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**THE IMPACT OF FISCAL SUPPORT
ON EARNINGS MANAGEMENT:
EVIDENCE FROM EQUITY OFFERINGS IN CHINA**

HE Guanming

MPHIL

LINGNAN UNIVERSITY

2008

**THE IMPACT OF FISCAL SUPPORT
ON EARNINGS MANAGEMENT:
EVIDENCE FROM EQUITY OFFERINGS IN CHINA**

**by
HE Guanming**

**A thesis
submitted in partial fulfillment
of the requirements for the Degree of
Master of Philosophy in Business
(Accountancy)**

Lingnan University

2008

ABSTRACT

The Impact of fiscal support on earnings management: Evidence from equity offerings in China

By

HE Guanming

Master of Philosophy

It is well documented in existing literature that firms manipulate earnings before IPOs (initial public offerings) and SEOs (seasoned equity offerings). This study contributes to prior research by being the first to examine whether fiscal support from local governments has impact on the earnings management behavior of Chinese listed firms. Using data from firms that conduct IPOs and SEOs from 1997 to 2006, I find that firms are less likely to manipulate earnings prior to the offerings if they enjoy more income tax savings attributed to the preferential tax favor or more financial subsidy from the local governments.

The findings of the study have important policy implications. Noticeably, the new Enterprise Income Tax Law effective from 1 January, 2008 abrogates the original tax system that allows various preferential tax rates for firms of different properties and stipulates a 25% enterprise income tax rate for all firms in China. Given the abolishment of the preferential tax favor, local governments lose a potent avenue of lending fiscal support to the listed firms. To this end, based on the findings in this study, I expect that the opportunistic earnings management by listed firms will probably be aggravated after the new income tax law is duly enforced.

DECLARATION

I declare that this is an original work based primarily on my own research, and I warrant that all citations of previous research, published or unpublished, have been duly acknowledged.

HE Guanming
31 August, 2008

CERTIFICATE OF APPROVAL OF THESIS

**THE IMPACT OF FISCAL SUPPORT
ON EARNINGS MANAGEMENT
EVIDENCE FROM EQUITY OFFERINGS IN CHINA**

By
HE Guanming

Master of Philosophy

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1 Introduction

Officially opened in the early 1990s, China's stock exchanges were established as an experiment in combining a market economy with central planning. As most listed companies are sponsored and controlled by government-related entities, governmental intervention has dominated throughout. The quotas of IPOs distributed from the state are allocated by the local governments to firms selected from their jurisdictions. The local governments deemed the listed firms within its jurisdiction as a symbol of wealth and prestige as well as a potent tool to absorb capital and technology which are essential for the promotion of a region's GDP growth (Chan et al., 2006). The equity offering has been a crucial financing channel not only for listed firms but also for the local governments for promoting their territorial economic growth. However, the regulations require the listed firms to attain a minimum return on equity (ROE) to be qualified for the rights offerings. The presumption that earning is a premier source of firm-specific information is well supported by research literature (Biddle et al. 1995; Francis et al. 2003; Liu et al. 2002; Graham et al. 2005). These studies show that investors as well as analysts rely on earnings more than any other summary measure of performance. Therefore, both the local governments and their listed firms collectively have strong motivation to boost the reported earnings prior to the equity offerings. On one hand, to promote territorial economy, local governments compete to lend fiscal support (preferential tax treatment and financial subsidy) to the listed firms within their regions (Chen and Lee, 2001)¹, engendering the drastic tax competition among the local governments. On the other hand, the listed firms in pursuit of low financing costs are inclined to manipulate earnings to a

¹ Chen and Lee (2001) conduct descriptive statistic test on the fiscal support for Chinese listed firms during test period of 1997-1999, and show that, in order to compete for capital investment in the stock market, the local governments generally provide tax favor and financial subsidy to the listed firms located in their jurisdictions.

high level.

The thesis contributes to the existing literature by being the first to investigate whether the fiscal supports from local governments exert impact on earnings management in Chinese listed firms. Different from earnings manipulations by firms, fiscal support in the form of financial subsidy and preferential tax favor that are granted by the local governments adds substantial economic value to the listed firms without prospective reversal of earnings performance. Prior research (e.g. Holthausen and Verrecchia, 1988; Teoh and Wong, 1993; Jian and Wong, 2004; Haw et al., 2005) well documents that investors would place less value on the earnings that are suspected of manipulation by a firm and discount the share prices of the firm. In this vein, I hypothesize that a firm will be less likely to take risks in earnings manipulations prior to the equity issues if the firm is fiscally supported by the local government in boosting the reported earnings.

Earnings manipulations using discretionary accruals are difficult to detect and the enforcing authority may not be capable of making the necessary adjustments due to the high processing costs to undo earnings management through discretionary accruals (Cahan, 1992; Schipper, 1989). Chinese listed companies mainly engage in accruals to manipulate earnings (Chen et al., 2006; Jian et al., 2004; Aharony et al., 2000). So in this study, earnings management is proxied by discretionary accruals. I test the hypothesis by analyzing the sample firm-years three years prior to the offerings by both IPO firms (firms that have initial public offerings) and SEO firms (firms that conduct seasoned equity offerings) from 1997 to 2006. I find that firms will be less likely to manipulate earnings prior to the equity issues if they enjoy more income tax savings attributed to the preferential tax favor or more financial subsidy from the local governments. The findings of this study complement to prior research

on equity offerings and suggest that institutional factors of fiscal supports that incarnate the political incentives of local governments should be accounted for in earnings management research on China's or other East Asian emerging markets (e.g. India, Malaysia, Indonesia, etc) in which fiscal support from local government prevails and government intervention into firm's reporting practices predominates (e.g. Leuz and Oberholzer, 2007; Piotroski et al., 2007; Guly, 2006; Bushman et al., 2004). Given privatization through the sale of state-owned enterprise (SOEs) by the government and the increased opportunities for investors to purchase shares in China's market², understanding the impact of fiscal support with political incentives on the underlying financial reporting environment and financial reporting incentives of firms is important for market participants in their investment decisions.

My study has implication for the economic influence of the enforcement of the Enterprise Income Tax Law of PRC in 2008 on the capital market. The new Enterprise Income Tax Law promulgated in March 2007 abrogates the original tax system that allows varied tax rates applicable for firms of different properties, and stipulates a 25% enterprise income tax rate applied to all Chinese firms. Given the ultimate abolishment of the preferential tax favor with a few exceptions after the transitional period, local governments will lose a potent avenue of lending fiscal support to the listed firms. To this end, basing on the findings in this study, I expect that opportunistic earnings management by listed firms will probably be aggravated after the new income tax act is duly enforced at the beginning of 2008.

The remainder of this thesis proceeds as follows. Section 2 describes the institutional background and develops the research hypothesis. Section 3 expatiates

² Many transitional economies such as China, India, Vietnam are privatizing their SOEs through either selling state shares in domestic market or listing in developed overseas markets. In recent years, the capital raising activities of SOEs have triggered fierce competition among global stock exchanges to seek new listings from Chinese firms (Kissel and Santini, 2004), notably for the world's biggest IPO by Industrial & Commercial Bank of China Ltd. (ICBC)'s \$19 billion share issuance.

on the research design which is followed by discussions of the empirical tests in section 4. Section 5 checks the robustness of the results and section 6 concludes.

2 Institutional Background and Research Hypothesis

2.1. China's tax regime and fiscal support from local governments

In China, the central government implements a planned quota system for IPOs under which a limited listing quota is assigned to the planning commission at province level, and then it makes the allocation to IPO candidates within its administrative region. The limited share quota assigned to each firm is usually too small to meet its capital need (Chen and Yuan, 2004). To enhance the capital-raising for firms during IPO as well as their subsequent rights offerings, Chinese local governments compete to lend fiscal support to their local IPO firms or SEO firms in attracting investment that is essential in promotion of territorial economic growth.

There are three avenues for local government to lend fiscal support to firms within its jurisdiction: preferential tax rate, tax refund and financial subsidy. Nevertheless, since the policy of first levying and then rebating taxes ("first levy last refund") was abolished in 2002, there had been two avenues left --- preferential tax rate and financial subsidy for local governments to mitigate the tax burden of companies in their administrative region prior to 2008.

Preferential tax rate policy usually serves as tax incentives for firms and aims at encouraging the development of certain industries such as high-tech, energy, transportation, infrastructures and agriculture and so forth to contribute to the national industrial adjustment to an optimal structure. Preferential tax rate practice mainly focuses on those fast-developed economic and technologic regions as well as revolutionary regions, minority administrative regions, rural regions and national designated necessitous regions. The firms which are entitled to enjoy the favor are required to pay tax with the rate lower than the standard tax rate of 33%, usually 27%

and 18%, or even 0%, based on their firm attributes. The discretion of examining and approving tax preference for companies rests on the local tax bureau or local office of SAT (State Administration of Taxation) which is an indispensable affiliated segment of local government. At present, many Chinese local governments illegally grant tax rate favor to the companies³ that fail to meet the national criteria (refer to appendix 1) for the granting of preferential tax rate (Chen and Lee, 2001). As such, many Chinese companies, to varied extent, manage to enjoy the benefit from direct tax rate reduction policy. Most listed companies in China are subject to the standard tax rate of 30% plus 3% local tax prior to the listing. No sooner would those companies be listed, did they get the approval from local governments to enjoy a preferential tax rate. The ensuing lower tax burden results in higher level of reported earnings for the firms, which well facilitates their financing through the subsequent offerings. In addition, the levy of 3% local tax is directly at the local governments' discretion. In order to attract providers of capital and technology, the local governments generally waive the 3% local tax in spite of the reduction of tax revenue for the local governments. Therefore, the effective tax burdens of most Chinese listed companies are mainly embodied within the three income tax rate intervals as follows: 15%-18%, 24%-27% and 30%-33% (besides preferential tax rate of 0%).

Before 1 January 2002, local governments could firstly levy the listed companies at an income tax rate of 33% and then refunded part of the taxes (usually 18%) to those companies. The specific amount of refund as well as which companies will be “qualified” for refund are up to the discretion of local governments which, in competition with each other for the flow of capital, offer large tax refund to attract

³ Prior to the promulgation of the new “Enterprise Income Tax Law of PRC” in March 2007, there were two distinctive sets of enterprise income tax law for domestic enterprises and for foreign & foreign investment enterprises (FIEs) respectively. The tax law for the FIEs stipulates more tax preference treatments than that for the domestic enterprises, enabling the local governments to attract more foreign investment to their jurisdictions.

investment (Wu et al., 2007). When the local government find it very hard to get favorable ground to grant preferential tax rate, they will resort to “first tax last refund” practice to relieve the substantial tax burden of the listed companies. In China, prior to the abolishment of “first tax last refund” policy, some local governments even refund the tax paid to those listed companies right during the IPO to help raise more capital and boost the stock price (Chen and Lee, 2001).

Financial subsidy is another effective financial tool for local governments to lend support to firms within its jurisdiction. Similarly, in order to attract economic resources and promote regional economic development, local governments, to a certain extent, render financial subsidy to local competitive enterprises since they make up main forces of gearing up the territorial economy⁴. This phenomenon exists widely in China. If the attribute of subsidy received is accredited to the scope designated by the Chinese central government, the subsidy from local government can be exempt from income tax. Without the subsidies which are recognized as the revenue in the income statements, a certain number of SEO firms in China would have failed to beat the regulatory return on equity (ROE) requirement for the rights issues (Chen and Lee, 2001).

In China, under the State Council regulations governing the tax revenue-sharing system, enterprise income tax levied from most of domestic enterprises and FIEs by the local offices of SAT (State Administration of Taxation) is shared between the central government and local governments in the portion of 6:4⁵ (Liu, 2006).

⁴ The maintenance of territorial economic predominance and the development of economy depend on the investment and operations of firms within the jurisdictions. In this wise, local governments compete to afford local firms subsidies in support of their investment and operation. Given the varied territorial economic condition (such as industrial composition, economic resource, human capital, development of market economy, industrial predominance and so forth), the specific schemes of fiscal support to local firms differ accordingly among the local governments at provincial level. For instance, local government in Liaoning province, in view of automobile being the mainstay of the territorial economic development, granted the financial subsidy amounting to 100 million RMB for Songliao Automotive Corporation, a listed company in Liaoning province in support of its automotive production in December 2003.

⁵ Prior to 2002, the income tax levied from local enterprises (excluding local financial institutions whose liable

Companies which pay the income tax ascribed to the above tax-revenue-sharing system are usually eligible for various sorts of tax favors, and local governments are entitled to grant tax favor to these firms. While 60% of the income tax⁶ levied by local offices of SAT from these companies is assigned as fiscal revenue to the central government, local governments just suffer from 40% direct loss of fiscal revenue accredited to the tax reductions from the enterprises that are granted the tax favor. Similar to granting preferential tax rate to listed firms, local governments also suffer just partial losses of the fiscal revenue if they provide “first levy last refund” to those listed companies.

In contrast to granting preferential tax treatment to companies, rendering fiscal subsidy to listed companies apparently is more costly for local governments, which does not limit to the fiscal expenditure of the local governments. Underlying opportunity cost also arises as economic resource for a local government is invariably limited for a certain period. If capital was excessively used as fiscal stipend for listed companies, the local government would be devoid of other social benefits brought about by alternatively utilizing its fiscal capital in other areas such as infrastructure, social welfare, education, medical treatment and environment etc. In addition, administration of the income tax levying and collection, capital turnover in the conversion of the levied tax into local fiscal revenue as well as in the subsequent disbursement of subsidy to firms engender costs to local governments too. However, fiscal support in the form of preferential tax favor will save those costs and the trouble for the local governments.

In China, the number of enterprises that enjoyed tax favor from local government

income belongs to tax revenues of central government) is ascribed to the tax revenues of local governments. In 2002, it is demanded that local governments surrender 50% of their corporate income tax revenues to central government. Later in 2003, the percentage of corporate tax revenue shared by the central government increased from 50% to 60%.

⁶ It excludes the 3% local income tax levied by the local governments. Just as the disbursement of subsidy income, the waiver of the 3% income tax will induce direct fiscal loss of the local governments.

is significantly larger than the number of enterprises which enjoy financial subsidy (Chen and Lee, 2001)⁷. Compared to the subsidy offerings, the grant of preferential tax rate is a more common avenue for local governments to boost the income of the companies in their region, which might be due to preferential tax treatment being less costly to the local governments.

[Insert Figure 1 Here]

In addition, all the three avenues of the fiscal supports that embody the political incentives of a local government (refer to figure 1) will bring them disadvantageous factors for the region's market economy. To be specific, competitiveness of the companies which do not have any form of fiscal subsidy or tax preference will be unfairly undermined at the industrial level in the same region. Consequently, companies probably focus more on how to maintain a desirable connection with officials of local governments to grasp fiscal support than on their self-subsistence and development.

2.2. Earnings management in the Chinese listed companies

Prior research literature argues that in order to sell the shares at a higher price and to raise capital at a lower cost, firms generally have a great desire of manipulating earnings during the equity offerings since investors rely on earnings more than any other measures of firm performance such as dividends, cash flows, or variants of earnings and the like (Biddle et al., 1995; Liu and Lu, 2002; Francis et al., 2003).

⁷ Chen and Lee (2001) state that less than 5% of Chinese listed firms during 1997-1999 are liable for the standard income tax rate of 33%. Chinese listed firms which enjoy financial subsidy from local governments account for 20.19% in 1997, 49.41% in 1998 and 54.66% in 1999 respectively among the listed firms.

Survey results also indicate that managers view earnings as the key metric for performance evaluations by investors and analysts (Graham et al., 2005). As investors rely exceedingly on reported earnings to evaluate firm performance, firms are apt to manipulate earnings through accruals (Teoh et al., 1998a) and the abnormal accounting accruals are unusually high around the equity offerings (Teoh et al., 1998c; Ducharme et al., 2004).

The agency conflict between controlling shareholders and external investors accounts for a significant portion of earnings management in China's listed firms (Jian and Wong, 2004). The controlling shareholders are prone to plunder the wealth of minority shareholders (La Porta et al., 2000; Claessens et al., 2000; Leuz et al., 2003), and manage earnings to mask their true firm performance and to conceal their private control benefits from the public (Leuz et al., 2003; Haw et al., 2004). They are particularly susceptible to engaging in earnings management in the setting of equity offerings (Jian and Wong, 2004).

In China, listed companies must meet certain return on equity (ROE) criteria to be qualified for rights issues⁸. So the controlling shareholders have great desire to exalt earnings above the ROE benchmark. Aharony et al. (2000) provide the evidence of earnings manipulations and the high median ROE prior to the IPO for listed Chinese firms. Chen and Yuan (2004) and Haw et al. (2005) both find that the Chinese listed firms manipulate earnings to meet the ROE requirements for rights issues. Meanwhile, the earnings exaltation enables the listed firms to gain trust from regulators and the public, and this in turn enhances the efficiency of capital-raising.

⁸ From 1996 to 1998, one of the basic requirements was that companies had to have a minimum of 10% ROE for the three consecutive years prior to the seasoned equity offerings (CSRC, China Securities Regulatory Commission, Notice No.17, 1996). In 1999, the rule was modified to requiring an average ROE of at least 10% as well as a minimum 6% in each of the 3 years prior to the offerings (CSRC Notice No.12, 1999). From 2001 onwards, CSRC relax the restriction of an average ROE of at least 10% and just a minimum 6% ROE is required of the listed firms to qualify for the right offerings (CSRC Notice No.43, 2001). Meanwhile, three consecutive profitable years are required of Chinese listed firms to qualify for initial public offerings.

Besides, most of the controlling shareholders prone to manipulate the earnings to a high level so that they would be subject to less supervision or restriction upon any of their misbehaviors e.g. the tunneling⁹.

2.3. The impact of fiscal supports from local governments on earnings management

It is well documented in the prior literature (e.g. Rangan, 1998; Loughran and Ritter, 1997; Teoh et al., 1998a; Jegadeesh, 2000) that pre-issue earnings management through discretionary accruals explains the long-term underperformance of the firms after equity offerings. Earnings management by listed companies through accruals is just like the borrowing of the future earnings and thus subsequent earnings would decline¹⁰ (Aharony et al., 2000). Or rather, the listed companies boost their current financial performance at the expense of future reported financial status. In contrast, earnings management in the form of fiscal support, which is ascribed to the behavior of the local government rather than that of individual companies or integral group companies¹¹, is free from temporary transfer of earnings through “time”. The afforded fiscal support from local governments adds substantial economic value to the listed companies without sacrifice of their future reported financial performance. In this respect, earnings derived from fiscal support, which are easily identified and disclosed in the financial statements, will not mislead the investors as earnings manipulated by firms, and hence is more credible to the

⁹ Johnson et al. (2000) use “tunneling” to describe the diversion of resource away from firms for the private benefits of the controlling shareholders. Tunneling includes activities such as outright theft, loan guarantees, related party loans and related party sales of assets or products below the market price.

¹⁰ Loughran et al. (1997) show that seasoned offerings are followed by significant earnings declines. Teoh et al. (1998a) find that post-issue stock return underperformance of issuers is accompanied by unusually poor earnings performance. Teoh et al. (1998c) also find that discretionary accruals are unexpectedly high around the IPO year and decline with net income afterwards.

¹¹ Integral group companies encompass subsidiary companies, parent companies and their affiliated/related parties.

market.

In the setting of equity offerings, earnings manipulation through accruals is usually not the optimal action as regards a firm's investing and operating strategies¹². The purpose that the firm's actions serve is no more than to meet the qualification of rights offerings or stock price lift to cut down their financing costs. Dechow et al. (1996) show that finance at low cost forms a dominant motivation for the earnings manipulations by firms, and find that while unidentified earnings manipulators enjoy lower costs of capital, identification as an earnings manipulator is associated with substantial increases in the cost of capital. Shivakumar (2000) provides evidence that investors rationally infer this earnings management at the equity offerings announcements and, as a result, reduce their price response to unexpected earnings released right after offering announcement and that investors would also correct the price impact of earlier earnings manipulations at the offering announcement. As Haw et al. (2005) find, in China, investors are able, to some extent, to "see through" the quality of managed earnings and rationally adjust for it for their investment decisions in the year of rights offering. In this vein, once the firms' earnings management behaviors are seen through by outsiders, the listed companies will suffer from price discount by external investors and bear much reputation loss, directly resulting in much dent on their capability of raising capital in the equity issues.

In addition, since Ritter's (1991) influential study, many papers document that firms underperform relative to benchmark indices (e.g. ROE) or to the similar stocks following their equity offerings¹³. Even if some investors might fail to recognize

¹² For example, firms can advance recognition of revenues by excessively selling their products through credit sales and delay recognition of expense by classifying more manufacturing overhead costs to be inventorial costs rather than period costs. Still, the resultant ensuing report of low level of accounting income may violate debt covenant restrictions.

¹³ Though the IPO underperformance effect is widely accepted, Gompers and Lerner (2003) propose a small sample explanation to the IPO underperformance puzzle. Nevertheless, a recent paper by Ang et al. (2007) presents new compelling evidence supporting the existence of the IPO underperformance effect by disproving

earnings manipulated by issuers around the offerings, they still would correct their misvaluations caused by earlier earnings management and lower the stock price in the long-term post-offering period. Teoh et al. (1998b) find that issuers with unusual high accruals in the IPO year experience poor stock return performance three years thereafter. Teoh et al. (1998a) and Rangan (1998) find that rights issuers who adjust discretionary accruals to report higher net income prior to the offerings have lower post-issue long-run abnormal stock return. Denis and Sarin (2001) also find that annual earnings announcements in long-run post-SEO period are met with a significantly negative abnormal stock price reaction. In this wise, the subsequent poor market performance would severely undermine firms' capability to re-finance capital through yet another seasoned rights issuing afterwards, while a rights offering is argued to be the dominant source of financing for listed firms in China (Haw et al., 2005)¹⁴.

As suggested previously, different from earnings manipulated by the management, earnings ascribed to fiscal supports by the local governments are much credible and informative to the public. Therefore, fiscally supported by the local governments in boosting the reported earnings, the firms would have less motivation to venture upon the earnings manipulations. The discussion above leads to the hypothesis respectively as follows:

H₁: *The firms will be less likely to manipulate earnings if they enjoy more financial subsidy from the local government.*

H₂: *The firms will be less likely to manipulate earnings if they enjoy more income tax expense savings attributed to the preferential tax favor from the local*

Gompers and Lerner's (2003) argument that the underperformance may be attributed to a small sample effect or "Peso problem".

¹⁴ Haw et al. (2005) document that China's regulators seldom approve listed companies' requests to issue bonds and that the listed Chinese firms are strongly motivated to maintain the ability to obtain long-term financing through equity offerings.

government.

The fiscal support is segregated into the categories of preferential tax favor and financial subsidy in the above hypothesis in view of their distinctive attributes. First, as indicated previously, the grant of preferential tax favor is less costly to local governments than the subsidy offerings. Second, once preferential tax favor is granted to the firms, it can rarely change across the subsequent fiscal years. In contrast, the scheme of the subsidy grant in support of financing for SEOs or IPOs can vary subsequently in the light of firms' earnings performance across fiscal years. Compared to preferential tax favor, financial subsidy is a more flexible tool for local governments to help boost the reported earnings of IPOs and SEOs across periods.

3 Research Design

3.1. Sample selection

Panel A of Table 1 describes the sample selection processes. My sample selection starts with the entire population of both IPO firms and SEO firms on the Shenzhen and Shanghai stock exchanges for 1997-2006¹⁵ based on both the China Stock Market and Accounting Research (CSMAR) database and Wind database. With reference to the sample selection method proposed by (Rangan, 1998), if listed companies have equity offerings more than once within any three years during the test period, I only choose the earliest equity offering as my selection target so as to trim measurement errors resulting from iterative offerings. Financial institutions are removed since the financial variables used in their earnings management measures are not comparable to those used by non-financial firms¹⁶. I further truncate firms whose listing had been postponed as well as those that lack the industry information from the database. The final sample consists of 3292 firm-year observations for the selected firms with complete financial accounting information during the three years prior to the year of equity offerings. Panel B of Table 1 summarizes the distribution of those final sample firm-years across fiscal years and industries¹⁷.

[Insert Table 1 Here]

¹⁵ Noted that 2007 is not included in the sample period for the reason that firms which would lose their previous tax preference assigned to the prior tax act (especially foreign investment enterprises) will have great incentives to manage earnings upwards to take advantage of lower tax rate that is still available before the new tax act is duly enforced in 1 January 2008. This will cause severe confounding effect to my results if firms in 2007 are included. This fact proposed measures up to the prior research findings that firms manipulate earnings upwards for the years before tax-rate increases due to the tax-incentive scheme (Lin, 2006). Expectedly, SOEs (State-owned enterprise) that bear highest level of income tax rate (33%) expect the enforcement of new Enterprise Income Tax Law are inclined to manage earnings downwards through accruals prior to the end of 2007. In this way, the SOEs will reduce income tax expenditure by reserving more earnings to be recognized after the year of 2008 during which they enjoy lower level of income tax rate (25%) under the new income tax law.

¹⁶ Specifically, the nature of accruals, the capital structure and the characteristic of the operating cash flow of the financial firms differ greatly from those of non-financial firms.

¹⁷ I use the industry definition system created by the CSRC, which classifies firms into 13 major industries such as manufacturing, real estate, commercial, etc.

3.2. Measurement of variables

3.2.1. Earnings management

As for earnings management behavior, using (discretionary) accruals is fairly flexible, and is more difficult for investors as well as regulators to identify than using the “below-the-line items” (items from non-operating income). External auditors bear much greater risk to tolerate earnings manipulation through the easily identifiable below-the-line items. Moreover, outside investors are mainly concerned over operating income that most accruals stem from instead of the below-the-line income when evaluating the financial performance of listed companies. In China, companies who report higher operating income but lower income from below-the-line items¹⁸ have a greater chance of obtaining government approval for rights offerings (Haw et al., 2005). Therefore, this study designates discretionary accruals as the measure of earnings management by listed companies prior to the equity issues.

I use the cross-sectional version¹⁹ of the modified-Jones model (DeFond and Jiambalvo, 1994; Becker et al., 1998; Bartov et al., 2000). Under this model, the level of discretionary accruals for a particular firm is calculated as the difference between the firm’s total accruals and its non-discretionary accruals (NDA), as estimated with Equation (1):

$$NDA_{i,t} / A_{i,t-1} = \hat{\alpha}_0 + \hat{\alpha}_1 (1 / A_{i,t-1}) + \hat{\alpha}_2 [(\Delta REV_{i,t} - \Delta REC_{i,t}) / A_{i,t-1}] + \hat{\alpha}_3 (PPE_{i,t} / A_{i,t-1}) \quad (1)$$

¹⁸ Chen and Yuan (2004) show that China’s regulators increase their scrutiny of the use of excessive amounts of non-operating income to manage earnings when approving rights issue application.

¹⁹ A cross-sectional accruals model is adopted for two reasons. First, a time-series version of the model requires a strong stationarity assumption in the parameters of the relation between nondiscretionary accruals and accruals drivers, and a contradiction of this assumption results in increased measurement errors in discretionary accruals. In China’s capital market, duration of the firms’ listing is short (less than 20 years hitherto, which fails to fulfill the minimum requirement of test period by time-series model). In addition, main business of Chinese listed firms, accounting rules and policies for Chinese listed companies change since IPO and thus lack a relatively stationary and sufficient time series. Second, as has been shown in prior literature (Subramanyam, 1996; Bartov et al. 2000), a cross-sectional model appears to be more efficient than a time-series model in capturing the extent of accrual manipulations.

Where $\hat{\alpha}_1$, $\hat{\alpha}_2$ and $\hat{\alpha}_3$ are coefficients²⁰ estimated during the test period of 1994-2005 from the following cross-sectional regression²¹:

$$TA_{i,t} / A_{i,t-1} = \hat{\alpha}_0 + \alpha_1(1 / A_{i,t-1}) + \alpha_2(\Delta REV_{i,t} / A_{i,t-1}) + \alpha_3(PPE_{i,t} / A_{i,t-1}) + \varepsilon_{i,t} \quad (2)$$

Where $TA_{i,t}$ = Total accruals for firm i in year t ²²,

$\Delta REV_{i,t}$ = Change in revenue for firm i between year $t - 1$ and t ,

$PPE_{i,t}$ = Gross property, plant and equipment for firm i in year t ,

$A_{i,t-1}$ = Total assets for firm i at the end of the previous year,

$\Delta REC_{i,t}$ = the change in receivables for firm i between year $t - 1$ and t .

The model assumes that no systematic earnings management occurred for the cross-sectional estimation sample. So I exclude the IPO and SEO firm-years when running the cross-sectional estimates with equation (2). My estimation of the parameters of modified-Jones model includes a constant term $\hat{\alpha}_0$ since doing so serves to mitigate the model misspecification (Kothari et al., 2005)²³. Having estimated non-discretionary accruals (NDA) from equation (1) above, the amount of discretionary accruals (DA) for firm i in year t are calculated as the residual value

²⁰ I relax the within industry restriction on Modified Jones Model estimation for two reasons. Firstly, a potential defect of industry control is the under-estimation of discretionary accruals and over-estimation of non-discretionary accruals (McNichols, 2000; Haw et al., 2004). Bagnoli and Watts (2000) show that the inclination of earnings management increases because of the firms' reliance on the relative performance evaluation by the time firms expect competitors to manage earnings. In this scenario, an industry specific model may overstate (understate) the extent of non-discretionary (discretionary) accruals because industry controls may encompass the average level of discretion exercised by the industry (McNichols, 2000; Kothari et al., 2005). Secondly, there is lack of sufficient data for the estimation sample that excludes IPOs and SEOs, which lowers the power of the test. Few industry-years in industry cross-sections manage to attain at least 20 estimation firm-years after excluding the IPOs and SEOs except for the manufacture industry-years.

²¹ The adjustment for changes in receivables (i.e. modified-Jones model) is only applied to equation (1) to allow for the possibility of credit sales manipulations by the equity issuers. With respect to coefficient estimates in the accruals expectation model (equation (2)), the original Jones model is used (Dechow et al., 1995; Bartov et al., 2000). All variables in the model are scaled by lagged assets to reduce heteroscedasticity, as it is assumed that lagged assets are positively associated with the variance of the disturbance term (Jones, 1991).

²² For post-1998 data, TA is directly computed as the difference between operating net income and operating cash flows. For other years when cash flow statement data are not available, I compute total accruals as: $TA = (\text{change in current assets} - \text{change in cash} - \text{change in short-term lending}) - (\text{change in current liability} - \text{change in short-term borrowing} - \text{change in accrued income taxes} - \text{change in current portion of long-term debt}) - \text{depreciation expense} - \text{amortization expense}$, where the change is computed between year t and $t-1$.

²³ Kothari et al. (2005) indicate that inclusion of the intercept not only provides an additional control for heteroskedasticity not alleviated by using assets as the deflator but also mitigates problems stemming from an omitted size variable, and find that discretionary accrual measures based on Modified-Jones models without a constant term are less symmetric.

from equation (3):

$$DA_{i,t} = TA_{i,t} - NDA_{i,t} \quad (3)$$

Prior studies (e.g. Chen and Yuan, 2004; Haw et al., 2005) find that the Chinese equity issuers' earnings management behavior is bound up with the regulatory ROE benchmark for the rights offerings. The multiyear requirement of rights offerings is likely to strengthen incentives for firms to manage earnings downward in years when ROE easily clears the benchmark hurdle (Clinch, 2005). In the meantime, downward earnings management prior to equity offerings might also result from the listed firms' incentives of income smoothing since prior research implies that investors in civil-law countries probably put much weight over persistence and smoothness in judging the value relevance of the earnings (e.g. Ball et al., 2000). In this regard, I apply unsigned abnormal accruals as a proxy for earnings management²⁴ which captures the firms' proclivity to both overstate and understate the reported income prior to the equity issues.

3.2.2. Fiscal supports variables

As indicated previously, preferential tax rate or income tax refund as tax incentive to firms possesses the distinctive attributes different from financial subsidies in that subsidy offering is more flexible for local governments to help boost the reported earnings of the firms though more costly compared to the tax favor. So I add up both the income tax savings from tax rate favor and those from tax refund to serve as a separate fiscal support variable in my main model. The income tax savings from the tax favor (preferential tax rate and tax refund) is measured as having 33%

²⁴The use of unsigned discretionary accruals is important since it avoids the conceptual ambiguity associated with benchmark measures which essentially account for all firms that meet or beat certain thresholds to have low "quality" earnings (Kinney and Libby, 2002; Haw et al, 2004). Furthermore, more and more influential studies of earnings management also employ absolute value of discretionary accruals as a proxy for insider reporting discretion (e.g. Warfield et al., 1995; Klein, 2002; Frankel et al., 2002; Haw et al., 2004; Francis et al., 2005; Kwon et al., 2007).

(the standard tax rate) of pre-tax income subtracted by income tax expense plus income tax refund. The income tax expense and the income tax refund can be respectively obtained from the account of “income tax expense” and that of “income tax refund” in a firm’s income statement. Pre-tax income rather than the taxable income is employed in this study to measure a firm’s income tax savings attributed to preferential tax favor since using taxable income to calculate the standard tax burden at a tax rate of 33% will under-state or over-state the income tax savings attributed to preferential tax favor²⁵. The amount of the income tax savings is deflated by net income as the income tax savings rate (TAXSAV/NI) to reflect the extent to which the income tax savings count in boosting firms’ reported earnings.

The amount of financial subsidy received by the listed companies from the local government is derived from the account of “subsidy income” in a firm’s income statement. The subsidy rate (SI/NI), calculated as subsidy income divided by net income, is used to measure the extent to which the listed firms benefit from the financial subsidy in their earnings performance.

3.3. Model specification

The following pooled regression is conducted for the hypothesis test during the test period from 1994-2005²⁶

²⁵ Given the book-tax difference, in some cases, firms need to adjust the pre-tax income (upwards with non-tax-deductible expense and downwards with tax-exempt or tax-reduced income items) to taxable income in calculating the income tax payable. The stipulation of tax-exempt (e.g. the interest income from state bonds purchase) or tax-reduced (e.g. rental and royalties with 10% tax rate) income items by the enterprise income tax law serves as tax incentive to alleviate tax burden of firms and hence the tax-exempt or tax-reduced item is ascribed to a source of income tax savings attributed to preferential tax treatment for the firms. Meanwhile, the adjusted amount of non-tax-deductible expenses (expenses irrelevant to the income incurred and obtained by enterprises are non-tax-deductible according to the China’s enterprise income tax law) is not a source of income tax savings attributed to preferential tax favor.

²⁶ Since that profitability requirement of the qualification for equity offering as well as the mandatory public disclosure of fiscal financial performance is targeted at three consecutive years prior to the offering announcement, I designate three years prior to the issues as my target for each IPO firm or SEO firm from 1997-2006, resulting in the substantial test period from 1994 to 2005 for the sample firm-years.

$$|DA|_{i,t} = \alpha + \beta_1(SI/NI)_{i,t} + \beta_2(TAXSAV/NI)_{i,t} + \gamma_1MKT_{i,t} + \gamma_2LEV_{i,t} + \gamma_3SIZE_{i,t} + \gamma_4EXP_{i,t} + \gamma_5ROA_{i,t} + \gamma_6|\Delta ROA|_{i,t} + (fixed\ effect) + u_{i,t} \quad (5)$$

Where $|DA|_{i,t}$ = the unsigned Modified Jones-model discretionary accrual for firm i in year t ; $(SI/NI)_{i,t}$ = subsidy income divided by net income for firm i in year t ; $(TAXSAV/NI)_{i,t}$ = 33% of pre-tax income subtracted by income tax expense plus tax refund and deflated by net income for firm i in year t ; $MKT_{i,t}$ = market value of common equity divided by the book value for firm i in year t ; $SIZE_{i,t}$ = natural logarithm of total assets for firm i in year t ; $EXP_{i,t}$ = fixed assets divided by total assets for firm i in year t ; $ROA_{i,t}$ = return on total assets for firm i in year t ; $|\Delta ROA|_{i,t}$ = absolute value of change in return on total assets for firm i in year t .

To appraise the aggregate effect of fiscal support from local government on the earnings management behavior of the firms that conduct the equity offerings, I use a variable of TFI, which is calculated as the sum of subsidy rate (SI/NI) and the tax savings rate (TAXSAV/NI), in place of the two aforementioned separate fiscal support variables and re-run the regression.

Prior studies (e.g. Bagnoli and Watts, 2000) show that industry effect is important in explaining discretionary accruals. Aharony et al. (2000) find that Chinese listed firms' incentives and opportunities for earnings management prior to the equity offerings vary across industries. Moreover, the fiscal support granted to listed firms is likely to be more homogeneous within industries than across industries²⁷. So I applied robust standard errors clustered by industry to correct for the industry effect

²⁷ Preferential tax favor in China is targeted at industry and region as is indicated in Section 2.1 and also can be inferred from the provisions of income tax law given in the appendix 1. As for the financial subsidy, it is offered to a larger extent to those firms in the protected industries such as petrochemicals, energy, and raw materials by China's local governments.

(Rogers, 1993; Williams, 2000; Petersen, 2007). In addition, since that the incentive and scheme of fiscal supports vary among local governments at provincial level and also differ across fiscal years (Chen and Lee, 2001), I introduce the dummy variables in the regression to control for fixed effects of year and region²⁸.

In addition, I control for variables that prior studies have found to be associated with earnings management through accruals.

Financial leverage (LEV), measured as the sum of short- and long-term debt divided by total assets, controls for income-increasing behavior to alleviate the constraints of accounting-based debt contracts²⁹ (DeFond and Jiambalvo, 1994; Balsam et al., 2003) and captures the incentives to practice earnings management when close to debt covenant violations (Beasley and Salterio, 2001; Klein, 2002).

Large firms likely face increased external monitoring, have more stable and predictable operations and stronger control structure³⁰, and hence report smaller discretionary accruals (Dechow and Dichev, 2002; Haw et al., 2004). So firm size (SIZE), measured as natural logarithm of total assets, is expected to be negatively associated with earnings management.

Capital intensity of a firm (EXP), measured as the ratio of fixed assets to total assets, reflects the level of capital expenditure that can lower current assets as well as the accruals of a firm. Firms with more fixed assets will have less total accruals (Jones, 1991; Klein, 2002) and firms with higher total accruals are likely to have greater discretionary accruals (Becker et al., 1998; Krishnan 2003; Balsam et al., 2003). Meanwhile, firms with more current assets are more capable of manipulating

²⁸ The use of year dummies and region dummies also respectively account for the case that macroeconomic environment changes among calendar years and the case that earnings management may be directed by a provincial local government who essentially controls the firms within its jurisdictions and expects as high its offering price and as much capital intake to the region as possible (Chan et al., 2006)

²⁹ Leverage measures the extent of financial constraint of a firm's indebtedness. Firms faced with financial constraint or distresses have strong motivation to boost the reported earnings so as to debase the financial costs. High leverage stimulates firms to manipulate earnings and firms with mandatory debt covenant probably have greater discretionary accruals (DeFond et al., 1994).

³⁰ Rajan et al. (1995) indicate that information asymmetries among insiders are lower for large firms.

earnings through working capital³¹. The higher ratio of fixed assets to total assets (EXP) generally implies smaller ratio of current assets to total assets. Therefore, while the ratio of fixed assets to total assets (EXP) is included as the control variable, I expect EXP to be negatively correlated to magnitude of earnings management.

Because discretionary accruals are large for rapidly growing firms or firms with high growth opportunities (McNichols, 2000; Haw et al., 2004; Kothari et al., 2005), the market-to-book-equity ratio (MKT) is included to control for the effect of earnings growth and growth opportunities on discretionary accruals³².

The estimated discretionary accruals for IPOs and SEOs contain discretionary accruals correlated with earnings performance, in addition to accruals related to the equity offerings (Kasznik, 1999; Kothari et al., 2005). To alleviate the concern that the modified Jones model provides biased estimates of discretionary accruals when firms experience extreme earnings performance (Dechow et al., 1995), I employ regression-based approach³³ to reduce measurement errors in the estimation of discretionary accruals. Two earning performance-related variables, (1) Return on total assets (ROA); (2) Absolute value of change in return on total assets ($|\Delta ROA|$), are introduced given that the level as well as change in earnings is positively associated with discretionary accruals (Kasznik, 1999; Klein, 2002; Haw et al., 2004). These measures also purge the earnings management measure of a firm's inherent

³¹ Burgstahler et al. (1997) find that before the occurrence of earnings management, firms with more current assets and liabilities suffer less cost of manipulating earnings than those with less current assets and liabilities.

³² An alternative proxy for earning growth expectations is analysts' forecast of long-term earning growth (McNichols, 2000). Since the market for analysts agency is far from mature in China's stock market, analysts forecast is not available for most of the Chinese listed companies. Therefore, due to the lack of data available, I dismiss the use of analysts' forecast of long-term earning growth as the proxy.

³³ Kothari et al. (2005) argue that a performance-matched accrual measure mitigates type I errors. Nevertheless, I do not use the approach in the research setting of this study for the following two reasons: Firstly, there exists great value discrepancy between ROA of treatment firm-years and that of the matched firm-years with the closest ROA value from the same industry-years. So I am not able to form a meaningful performance-matched sample within industry-year due to limited sample size in my study. Secondly, the performance-matched approach's superiority of addressing biased estimates of discretionary accruals of firms with extreme earnings performance lies in the assumption that, on average, the sample and matched firms have the same estimated non-event discretionary accruals and that, at the portfolio level, the impact of performance on accruals is identical for the test and matched control sample. However, the homogeneity in the relation between performance and accruals for the treatment firm and matched firm is not always warranted.

accruals, reversal of lagged-year accruals, and growth in earnings (Kasznik, 1999; Frankel et al., 2002; Klein, 2002; Haw et al., 2004).

4 Empirical Results

4.1. Descriptive statistics

Table 2 reports descriptive statistics on the variables contained in the regression model. It is shown that the pooled sample average of unsigned discretionary accruals is 0.1298 which is well above zero. All the quartiles including the median are also well above zero. This implies that the equity issuers manage reported earnings by altering discretionary accounting accruals prior to the offerings, which is consistent with the prior research. The mean value of subsidy rate is 4.6% with a standard deviation of 19.8%, indicating that an average of 4.6% of net income of the pooled sample firm-years stems from the financial subsidy from the local governments. Likewise, the mean value of the income tax savings rate manifests that approximately an average of 17.5% of the earnings of the sample firm-years is derived from the enjoyment of tax favor. This suggests that preferential tax favor might generally be more significant in upgrading earnings performance than financial subsidy. Meanwhile, an average of aggregated 22.1% of the net income of the firm-years is ascribed to the fiscal support from the local governments. In addition, it can also be inferred from the quartiles that fiscal support in the form of preferential tax favor from local governments is more prevalent than that in the form of financial subsidy during the equity offerings in China.

[Insert Table 2 Here]

4.2. Regression results

Table 3 reports Pearson and Spearman correlations among variables used in the model. The correlations are all below 0.50, suggesting that the model run with the sample firm-years are beyond the problem arising from multicollinearity.

[Insert Table 3 Here]

Table 4 presents the regression results for the main model. The coefficient of subsidy rate (SI/NI) is -0.027 with high significance level of 0.005 (two-tailed) while that of tax savings rate is -0.071 and statistically significance with p-value of 0.002 (two-tailed). This conforms to the hypothesis that firms will be less likely to manipulate earnings if they enjoy more income tax savings attributed to the preferential tax favor or more financial subsidy from the local governments. The absolute value of the standardized coefficient (beta coefficient) of tax savings rate is far larger than that of the subsidy rate, signifying that preferential tax favor's attenuating impact on the opportunistic earnings management is much stronger than that of financial subsidy. One explanation for this result is that compared to subsidy offering that varies across fiscal years, preferential tax treatment is a stable and long-run incentive to a firm, and thus makes the firm less motivated to manage earnings to window-dress its performance. The coefficient of the variable of aggregate fiscal support (TFI) is highly significant at $p=0.001$ (two-tailed) and also in expected sign, further corroborating that fiscal support from the local governments exerts negative impact on the earnings management behaviors of Chinese listed firms. Besides, consistent with prior studies, the control variables, LEV, MKT, SIZE, EXP, ROA and $|\Delta ROA|$ are all statistically significant in both the regressions. All the

p-values in the regressions are based on the two-tailed test.

[Insert Table 4 Here]

5 Sensitivity Analysis

5.1. Alternative measure of earnings management

The Modified Jones Model implicitly assumes that there is no earnings management through the recognition of revenue on credit sales for the cross-sectional estimation sample. In this wise, when discretion is exercised over revenues in non-SEO and non-IPO firms, not including the change in accounts receivable in estimation of non-discretionary accruals will result in biasing discretionary accruals toward zero. So I extend the Modified Jones abnormal accruals measure by adjusting the change in revenues with the change in receivables in the coefficient estimates of non-discretionary accruals. The pooled results, presented in Table 5, are similar in all respects to those reported in Table 4 for the main test.

[Insert Table 5 Here]

5.2. Re-classification of fiscal support on basis of its cash flow-induced attribute

Although the tax refund is complementary to preferential tax rate as tax incentive to firms, the tax refund provides firms with cash in addition to promoting the firms' earnings performance. While preferential tax rate only serves to boost firms' earnings without any cash flow induced, both subsidy and tax refund are revenue in form of cash flow recognized in the financial statements. They can improve firms' short-term liquidity or long-term solvency which also conveys the positive information to the investors just as good earnings performance does. In this connection, I detach the tax

savings ascribed to tax refund from those ascribed to tax favor and combine tax refund rate with subsidy rate to form the separate fiscal support variable (FI_CASH) which is of cash-flow-induced attribute. The tax savings attributed to the grant of preferential tax rate (FI_NONCASH) is classified into non cash flow-induced category of fiscal support. The results are similar when I re-run the regression with these two re-classified fiscal support variables.

The “first levy last refund” practice was abolished in 2002 in China and tax refund only accounts for a very small portion in my pooled sample firm-years³⁴. To highlight the separate effect of financial subsidy and preferential tax rate on earnings management during the test period from 1994 to 2005, I further apply subsidy rate (SI_NI) and tax savings rate which is accredited to just preferential tax rate (FI_NONCASH) to re-run the regression, and as shown in Table 6, the exclusion of tax refund does not affect my main results.

[Insert Table 6 Here]

5.3. Segregation of IPOs and SEOs in the pooled sample firm-years

It is well documented in existing literature that firms manipulate earnings before IPO and SEO. However, since the motivation for earnings management by IPO firms is likely to differ from incentives of SEO firms (Teoh et al., 1998a; Haw et al., 2005), I segregate the pooled sample into IPO firm-years and SEO firm-years and re-run the model. As shown in Table 7, the regression results with IPO firm-years and those with SEO firm-years both exhibit similar patterns as those with pooled firm-years in

³⁴ Only 46 firm-years have tax refund from local governments during the test period, accounting for less than 2% of 3292 sample firm-years observations.

the main test, and (in test not reported in the table) are also robust using alternative measure of earnings management and re-classifying fiscal support variable as have been indicated in the two preceding sub-sections.

[Insert Table 7 Here]

6 Conclusion

The study is the first to investigate whether fiscal supports from local governments have impact on earnings management. The empirical results, based on the sample firm-years from both IPOs and SEOs from 1997 to 2006, are all statistically significant in support of my hypothesis that the listed firms will be less likely to manipulate earnings prior to the equity issuing if they enjoy more financial subsidy or more income tax savings attributed to the preferential tax favor from the local government. The results are robust after using alternative measure of earnings management, segregating the pooled sample into IPOs and SEOs, and re-classifying fiscal support based on its cash flow induced attribute. The finding implies that institutional factors of fiscal supports from local governments should be taken into account in earnings management research over emerging capital market in which fiscal supports from local governments prevail and government's influence on firm's financial reporting incentives dominates³⁵.

Fiscal support from local governments, in some sense, avail the market efficiency of China's stock market on account of its attenuating effects over the opportunistic earnings management as corroborated in the study. This has good implication for the impact of the enforcement of the latest Enterprise Income Tax Law on the China's capital market. The new statute effective from January 1, 2008 abrogates original tax system that allows varied tax rates for firms of different properties, and legally stipulates the 25% enterprise income tax rate for all firms. The repeal of preferential tax favor (refer to appendix 2) makes a local government lose an impactful tool of lending fiscal support to the listed firms in increasing its ability (or rather, a region's

³⁵ For example, Watts and Zimmerman (1978) argue that the accounting choices are influenced by the expected political costs associated with given financial reporting outcomes. The political costs can be heightened tax burdens as well as a host of indirect tax such as heightened regulation or the threat of greater government intervention into firm's business activities.

ability) to absorb capital in the stock market. In China, fiscal support in the form of preferential tax rate favor is more prevalent than that in the form of financial subsidy. Moreover, as found in Section 4, preferential tax favor is more significant in improving earnings performance and exerts greater constraint on earnings management than financial subsidy does during the equity offerings. In this regard, local governments have to resort to either providing their listed firms with more subsidy or reinforcing the prompt on the earnings management of the listed firms through their political influence so as to maintain the capability of raising capital within the jurisdiction in stock market. However, as indicated in Section 2.1, subsidy offering is more costly for a local government than the grant of preferential tax favor is. Capital resource for the local government to grant financial subsidy to listed companies is usually limited. So increasing subsidy disbursement in compensation of the lost preferential tax favor in support of listed firms would be circumscribed. Instead, to maintain the strength of absorbing investment from capital market, the opportunistic earnings management in “window-dressing” firm performance would probably be aggravated and more prevalent in the capital market. This would be yet another shortcoming of the new Enterprise Income Tax Law (besides the probable tamper with appeals to foreign investors due to the abrogation of tax preference to foreign & foreign investment enterprises) carried out in 2008. In that event, to improve legal institutions and contribute to effective corporate governance system will be more pressing for the Chinese government.

This study also has important implication for investors. In recent years, China has been privatizing government owned firms through selling their state shares and listing in developed overseas market. Given the increased opportunities for investors to purchase shares in state-controlled enterprises in China’s capital market, investors

shall be cautious of earnings management behavior of Chinese firms after the enforcement of the new Enterprise Income Tax Law in 2008. In addition, understanding the impact of fiscal support that embodies the political incentives of the government on firms' financial reporting practice is also important to the investors for their investment decision.

Appendix 1

Provisions of tax preference stipulated by relevant China's income tax law

A. *Provisional regulations of the People Republic of China on Enterprise Income Tax issued by the decree of the State Council No.137 of PRC on December 13, 1993*

Article 8 Preferential tax favor is available to the following taxpayers:

(1) Enterprises that operate in autonomous regions and are in need of incentives shall be given tax reductions or exemption for a specified period, upon the approval of local governments;

(2) Enterprises given tax reductions or exemptions under the laws, executive regulations and relevant rules of the State Council shall be granted such tax favor accordingly.

(Certain tax reductions and exemptions are granted to the following enterprises: high-technology enterprises and enterprises engaged in tertiary industry (e.g. consultancy, tourism, catering trade, information technology, logistics, technical services, etc) designated by the relevant regulations of the State, enterprise that use wastes as their main production materials, enterprises involved in agriculture, forestry, animal husbandry, fishery and water conservancy, enterprises engaged in science, education, culture, propaganda, health and sports, enterprises engaged in environmental protection and resource utilization, enterprise located in revolutionary base areas, minority nationality areas, remote areas and poor areas approved by the State, enterprise in the industry encouraged by the State in the West China, the newly founded enterprises engaged in transportation, electrical power, water reservation, post service, telecommunications, enterprises which have suffered from serious natural disasters like wind, fire, water, earthquake, newly-organized service enterprises that provide social employment opportunities, enterprises engaged in processing, venture capital enterprises, State entities set up to absorb additional workers, factories and farms operated by schools under the educational administration departments, welfare production enterprises that belong to the civil administration departments, farming and forestry enterprises, township enterprises, countryside credit firms, non-profit medical institutions, disease control institutions, women and child care institutions, non-profit welfare institutions in service for the old, non-profit scientific and research institutions, etc. Local tax bureaus or local office of SAT shall, with reference to the actual territorial situations and practical necessity, formulate the specific scheme of tax reductions and exemptions according to the relevant income tax favor policies prescribed notice by the Ministry of Finance (MOF (the Ministry of Finance) & SAT Notice No.1, 1994). In addition, taxpayers with an annual taxable income less than RMB 30000 will be taxed at a reduced rate of 18% while those with an annual taxable income between RMB 30000 and 100000 will be taxed at 27% (MOF Notice No.9, 1994).)

B. *Income Tax Law of the People's Republic of China on enterprises with foreign investment and foreign enterprises passed at Fourth Session of the 7th NPC on April 9, 1991 and promulgated by the President of PRC Decree No.45 on the same date*

Article 7 The income tax on foreign investment enterprises established in special economic zones, foreign enterprises which are engaged in production or business operations and have establishments or places in special economic zones, and foreign investment enterprises engaged in production and established in economic and technological development zones shall be levied at the reduced rate of 15%.

The income tax on enterprises with foreign investment which are engaged in production and established in coastal economic open zones, special economic zones,

or in the old urban districts of cities in the economic and technological development zones shall be levied at the reduced rate of 24%.

The income tax on enterprises with foreign investment, which are engaged in energy, communications, harbor, wharf or other State-encouraged projects in coastal economic open zones, special economic zones, or in the old urban districts of cities in the economic and technological development zones as well as other regions designated by the State Council may be levied at the reduced rate of 15%.

Article 8 Any foreign investment enterprise that is engaged in production and scheduled to operate for a period of not less than 10 years shall, from the year in which it begins to make profits, be exempted from income tax in the first and second year and allowed a 50% reduction from the third to fifth year. However, the exemption and reduction of income tax for enterprises with foreign investment engaged in the exploitation of resources such as petroleum, natural gas, rare metals and precious metals shall be regulated separately by the State Council. Enterprises with foreign investment which have actually had operations for less than 10 years shall repay the amount of income tax already exempted or reduced³⁶.

The relevant regulations promulgated by the State Council before the enforcement of this law shall remain applicable after this law is put into practice³⁷ as follows. Preferential treatment in form of exemption and reduction of income tax is offered both to enterprises engaged in energy, communications, harbor, wharf and other major projects of the production nature for the tax holiday longer than that specified in the preceding paragraph and to those engaged in major projects of a non-production nature.

The enterprises with foreign investment which are engaged in agriculture, forestry or animal husbandry as well as any other enterprises with foreign investment which are established in remote underdeveloped areas may, upon approval by the competent authorities over tax affairs under the State Council for the application filed by the enterprises, be allowed a 15% to 30% reduction of the income tax for 10 years following the expiration of the period for tax exemption or reduction prescribed in the two preceding paragraphs.

Article 9 The exemption and reduction of local income tax for any enterprise with foreign investment which operates in a State-encouraged industry or undertakes a project encouraged by the State shall, in accordance with the actual situation, be at the discretion of the local governments at province, autonomous region or municipality that is directly affiliated to the State.

Article 10 Any foreign investor of a foreign investment enterprise who reinvests its profit obtained from the enterprise back in the enterprise by increasing registered capital, or uses the profit as capital invested in establishing other foreign investment enterprise to operate for a period of not less than 5 years shall, upon approval by the tax authorities for the application filed by the investor, be refunded 40% of the income tax that is ascribed to the amount of the reinvestment. (In assessing the refundable tax amount, the said foreign investor shall provide supporting documents

³⁶ The enterprises with foreign investment in the middle and west of China as encouraged by the State, the tax may be reduced to 15% for 3 years at the expiration of the tax break as ruled in this provision. Out of those qualified, the tax rate may be reduced to 10% for the export-oriented enterprises satisfying the rules of the State (SAT Notice No 172, 1999).

³⁷ The additional investment of the enterprise with foreign investment may also enjoy the tax incentives of the two preceding paragraphs.

certifying the attributed year of the profit used in the reinvestment. In the case that no supporting document can be provided, the local tax authorities shall determine the year by appropriate methods.)

C. *The Law of the People's Republic of China on enterprise income tax passed at the 5th Session of the 10th NPC on March 16, 2007, and promulgated by the President of PRC Decree No.63 on the same date*

Article 4 The rate of enterprise income tax shall be 25%.

Appendix 2

Repeals of main preferential tax favor under the new enterprise income tax law

Former preferential tax treatments	Previously available to: (Prior to 2008)
15% preferential tax rate	Firms in special economic zones, economic and technological development zones and Shanghai Pudong New Area. Foreign Investment Enterprises located in economic technological development zones.
24% preferential tax rate	Foreign Investment Enterprises which are engaged in production in coastal economic open cities or other economic development areas.
“Two-year-exemption followed by three-year half tax deduction” (2+3 tax holiday)	Foreign Investment Enterprises which are engaged in production
50% tax rate reduction for an extended period of three years	Technologically-advanced enterprises
50% preferential tax reduction	Export oriented Foreign Investment Enterprises
Reinvestment refund	Foreign investors Foreign invested China Holding Companies
Refund on local portion of the enterprise income tax revenue or local income tax	Local governments at province and municipality that is directly affiliated to the State have the right to grant the local income tax exemption or local income tax reduction to encouraged Foreign Investment Enterprises

Table 1 Sample selection and composition

Panel A: Sample selection procedure													n
Total number of firms that conduct equity offerings from 1997 to 2006													1838
Less: firms with iterative right offering within three years during the test period													385
Less: financial institutions with rights offerings													18
Less: firms whose listing had been postponed													24
Less: firms that lack the industry information in the database													10
Selected equity issuers													1401
Sample firm-year observations three years prior to the equity offerings by the selected equity offerings firms													4203
Exclude firm-years without complete financial accounting information													911
Final sample firm-year observations													3292
Panel B: Distribution of Sample Firm-year observations across fiscal years and industries													
Industry	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	1994-2005
Agriculture, forestry and fishing	2	9	13	7	14	12	4	7	9	8	4	3	92 (2.79%)
Mining	0	2	5	5	6	4	2	4	6	4	4	4	46 (1.40%)
Manufacture	65	233	313	233	216	195	149	139	141	121	79	67	1951(9.26%)
Utilities	8	20	27	16	18	16	11	10	12	14	7	5	164 (4.98%)
Construction	1	5	9	6	5	3	3	7	9	5	5	4	62 (1.88%)
Transportation	5	17	23	13	20	17	13	13	10	8	6	7	152 (4.62%)
Information technology	6	25	32	18	19	20	15	21	16	9	9	9	199 (6.04%)
Wholesale and retail	16	45	50	32	21	17	10	10	9	8	4	4	226 (6.87%)
Real estate	11	21	25	15	15	15	10	5	3	8	8	8	144 (4.37%)
Social service	6	13	16	12	14	12	3	3	2	4	4	4	93 (2.83%)
Communication and Literature	0	2	3	2	1	2	0	0	0	0	0	0	10 (0.30%)
Conglomerate	10	29	33	23	14	11	10	7	4	4	4	4	153 (4.65%)
Total	130	421	549	382	363	324	230	226	221	193	134	119	3292 (100%)
% of population	3.95	12.79	16.68	11.6	11.03	9.84	6.99	6.87	6.71	5.86	4.07	3.61	100

Table 2 Descriptive statistics

Sample description and variable definitions: The sample contains 3292 firm-year observations with complete financial information for the hypothesized test. $|DA|$, the unsigned abnormal accruals, is estimated through the cross-sectional Modified Jones Model with IPOs and SEOs deleted in the coefficient estimates of nondiscretionary accruals. SI/NI refers to the subsidy rate, which is measured as subsidy income divided by net income. $TAXSAV/NI$ refers to the income tax savings rate ascribed to both preferential tax rate favor and the tax refund favor, which is measured as having 33% of pre-tax income subtracted by income tax expense plus tax refund before deflated by the net income. TFI is computed as the sum of subsidy rate (SI/NI) and income tax savings rate ($TAXSAV/NI$). MKT equals the market value of common equity divided by the book value of the common equity. LEV equals the sum of short- and long-term debt divided by total asset. $SIZE$ equals natural logarithm of total asset. EXP equals the ratio of fixed assets to total assets. ROA equals return on total assets. $|\Delta ROA|$ equals absolute value of change in net income divided by total assets.

Variable	Mean	25%	Median	75%	St.Dev
$ DA $	0.130	0.042	0.090	0.166	0.193
TFI	0.221	0.154	0.216	0.296	0.232
SI/NI	0.046	0	0	0.018	0.198
$TAXSAV/NI$	0.175	0.010	0.212	0.252	0.128
MKT	2.220	0	1.473	3.124	3.371
LEV	0.516	0.412	0.533	0.642	0.155
$SIZE$	8.789	8.467	8.716	9.042	0.465
EXP	0.105	0	0	0.165	0.189
ROA	0.092	0.054	0.080	0.114	0.061
$ \Delta ROA $	0.025	0.006	0.015	0.031	0.035

Table 3 Correlation Matrix

This table presents the Pearson (Spearman) correlations among variables used in the |DACC| regression in the upper (lower) triangle.

	DA	SI/NI	TAXSAV/NI	MKT	LEV	SIZE	EXP	ROA	ΔROA
DA	1	-0.033*	0.003	0.003	0.010	-0.124***	-0.094***	0.167***	0.168***
SI/NI	-0.058***	1	-0.029*	0.003	0.020	0.011	0.006	-0.074***	0.006
TAXSAV/NI	0.040**	0.023	1	0.105***	-0.179***	-0.059***	-0.210***	0.151***	0.121***
MKT	-0.046***	0.046***	0.100***	1	-0.189***	0.074**	-0.037***	-0.057***	0.023
LEV	0	0.026	-0.176***	-0.347***	1	0.116***	0.070***	-0.277***	-0.105***
SIZE	-0.179***	0.061***	-0.063***	0.238***	0.125***	1	0.230***	-0.361***	-0.153***
EXP	-0.107***	0.169***	-0.205***	0.084***	0.076***	0.157***	1	-0.147***	-0.116***
ROA	0.215***	-0.107***	0.150***	-0.217***	-0.298***	-0.455***	-0.158***	1	0.436***
ΔROA	0.199***	-0.047***	0.124***	-0.070***	-0.027***	-0.164***	-0.143***	0.348***	1

***, **, * indicate correlations significant at the 1 percent, 5 percent and 10 percent levels, respectively, two tailed, using Pearson (Spearman) correlation test.

TABLE 4**The impact of fiscal support on earnings management**

This table presents coefficients from various pooled, cross-sectional estimations of the following regression model:

$$|DA| = \alpha + \beta \text{TFI} (\beta_1 \text{SI/NI} + \beta_2 \text{TAXSAV/NI}) + \gamma_1 \text{MKT} + \gamma_2 \text{LEV} + \gamma_3 \text{SIZE} + \gamma_4 \text{EXP} + \gamma_5 \text{ROA} + \gamma_6 |\Delta \text{ROA}| + (\text{fixed effect}) + \varepsilon$$

Where $|DA|$, the unsigned abnormal accruals, is estimated through the cross-sectional Modified Jones Model with IPOs and SEOs deleted in the coefficient estimates of nondiscretionary accruals. SI/NI refers to the subsidy rate, which is measured as subsidy income divided by net income. TAXSAV/NI refers to the income tax savings rate ascribed to both preferential tax rate favor and the tax refund favor, which is measured as having 33% of pre-tax income subtracted by income tax expense plus tax refund before deflated by the net income. TFI is computed as the sum of subsidy rate (SI/NI) and income tax savings rate (TAXSAV/NI). MKT equals the market value of common equity divided by the book value of the common equity. LEV equals the sum of short- and long-term debt divided by total asset. SIZE equals natural logarithm of total asset. EXP equals the ratio of fixed assets to total assets. ROA equals return on total assets. $|\Delta \text{ROA}|$ equals absolute value of change in ROA. The fixed effect of year and region are included as dummies in the regressions. For simplicity, they are not reported in the table.

Independent Variable	Pred. Sign	Separate effect of Fiscal support			Aggregate effect of fiscal support		
		Coeff.	t-stat.	Sig.	Coeff.	t-stat.	Sig.
Constant	?	0.293	5.13	0.000***	0.286	4.94	0.000***
TFI	-				-0.038	-4.38	0.001***
SI/NI	-	-0.027	-3.55	0.005***			
TAXSAV/NI	-	-0.071	-4.03	0.002***			
MKT	+	0.002	2.29	0.043**	0.002	2.06	0.064*
LEV	+	0.064	3.57	0.004***	0.067	3.63	0.004***
SIZE	-	-0.022	-4.35	0.001***	-0.022	-4.29	0.001***
EXP	-	-0.073	-2.24	0.047**	-0.072	-2.18	0.052*
ROA	+	0.336	7.75	0.000***	0.328	7.50	0.000***
$ \Delta \text{ROA} $	+	0.649	7.64	0.000***	0.646	7.69	0.000***
Adj R ² (%)			7.17			7.12	
n			3292			3292	

***, **, * indicate significance at the 1 percent, 5 percent and 10 percent levels, respectively, two tailed.

The t-statistics is based on clustered standard error adjusted for correlations within industry. The standardized coefficients (beta coefficients) of SI/Ni and TAXSAV/Ni are -0.0277 and -0.0471 respectively.

TABLE 5
Sensitivity test: Alternative measure of earnings management

This table presents regressions results using alternative measure of earnings management.

The alternative proxy for earnings management is the unsigned abnormal accruals estimated through the extended cross-sectional Modified Jones Model with IPOs and SEOs deleted in the coefficient estimates of nondiscretionary accruals. The modified Jones abnormal accruals measure is extended through the inclusion of the change in accounts receivable in the estimation of non-discretionary accruals. SI/Ni refers to the subsidy rate, which is measured as subsidy income divided by net income. TAXSAV/Ni refers to the income tax savings rate ascribed to both preferential tax rate favor and the tax refund favor, which is measured as having 33% of pre-tax income subtracted by income tax expense plus tax refund before deflated by the net income. TFI is computed as the sum of subsidy rate (SI/Ni) and income tax savings rate (TAXSAV/Ni). MKT equals the market value of common equity divided by the book value of the common equity. LEV equals the sum of short- and long-term debt divided by total asset. SIZE equals natural logarithm of total asset. EXP equals the ratio of fixed assets to total assets. ROA equals return on total assets. $|\Delta ROA|$ equals absolute value of change in ROA. The fixed effect of year and region are included as dummies in the regressions. For simplicity, they are not reported in the table.

Independent Variable	Pred. Sign	Separate effect of Fiscal support			Aggregate effect of fiscal support		
		Coeff.	t-stat.	Sig.	Coeff.	t-stat.	Sig.
Constant	?	0.298	5.37	0.000***	0.290	5.15	0.000***
TFI	-				-0.041	-4.52	0.001***
SI/Ni	-	-0.028	-3.53	0.005***			
TAXSAV/Ni	-	-0.078	-4.25	0.001***			
MKT	+	0.002	2.46	0.032**	0.002	2.21	0.049**
LEV	+	0.068	3.74	0.003***	0.072	3.80	0.003***
SIZE	-	-0.023	-4.55	0.001***	-0.022	-4.48	0.001***
EXP	-	-0.072	-2.18	0.052*	-0.071	-2.12	0.058*
ROA	+	0.349	8.30	0.000***	0.339	8.05	0.000***
$ \Delta ROA $	+	0.649	7.28	0.000***	0.645	7.35	0.000***
Adj R ² (%)			7.34			7.28	
n			3292			3292	

***, **, * indicate significance at the 1 percent, 5 percent and 10 percent levels, respectively, two tailed.

The t-statistics is based on clustered standard error adjusted for correlations within industry. The standardized coefficients (beta coefficients) of SI/Ni and TAXSAV/Ni are -0.0287 and -0.0517 respectively.

TABLE 6**Sensitivity test: Re-classification of fiscal support on basis of its cash flow-induced attribute**

This table presents regressions results using fiscal support variables re-classified on the basis of its cash flow-induced attribute.

SI/NI refers to the subsidy rate, which is measured as subsidy income divided by net income. FI_CASH/NI refers to the sum of subsidy rate (SI/NI) and the income tax savings rate ascribed to the tax refund favor. FI_NONCASH is the income tax savings rate attributed to preferential tax rate, which is calculated as having 33% of pre-tax income subtracted by income tax expense and deflated by net income. MKT equals the market value of common equity divided by the book value of the common equity. LEV equals the sum of short- and long-term debt divided by total asset. SIZE equals natural logarithm of total asset. EXP equals the ratio of fixed assets to total assets. ROA equals absolute value of ROA. $|\Delta ROA|$ equals absolute value of change in ROA. The fixed effects of year and region are included as dummies in the regressions. For simplicity, they are not reported in the table.

Independent Variable	Pred. Sign	Re-classification with tax refund			Re-classification without tax refund		
		Coeff.	t-stat.	Sig.	Coeff.	t-stat.	Sig.
Constant	?	0.295	5.30	0.000***	0.296	5.35	0.000***
TFI	-						
SI/NI	-				-0.027	-3.56	0.004***
FI_CASH	-	-0.027	-4.02	0.002***			
FI_NONCASH	-	-0.072	-3.52	0.005***	-0.072	-3.49	0.005***
MKT	+	0.002	2.28	0.044**	0.002	2.27	0.045**
LEV	+	0.064	3.60	0.004***	0.064	3.60	0.004***
SIZE	-	-0.022	-4.49	0.001***	-0.023	-4.54	0.001***
EXP	-	-0.073	-2.23	0.047**	-0.073	-2.23	0.048**
ROA	+	0.336	7.61	0.000***	0.336	7.62	0.000***
$ \Delta ROA $	+	0.650	7.69	0.000***	0.651	7.73	0.000***
Adj R ² (%)			7.18			7.18	
n			3292			3292	

***, **, * indicate significance at the 1 percent, 5 percent and 10 percent levels, respectively, two tailed.

The t-statistics is based on clustered standard error adjusted for correlations within industry. The standardized coefficients (beta coefficients) of FI_CASH/NI and FI_NONCASH in the first regression are -0.0280 and -0.0474 respectively while those of SI/NI and FI_NONCASH in the second regression are -0.0277 and -0.0474 respectively.

TABLE 7**Sensitivity test: Segregation of IPOs and SEOs in the pooled sample firm-year observations**

This table presents regressions results for SEO firm-years and IPO firm-years respectively.

SI/Ni refers to the subsidy rate, which is measured as subsidy income divided by net income. TAXSAV/Ni refers to the income tax savings rate ascribed to both preferential tax rate favor and the tax refund favor, which is measured as having 33% of pre-tax income subtracted by income tax expense plus tax refund before deflated by the net income. TFI is computed as the sum of subsidy rate (SI/Ni) and income tax savings rate (TAXSAV/Ni). MKT equals the market value of common equity divided by the book value of the common equity. LEV equals the sum of short- and long-term debt divided by total asset. SIZE equals natural logarithm of total asset. EXP equals the ratio of fixed assets to total assets. ROA equals return on total assets. $|\Delta ROA|$ equals absolute value of change in ROA. The fixed effect of year and region are included as dummies in the regressions. For simplicity, they are not reported in the table.

Panel A: Regression results with SEO firms							
Independent Variable	Pred. Sign	Separate effect of Fiscal support			Aggregate effect of fiscal support		
		Coeff.	t-stat.	Sig.	Coeff.	t-stat.	Sig.
Constant	?	0.137	1.20	0.254	0.135	1.19	0.259
TFI	-				-0.047	-5.18	0.000***
SI/Ni	-	-0.029	-3.27	0.007***			
TAXSAV/Ni	-	-0.100	-3.26	0.008***			
MKT	+	0.001	0.78	0.451	0.001	0.61	0.553
LEV	+	0.060	2.22	0.048**	0.061	2.20	0.050**
SIZE	-	-0.011	-1.04	0.332	-0.012	-1.11	0.290
EXP	-	-0.072	-1.77	0.104	-0.076	-1.80	0.100*
ROA	+	0.224	2.52	0.028**	0.207	2.21	0.049**
$ \Delta ROA $	+	0.920	6.75	0.000***	0.920	6.86	0.000***
Adj R ² (%)			7.73			7.64	
n			1743			1743	

Panel B: Regression results with IPO firms							
Independent Variable	Pred. Sign	Separate effect of Fiscal support			Aggregate effect of fiscal support		
		Coeff.	t-stat.	Sig.	Coeff.	t-stat.	Sig.
Constant	?	0.287	2.26	0.045**	0.283	2.27	0.045**
TFI	-				-0.030	-2.93	0.014**
SI/Ni	-	-0.025	-2.17	0.053*			
TAXSAV/Ni	-	-0.046	-3.02	0.012**			
MKT	+	0.003	2.47	0.031**	0.003	2.43	0.033**
LEV	+	0.054	1.76	0.106	0.056	1.87	0.088*
SIZE	-	-0.028	-2.18	0.051*	-0.028	-2.18	0.052*
EXP	-	-0.055	-1.58	0.142	-0.054	-1.55	0.148
ROA	+	0.405	4.43	0.001***	0.401	4.46	0.001***
$ \Delta ROA $	+	0.449	3.94	0.002***	0.445	3.85	0.003***
Adj R ² (%)			10.18			10.16	
n			1549			1549	

***, **, * indicate significance at the 1 percent, 5 percent and 10 percent levels, respectively, two tailed.

The t-statistics is based on clustered standard error adjusted for correlations within industry. The standardized coefficients (beta coefficients) of SI/Ni and TAXSAV/Ni in Panel A are -0.0267 and -0.0557 respectively while those of SI/Ni and TAXSAV/Ni in Panel B are -0.0304 and -0.0376 respectively.

Figure 1 Fiscal support in the setting of equity offerings

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