total issuing expenses.

Table 2: Distribution of a sample of 463 Seasoned Equity Offerings (SEOs) with 285 Standby Rights Offerings (ROs) and 61 Underwritten Public Offerings (Pos), 117 private placements (PPs) during the period 1999-2003. The Total Net proceeds are in millions of Chinese Currency Renminbi (RMB), calculated as the total proceeds from the equity issue minus the total issuing expenses The SEOs are identified from the Chinese Rights Offerings database. (CSMAR)

	1999	**2000**	**2001**	**2002**	**2003**
Panel A: Number of SEOs	113	128	96	72	54
Rights Offerings (Standby)	104	104	51	10	16
Public Offerings	8	2	32	10	9
Private Placements	1	22	13	52	29
Panel B: Total Net Proceeds (RMB)					
Rights Offerings (Standby)	1956.64	2056.36	1028.32	24.36	35.29
Public Offerings	74.23	4.21	247.36	81.25	78.52
Private Placements	0.36	63.88	42.01	134.37	75.10

In Table 3 we report the number of seasoned equity offerings divided into three groups according of the percentage of government ownership variable, GOV. The total sample of 463 firms is divided into 3 categories: 1) The government ownership percentage is above 30%, 2) The government ownership is from 29.99% to 15% and 3) The government ownership is below 15%. The majority of firms issuing rights offerings are in the upper two categories; firms issuing public offerings lie in the middle category; 42 out of the 61 firms issuing public offerings are in the middle category, while firms

issuing private placements lie in the lowest category; 79 out of the 117. The interesting result to report from table 3 is the fact that all the private placements were made by firms that have lowest government ownership; the underwritten public offerings were made by firms having medium government ownership, while rights offerings are made by firms with high government ownership. Therefore, just by comparing the three sub-samples, we notice that firms with higher government ownership rely on rights offerings as their equity issue method, while firms issuing public offerings and private placements have lower government ownership concentration, the latter having the lowest government ownership among them.

Table 3: Distribution of the total sample of 463 SEOs into 3 categories with respect to the government ownership variable, which is divided into 3 classes.

Government Ownership Percentage Category	**Number of SEOs in each category**	**Number of Rights issuing firms**	**Number of Public Issuing Firm**	**Number of Private Placements**
Above 30%	109	109	0	0
29.99 to 15%	225	145	42	38
Below 15%	129	31	19	79
	463	**285**	**61**	**117**

Table 4 reports the number of SEO firms divided by the median value of the government ownership variable which is 0.1917. The firms are classified according to their location above the median or below the median regarding the government ownership concentration. The results confirm the results found in the previous tables, firms with the highest government ownership use rights offerings as equity issue method, firms with mid-government ownership levels use underwritten public offerings, while firms with the lowest government ownership use private placements.

Table 4: Distribution of the total sample of 463 Seasoned Equity Offerings (SEOs) with 285 Standby Rights Offerings (ROs) , 61 Underwritten Public Offerings (Pos) and 117 private placements (PPs) during the period 1999-2003 divided by the median value of the government ownership variable (0.1917).

	SEO Issue Type		
	ROs	POs	PPs
Above Median	175	41	15
Below Median	110	20	102

In table 5 we report the correlation matrix of the variables that will be used in the regression analysis. The results clearly show that correlation between ROA on the one hand and NESSEX, DB and GOV on the other hand is negative. This provides indirect evidence of inefficiency when government ownership is relatively high.

Table 5: The correlation matrix of the variables used, the ROA, NESSEX, non-essential expenses, DB, the debt ratio, INVEX, the investment opportunity set, and the percentage of shares owned by the government, GOV, MANOWN, the managerial ownership percentage and the INST, the institutional ownership percentage.

Variable	NESSEX	INST	MANOWN	INVEX	DB	GOV	ROA
Non-Essential Expenditure (NESSEX)	1.00						
Institutional shareholders (INST)	-0.241[c]	1.00					
Managerial Ownership (MANOWN)	-0.084	0.205[c]	1.00				
Investment opportunity Set (INVEX)	-0.314[b]	0.281[b]	0.018	1.00			
Debt Ratio (DB)	0.0584	-0.172	-0.047	-0.015	1.00		
Government Ownership (GOV)	0.608[a]	-0.324[c]	-0.028	-0.418[b]	0.297[c]	1.00	
ROA	-0.125	0.274[c]	0.098	0.374[a]	-0.087	-0.098	1.00

[a] significant at 1%,[b] significant at 5% ,[c] significant at 10%

4.7. Empirical Results

The empirical analysis part is divided into 4 sections within which we test each of the hypotheses proposed in section IV of the essay. In the first section we establish the relationship between government ownership and firm efficiency. In the second section, we study the effect of the government ownership on the choice of the seasoned equity offering method. In the third section, we study the short-term performance of the firms issuing SEOs. Finally, in the last section, we study the long-term performance of the equity issuing firms post-SEO.

4.7.1. Government ownership and firm efficiency

The relationship between government ownership and firm efficiency is tested using parametric and non-parametric tests. Table 5 reports the results of the non-parametric, Kruskal-Wallis test.

Table 6: The sample of 463 firms issuing SEOs during the period 1999-2003 is divided into 4 categories according to the percentage of shares owned by the government. For each independent variable, the median is calculated for each sub-sample; the Chi-square statistic is the Kruskal-Wallis test of medians.

Variable	Above 30%	29.99 to 15%	Below 15%	Chi-Square statistic	Asymptotic Significance
Non-Essential Expenditure (NESSEX)	0.1247	0.0768	0.0304	12.951	0.002
Investment opportunity set (INVEX)	0.0751	0.1011	0.1613	13.818	0.000
Institutional Ownership (INST)	0.0925	0.1603	0.2218	14.281	0.000
Managerial Ownership (MANOWN)	0.0084	0.0207	0.0299	3.875	0.384
Debt Ratio (DB)	0.1172	0.0836	0.0468	11.957	0.004

The total sample of firms issuing SEOs is divided into three categories depending on the percentage of shares owned by the government. The independent variables are the 1) NESSEX, the non-essential expenses which is computed as the total expenses minus costs of goods sold, wage expenses and interest expenses divided by the total expenses; 2) INVEX, the Investment expenditure which is the long-term investment expenditure divided by the total assets; 3) DB, the debt-to-asset ratio; 4) MANOWN, the percentage of shares owned by the firms managers; 5) INST, the percentage of shares owned by the institutional shareholders of the firm.

For each of the independent variables in the table we find the median value for each sub-sample and use the Kruskal-Wallis test for the medians. The non-essential expenses (NESSEX) and debt ratio (DB) are significantly larger for firms with high government ownership than their low government counterparts. Institutional holdings (INST) of the former are significantly lower. These results attest to the inefficiencies of and lack of monitoring for firms with high government ownership This may explain why these firms were unable to take advantage of higher (than firms with low government ownership) investment opportunity set.

In order to test hypothesis 1, we also use two OLS regressions. In the first regression, ROA is the dependent variable. The independent variables are: 1) the non essential expenses, NESSEX; 2) the investment opportunity set, INVEX; 3) The debt ratio, DB; and the Government ownership, GOV. The results are presented in Table 7.

Table 7: The dependent variable is the ROA, the independent variables are NESSEX, non-essential expenses, DB, the debt ratio, INVEX, the investment opportunity set, and the percentage of shares owned by the government, GOV.

	Regression 1
Intercept	0.108[a]
	(15.111)
NESSEX	-0.160[a]
	(-5.529)
INVEX	0.017
	(0.684)
DB	-0.164[a]
	(-4.368)
GOV	-0.021[a]
	(-4.403)
MANOWN	0.002
	(0.047)
INST	0.065[a]
	(3.642)
R^2	0.519

[a] significant at 1% [b] significant at 5% [c] significant at 10%

Table 7 demonstrates that the higher the government ownership, the lower the firm's operating performance (ROA). The coefficient of GOV is negative and significant at the 1% level. Consistent with this finding, the coefficients of NESSEX and DB are negative, while that of INST is positive. All three coefficients are statistically significant at 1%.

In Table 8, we use Tobin's Q as the dependent variable while independent variables are the same as in Table 6. Table 8 confirms the results in Table 6. Consistent with hypothesis 1B, firms with higher government ownership, higher debt ratio and higher non-essential expenses are likely to have lower Q. A major conclusion that can be derived from Table 7 and 8 is that high government ownership adversely affects both the operating and market performance of a firm.

Table 8: OLS regression with the dependent variable being Tobin's q ratio, Q. The independent variables are the non-essential expenses, NESSEX, the investment opportunity set, INVEX, the debt ratio, DB, the government ownership percentage, GOV, the percentage of managerial ownership shares, MANOWN, and the percentage of institutional shares, INST.

	Regression 1
Intercept	1.845a
	(34.155)
NESSEX	-1.333a
	(-6.127)
INVEX	1.123a
	(6.088)
DB	-1.554a
	(-5.508)
GOV	-0.156a
	(-4.288)
MANOWN	0.349
	(1.170)
INST	0.662a
	(4.941)
R^2	0.682

[a] significant at 1% [b] significant at 5% [c] significant at 10%

4.7.2. Government Ownership and Choice of SEO method

In Hypothesis 2a, we argue that that higher government ownership and the resulting poor performance would likely render these firms to choose the rights offering method to raise external equity. To test this hypothesis, we perform a multinomial logistic regression in which we attempt to determine the variables that affect a firm's choice of one of the two available methods of seasoned equity offerings. When a firm chooses rights offering, the dependent variable takes on a value of 0, when it chooses underwritten public offering, its value is 1 and when it chooses private placements the value is 2. Table 9 we report the results of the multinomial logistic regression.

Table 9: Multinomial logistic regression to explain the choice of the SEO method using a sample of 463 SEOs during the period 1999-2003. The dependent variable is the method of raising equity which takes on a value of 0 when a firm issues ROs, 1 for when it issues POs and 2 when the firm uses private placements. MANOWN is the percentage shares held by managers, INST is the percentage of shares held by the Institutional shareholders including institutional and private investors but excluding the government. GOV is the percentage of shares held by the government. NESSEX is the ratio of non-essential expenditures over total expenses, INVEX is the long-term investment expenditure to total asset ratio. DB is the total debt over total assets ratio and ROA. The default choice method is 0, rights offering choice. The Wald statistic is shown in the parentheses.

	Reg.1a (PO)	**Reg. 1b (PP)**	**Reg. 2a (PO)**	**Reg. 2b (PP)**	**Reg. 3a (PO)**	**Reg. 3b (PP)**
Intercept	11.901	54.315[a]	10.353	51.573[b]	10.827	52.847[b]
	(2.128)	(8.819)	(1.608)	(5.175)	(1.910)	(7.824)
MANOWN	18.510	101.098[c]	15.081	153.599[b]	14.365	142.367[b]
	(0.330)	(3.566)	(0.209)	(4.306)	(1.071)	(5.074)
INST	32.907[c]	97.360[a]	30.027	120.832[a]	35.247[c]	114.392[c]
	(3.070)	(9.890)	(2.419)	(8.278)	(2.974)	(8.047)
GOV	-16.545[b]	-162.759[a]	-15.058b	-204.996b	-18.314[b]	-187.682[b]
	(4.605)	(7.941)	(4.065)	(6.338)	(5.317)	(7.589)
NESSEX	-141.961[a]	-266.661[a]	-140.870[a]	-295.039[a]	-139.148[a]	-271.364[a]
	(7.618)	(14.150)	(7.646)	(11.716)	(8.051)	(13.847)
INVEX	77.473[a]	58.433[c]	74.778[a]	39.269	81.236[a]	79.682[a]
	(9.776)	(2.924)	(8.201)	(0.948)	(8.521)	(7.982)
DB	-90.677[a]	-223.183[a]	-94.722[c]	-243.229[a]	-88.521[a]	-219.378[a]
	(4.016)	(9.166)	(4.149)	(8.101)	(3.974)	(8.375)
ROA			25.179	135.403[c]		
			(0.512)	(3.388)		
Industry Dummy					10.374	15.397
					(1.074)	(1.896)
Nagelkerke R^2	0.723		0.782		0.738	
McFadden R^2	0.647		0.750		0.716	

[a] significant at 1% [b] significant at 5% [c] significant at 10%

Table 9 reports three different models of multinomial logistic regression. In Equation 1, right-hand side variables are MANOWN, INST, GOV, NESSEX, INVEX, and DB. Equation 2 adds to these ROA; while Equation 3 adds industry dummy. In the three models, the rights offering choice is taken as the default offering method, while the two other methods are compared to the rights offerings choice. Higher government ownership, higher non-essential expenses, and higher debt ratio lowers the likelihood of choosing public offerings relative to rights offerings. On the other hand, higher institutional ownership, higher managerial ownership and higher ROA in addition to lower government ownership, lower non-essential expenses and lower debt ratio

increases the likelihood of choosing private placements over rights offerings, (the INST variable being significant at 1% in all the models). The effect of industry is not significant in the choice of the equity offering method as we can see in the third regression. Therefore, firms issuing private placements have higher institutional ownership compared to both firms issuing public offerings and rights offerings. Consistent with our hypothesis 2A, the results of the multinomial regressions indicate that firms with higher government ownership are more likely to choose rights offerings relative to either public offerings or private placements. Also, firms with lower government ownership and with higher institutional ownership are more likely to choose private placements over rights offerings.

4.7.3. Short-Term Performance

Our third hypothesis is an extension of Hypothesis 2. Our logic proceeds as follows. High government ownership introduces inefficiencies which lead to poor performance. Because of the poor performance record, a firm with high government ownership will prefer the rights offering method to either public offerings or private placement. Consequently, the firms issuing rights offering will receive lower abnormal returns than either public-offering firms or firms offering private placements. To test this hypothesis, we examine the abnormal returns at the announcements of the issuance of the three offering methods. We apply the conventional event study methodology for this purpose. The abnormal returns are calculated using the market model parameters estimated over a 220-day period ending 21 days before the announcement date (as

estimated by Eckbo and Masulis, 1992). The results are reported in Tables 10, 11 and 12. Table 10 reports the abnormal returns for rights offering announcement, Table 11 does the same for public placement announcements, while Table 12 reports the abnormal returns for firms offering private placements.

Table 10: Cumulative abnormal returns for a sample of 285 Rights offering firms during the period 1999-2003. The ROs are identified from the Chinese Rights Offerings database. (CSMAR). Abnormal returns are calculated using the market model parameters estimated over a 220-day period ending 21 days before the announcement date. The Chinese stock market's equally weighted index is used in the market model to compute betas. The abnormal returns are calculated in the intervals. The Wilcoxon signed rank test for the differences in medians appears in the last column.

	Cumulative abnormal returns for RO firms			
Interval	**Mean %**	**Z – statistic**	**Median %**	**Signed rank test**
-5 , -1	-1.35	-2.171[d]	-0.51	-623.50
-1 , 0	-4.11	-14.281[a]	-2.11	-3874.50[a]
0	-3.41	-13.947[a]	-1.24	-3046.50[b]
-1 , +1	-4.87	-12.528[a]	-2.57	-4209.50[a]
+1 , +5	-0.94	-1.854[d]	-0.85	-1593.50[d]
-10 , +1	-3.08	-6.235[a]	-2.17	-4159.50[a]
-10 , +10	-3.71	-7.462[a]	-1.98	-3985.50[a]

[a] significant at 0.1% [b] significant at 1% [c] significant at 5% [d] significant at 10%

Table 10 shows that announcement effects of the rights offering are consistently negative and statistically significant. The cumulative abnormal return (CAR) for the window of (-1, 0), a window often reported by researchers is -4.11% and is significant at the 0.1% level. The results are quite opposite, as Table 11 demonstrates, when a firm chooses public offering. CARs are positive and significant for all windows. CAR for the (-1, 0) window is 7.69% and significant at the 0.1% level.

Table 10: Cumulative abnormal returns for a sample of 61 Public offering firms during the period 1999-2003. The POs are identified from the Chinese Rights Offerings database. (CSMAR). Abnormal returns are calculated using the market model parameters estimated over a 220-day period ending 21 days before the announcement date. The Chinese stock market's equally weighted index is used in the market model to compute betas. The abnormal returns are calculated in the intervals. The Wilcoxon signed rank test for the differences in medians appears in the last column.

	Cumulative abnormal returns for the PO firms			
Interval	**Mean %**	**Z – statistic**	**Median %**	**Signed rank test**
-5 , -1	4.98	13.578[a]	4.27	3874.50[b]
-1 , 0	7.69	72.367[a]	6.14	3986.50 [a]
0	4.68	62.028 [a]	3.52	4027.50 [a]
-1 , +1	10.97	50.237 [a]	8.49	4987.50 [a]
+1 , +5	2.78	9.657 [a]	1.87	2473.50 [d]
-10 , +1	24.18	39.412 [a]	17.54	6984.50 [a]
-10 , +10	21.87	45.217 [a]	16.97	7158.50 [a]

[a] significant at 0.1% [b] significant at 1% [c] significant at 5% [d] significant at 10%

Table 12 reports the results of firms issuing private placements. The CARs in this case are more positive than the public offering counterpart. The CAR for the (-1,0) widow is 8.63 which is significant at 0.1% level.

Table 12: Cumulative abnormal returns for a sample of 117 Private Placements (PPs) during the period 1999-2003. The PPs are identified from the Chinese Rights Offerings database. (CSMAR). Abnormal returns are calculated using the market model parameters estimated over a 220-day period ending 21 days before the announcement date. The Chinese stock market's equally weighted index is used in the market model to compute betas. The abnormal returns are calculated in the intervals. The Wilcoxon signed rank test for the differences in medians appears in the last column.

	Cumulative abnormal returns for the PO firms			
Interval	**Mean %**	**Z – statistic**	**Median %**	**Signed rank test**
-5 , -1	5.27	14.379[a]	4.85	4018.50[b]
-1 , 0	8.63	79.364[a]	7.13	4157.50 [a]
0	5.47	69.405 [a]	3.87	4287.50 [a]
-1 , +1	12.85	57.571 [a]	9.54	5369.50 [a]
+1 , +5	4.08	17.107 [a]	2.15	2874.50 [d]
-10 , +1	30.15	41.572 [a]	21.65	7485.50 [a]
-10 , +10	28.75	48.892 [a]	19.47	8024.50 [a]

[a] significant at 0.1% [b] significant at 1% [c] significant at 5% [d] significant at 10%

To summarize the results in Tables 10 to 12, investors in Chinese firms react negatively to rights offering and positively to both underwritten public offerings and private placements. The results are consistent with our third hypothesis 3A, 3B and 3C and clearly indicate that the rights offering signals bad news, while public offering and

private placements signals good news to investors. This finding is of particular interest because opposite finding appear to prevail for the non-Chinese firms. A large number of studies on U.S. firms have shown that SEOs are associated with negative abnormal returns, especially when the method used is firm commitment underwritten offer. On the other hand, studies (Kang and Stulz, 1996 and Bøhren, Eckbo and Michalsen, 1997) document positive abnormal returns to uninsured rights issues in other countries. The unique ownership structure of Chinese firms might explain this contradiction. On the other hand, the monitoring benefit from the private placement buyer is one reason behind the higher positive abnormal returns of the private placements announcement. The highest abnormal returns associated with the private placements are consistent with the U.S. data. The certification provided by the placement buyer translates in the market reaction with highest abnormal returns.

Tables 13 and 14 report the CARs for the private placements to local investor and foreign investors separately. The interesting result from those tables is the fact that the CAR for the local investors in more positive than that of the foreign investors. The market reaction is more positive when the private placement buyer is a local firm or investor. It can be deduced that the market regards the monitoring provided by the local investor to be better than that provided by the foreign investor.

Table 13: Cumulative abnormal returns for a sample of 63 Private Placements (PPs) to local investors during the period 1999-2003. The PPs are identified from the Chinese Rights Offerings database. (CSMAR). Abnormal returns are calculated using the market model parameters estimated over a 220-day period ending 21 days before the announcement date. The Chinese stock market's equally weighted index is used in the market model to compute betas. The abnormal returns are calculated in the intervals. The Wilcoxon signed rank test for the differences in medians appears in the last column.

	Cumulative abnormal returns for the PP firms			
Interval	**Mean %**	**Z – statistic**	**Median %**	**Signed rank test**
-5 , -1	7.81	15.239[a]	5.87	4972.50[b]
-1 , 0	10.23	69.367[a]	9.21	5874.50 [a]
0	6.37	71.248 [a]	4.65	5069.50 [a]
-1 , +1	14.85	61.394 [a]	11.08	6102.50 [a]
+1 , +5	5.71	20.024 [a]	3.27	3847.50 [d]
-10 , +1	37.25	54.217 [a]	28.36	8025.50 [a]
-10 , +10	34.58	53.987 [a]	24.78	8243.50 [a]

[a] significant at 0.1% [b] significant at 1% [c] significant at 5% [d] significant at 10%

Table 14: Cumulative abnormal returns for a sample of 54 Private Placements (PPs) to foreign investors during the period 1999-2003. The PPs are identified from the Chinese Rights Offerings database. (CSMAR). Abnormal returns are calculated using the market model parameters estimated over a 220-day period ending 21 days before the announcement date. The Chinese stock market's equally weighted index is used in the market model to compute betas. The abnormal returns are calculated in the intervals. The Wilcoxon signed rank test for the differences in medians appears in the last column.

	Cumulative abnormal returns for the PP firms			
Interval	**Mean %**	**Z – statistic**	**Median %**	**Signed rank test**
-5 , -1	4.23	10.319[b]	2.17	4972.50[b]
-1 , 0	7.92	21.3587[a]	4.78	5874.50 [a]
0	3.10	18.238 [a]	1.46	5069.50 [a]
-1 , +1	10.04	31.247 [a]	7.31	6102.50 [a]
+1 , +5	2.94	14.236 [a]	3.27	3847.50 [d]
-10 , +1	19.36	38.328 [a]	28.36	8025.50 [a]
-10 , +10	18.74	32.159 [a]	24.78	8243.50 [a]

[a] significant at 0.1% [b] significant at 1% [c] significant at 5% [d] significant at 10%

In Table 15, we validate our finding in Tables 10 to 12 that negative (positive) abnormal returns of rights offering firms (public offering firms) are related to the extent of government ownership in Chinese semi-privatized firms; the positive abnormal returns of the private placements are related to the institutional ownership. To explain the abnormal returns surrounding SEO issue announcements, we estimate the cross-sectional regression using Generalized Least Squares (GLS) where the dependent variable is the

cumulative abnormal return over the window (-1, 0). We estimate 3 different models of the equation to assess the effect of different variables on the stock price.

Table 15: GLS regression to explain the valuation effect of the SEO announcement a sample of 463 SEOs 285 Standby Rights Offerings (ROs) and 61 Underwritten Public Offerings (Pos), 117 private placements (PPs) during the period 1999-2003. The dependent variable is the cumulative abnormal return during the two-day announcement window CAR(-1,0). The independent variables are: MANOWN is the percentage shares held by managers, INST is the percentage of shares held by the institutional shareholders including institutional and private investors but excluding the government. GOV is the percentage of shares held by the government. NESSEX is the ratio of non-essential expenditures over total expenses. INVEX is the investment opportunity set. Dummy A is equal to 1 when the offering is private placements, 0 otherwise and Dummy B is equal to 1 when the offering is rights issue, 0 otherwise.

	Regression 1	**Regression 2**	**Regression 3**
Intercept	3.592	4.381	3.230
	(0.169)	(0.236)	(0.291)
MANOWN	0.263	0.310[c]	0.1396
	(0.204)	(2.232)	(0.935)
INST	0.237[c]	0.415[a]	0.245
	(1.294)	(3.126)	(0.507)
GOV	-0.205[b]	-0.126[a]	-0.207[b]
	(-2.381)	(-4.121)	(-2.691)
NESSEX	-0.347[c]	-0.720[b]	-0.371
	(1.789)	(2.204)	(0.127)
INVEX	0.397	0.914	0.692
	(0.287)	(0.274)	(0.502)
DUMMY A		0.719[a]	
		(2.875)	
DUMMY B			0.563[a]
			(2.940)
R^2	0.34	0.38	0.41

[a] significant at 1% [b] significant at 5% [c] significant at 10%

Three variables that affect announcement returns for when the issuance type is rights offerings are the government ownership concentration only while the variables affecting the announcement returns when the issuance type is private placements are the government ownership, the institutional holding, and the non-essential expenditure. Government ownership and rights offering negatively affect, while institutional holding positively affect announcement returns. In summary, the choice of equity financing method by Chinese firms reveals the extent of ownership conflict between the government and institutions. The results support hypothesis 3.

4.7.4. Long-term performance Analysis

Hypothesis 4 states that long-term post-announcement performance of rights issuing firms will be inferior to that of public offering firms and firms issuing private placements. Also, firms issuing private placements will have superior long-term performance than the public issuing firms due to the positive monitoring effect provided by the placement buyer. In this section, we examine both market and operating performance of Chinese firms that issued seasoned equity offering.

In examining long-term performance, it is necessary to select a benchmark against which the sample performance must be evaluated. Barber and Lyon (1997) find that results are influenced by the benchmark being selected. We select two benchmarks for the purpose of comparisons.

The first benchmark consists of firms which 1) did not issue new equity during the same period; 2) belonged to the same industry; 3) were of similar to post-issuance asset size and 4) similar degree of government ownership as the SEO firms. If a matching company could not be found in the same industry, we select a company closest to the issuing company's industry with similar size. This benchmark is used to evaluate both operating and market performance. When evaluating market performance, we add the market return (weighted average of returns of stocks listed in the two exchanges in China) as a second benchmark.

Table 16 compares the market performance of the rights and public offering firms with that of the two benchmarks stated above. Panel A of Table 16 shows that the long-term market performance of the rights offering sample is significantly inferior to that of the benchmarks. This result is especially true for +1 and +2 years. Rights issuing firms

significantly under-perform the market portfolio by -4.93% and -5.01% in year +1 and year +2 respectively. Compared to the matched sample, their levels of underperformance are -3.67% and -3.29% in year +1 and year +2 respectively. Both differences are significant at the 1% level

Table 16: Long-term returns of Rights issuing firms, public issuing firms and firms issuing private placements with their respective non-issuing matching firms using holding period return method. The mean difference is tested using a two-tail t test while the median difference is tested using a nonparametric Wilcoxon Z test.

	6-months		1 year		2 years	
	Mean	Median	Mean	Median	Mean	Median
PANEL A. MARKET PERFORMANCE OF RIGHTS ISSUING FIRMS						
Comparison with market return						
Return of Rights Issuing Firms	9.32	6.34	13.54	10.29	29.38	23.05
Market Return	12.85	7.39	18.47	14.05	34.39	27.41
Difference	-3.53[a]	-1.05[c]	-4.93[a]	-3.76[a]	-5.01[a]	-4.36[a]
Comparison with industry-and size matched firms						
Return of Rights Issuing Firms	9.32	6.34	13.54	10.29	29.38	23.05
Return of the matched firms	10.11	6.41	17.21	12.97	32.67	22.59
Difference	-0.79	-0.07	-3.67[a]	-2.68[b]	-3.29[a]	0.46
PANEL B. MARKET PERFORMANCE OF FIRMS OFFERING PRIVATE PLACEMENTS						
Comparison with market return						
Return of Private Placements Firms	14.29	9.87	23.04	17.85	37.28	30.75
Market Return	12.85	7.39	18.47	14.05	34.39	27.41
Difference	1.44[c]	2.48[b]	4.57[a]	3.8[a]	2.89[a]	3.34[a]
Comparison with industry-and size matched firms						
Return of Private Placements Firms	14.29	9.87	23.04	17.85	37.28	30.75
Return of the matched firms	11.83	8.27	21.53	16.37	34.95	28.94
Difference	2.46[a]	1.6[c]	1.51[c]	1.48[c]	2.33[b]	1.81[c]
PANELC. MARKET PERFORMANCE OF PUBLIC OFFERING FIRMS						
Comparison with market return						
Return of Public Offering Firms	13.28	10.83	21.95	17.83	35.28	28.67
Market Return	12.85	7.39	18.47	14.05	34.39	27.41
Difference	0.43	3.44[a]	3.48[a]	3.78[a]	0.89	1.26[c]
Comparison with industry-and size matched firms						
Return of Public Offering Firms	13.28	10.83	21.95	17.83	35.28	28.67
Return of the matched firms	12.63	9.76	22.34	17.54	36.42	28.32
Difference	0.65	1.07	-0.39	0.29	-1.14[c]	0.35

[a] significant at 1% [b] significant at 5% [c] significant at 10%

Opposite results hold true for the private placements group. The group significantly outperforms the market in years +1 and +2. Compared to the matched sample, this group performs significantly better in all three of the post-issuance period. On the other hand the firms issuing public offerings do not have consistent results regarding their out performance with respect to the matched sample or the market. These results are consistent with our hypothesis that long-term market performance of the rights offering group is inferior to its public offering counterpart.

Table 17: Comparison of long-term accounting performance between firms issuing rights offerings, firms issuing private placements and public offering firms with their respective matched samples. The mean difference is tested using a two-tail t test while the median difference is tested using a nonparametric Wilcoxon Z test. The ROA is calculated as the net income over total assets. The Operating performance is calculated as EBIT divided by the total assets. The profit margin is calculated as net income over revenue.

	Pre-offering year		Offering Year		1 Year after offering		2 Years after offering	
	Mean	**Median**	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**
Panel A: Accounting Performance of Rights Issuers								
a) Return on Assets (ROA)								
Rights Issuing Firms	4.53	2.17	5.23	2.98	4.89	1.87	4.78	1.59
Matched Sample	4.12	2.01	5.78	3.04	5.07	2.36	5.03	2.47
Difference	0.41	0.16	-0.55	-0.06	-0.18	-0.49	-0.25	-0.88
b) Operating Performance (EBIT/TA)								
Rights Issuing Firms	3.12	1.24	3.65	1.87	3.17	1.27	3.11	1.17
Matched Sample	5.33	2.51	5.37	2.41	6.07	2.87	6.13	2.91
Difference	-2.21[b]	-1.27[c]	-1.72[c]	-0.54	-2.9[b]	-1.6[c]	-3.02[a]	-1.74[c]
c) Profit Margin								
Rights Issuing Firms	5.11	1.98	5.17	2.03	4.87	1.54	4.97	2.01
Matched Sample	7.69	3.48	8.17	4.03	7.36	3.17	7.31	3.47
Difference	-2.58[b]	-1.5[c]	-3[a]	-2[c]	-2.49[c]	-1.63[c]	-2.34[b]	-1.46[c]
Panel B: Accounting Performance of Public Offering Firms								
a) Return on Assets (ROA)								
Public Issuing Firms	7.25	4.26	8.11	4.86	8.17	5.01	8.45	5.93
Matched Sample	7.36	4.32	8.56	5.17	8.13	5.11	7.58	5.17
Difference	-0.11	-0.06	-0.45	-0.31	0.04	-0.1	0.87	0.76
b) Operating Performance (EBIT/TA)								
Public Issuing Firms	7.86	4.35	8.13	4.89	8.32	5.03	8.14	4.21
Matched Sample	7.25	5.11	7.11	3.98	7.89	4.03	8.36	4.31
Difference	0.61	-0.76	1.02[c]	0.91	0.43	1	-0.22	-0.1
c) Profit Margin								
Public Issuing Firms	11.14	7.89	11.54	7.41	10.24	6.21	10.11	5.98
Matched Sample	10.23	6.52	9.87	5.84	9.63	5.32	8.56	5.21
Difference	0.91	1.37[c]	1.67[c]	1.57[c]	0.61	0.89	1.55[c]	0.77
Panel C: Accounting Performance of Firms issuing Private Placements								
a) Return on assets (ROA)								
Private Placement Firms	7.42	6.38	8.11	5.36	8.32	6.17	8.97	6.31
Matched Sample	6.13	4.23	7.19	4.98	7.54	4.87	7.93	5.14
Difference	1.29[c]	2.15[b]	0.92	0.38	0.78	1.3[c]	1.04[c]	1.17[c]

b) Operating Performance (EBIT/TA)								
Private Placement Firms	10.87	7.15	11.23	7.25	11.59	7.34	12.19	8.03
Matched Sample	9.11	6.27	10.37	7.06	9.89	5.98	10.23	6.97
Difference	1.76[c]	0.88	0.86	0.19	1.7[c]	1.36[c]	1.96[b]	1.06[c]
c) Profit Margin								
Private Placement Firms	11.51	7.31	11.93	7.89	12.27	8.16	12.59	8.34
Matched Sample	10.27	6.74	10.57	6.89	10.37	6.47	11.09	7.03
Difference	1.24[c]	0.57	1.36[c]	1.00[c]	1.9[b]	1.69[c]	1.5[c]	1.31[c]

[a] significant at 1% [b] significant at 5% [c] significant at 10%

Table 17 compares the accounting performance of SEO issuers with the matching benchmark. Panel A concerns the rights offering group, while Panel B deals with the public offering group and Panel C with the private placements. The accounting performance of the three groups mirrors their market performance shown in Table 16. On all three measures of accounting performance, the rights issuers under-perform, while issuers of private placements out-perform their corresponding matching groups. The group of firms issuing public offerings also out-perform their matching sample but with less significant results. The mean value of the difference between the ROA of the rights offering firms and its matched sample is -0.18 after 1-year and -0.28 after 2-years. The mean value of the difference of the operating profit between the rights offering firms and its matched sample is -2.90 after 1-year and -3.02 after 2-years, with 5% and 1% significance levels respectively. Finally, the mean value of the difference of the profit margin between the rights offering firms and its matched sample is -2.49% after 1-year and -2.34% after 2-years, the first being significant at the 10% while the second at the 5% level. Median differences give similar results.

For the sample of firms issuing private placements the accounting performance is significantly positive. The mean value of the difference between the ROA of the firms

issuing private placements and the matched sample is 0.7% after 1-year and 1.04% after 2-years, the latter being significant at the10% level. The mean value of the difference of the operating profit between the firms issuing private placements and its matched sample is 1.7% after 1-year and 1.96% after 2-years, the first being significant at 10% while the second is significant at the 5% level. Finally, the profit margin of the firms issuing private placements exceeds that of the matched sample by 1.9% in year +1 and 1.5% in year +2; the first being significant at 10% while the second is significant at the 5% level. The median difference results are similar results to those of the means difference. Finally, for the sample of public offering firms the accounting performance is positive and better than the matched sample. However the significance is absent for most of the results.

To summarize, the evidence presented in Table 16 and 17 strongly supports our hypothesis that SEO firms that make rights offering significantly under-perform their private placement counterparts.

4.8. Conclusion

The primary purpose of this essay is to demonstrate that a) firms with higher government ownership are still performing poorly during the period 1999-2003, the inferior the firm performance and the greater the probability that the firm will choose rights offering over public offering or private placement when making seasoned equity offering; b) firms with the highest institutional ownership tend to have the best performance and efficiency and those firms use private placements as their preferred choice of equity issue method.

This study covers a period that spans from 1999 through 2001. During this period, private placements were used as a third method of seasoned equity offering along with rights offering and public offering. We examine four hypotheses in this study:

5) Higher government ownership produces inefficiencies in the firm. The inefficiency results from agency conflicts as the wealth-maximization goal may be compromised by the social and political agenda of the government.

6) Inefficiency of a firm, due to high government ownership, would lead to inferior performance of this firm relative to a firm that has low government ownership.

7) Due to poor performance, a firm with high government ownership would prefer rights offering to public offering or private placement. On the other hand, firms with highest institutional ownership use private

placements, the monitoring and certification provided by the private placements' buyer enhances the firm value further.

8) The market would perceive rights offering as signaling bad news and react accordingly. Consequently, the abnormal return to the announcement of rights offering would be lower (less positive or more negative) than that of the public offering or private placement announcements. Long-term performance of firms issuing rights offering would also be inferior to that of firms issuing public or private placement. The abnormal return to the announcement of the private placements is the most positive and the long-term performance of firms issuing private placements is superior to that of firms issuing public offerings or rights offerings.

The results reported in this study are consistent with the results of the first essay. Moreover, the results concerning the private placements are consistent with the monitoring and certification hypothesis.

4.9.References

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