

Privatization, Large Shareholders' Incentive to Expropriate, and Firm Performance

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Abstract

Privatization is typically associated with concentration of ownership and often occurs in countries with weak property rights protection. Therefore, conflicts of interests between the large shareholders and the minority shareholders are likely to influence the success of privatization. We make our point using China's share issue privatization, by far the largest one in history. Based on detailed firm-level data, we document two channels through which large shareholders expropriate resources at the expense of minority shareholders. One is through related-party transactions, including transfer pricing of goods and services, assets sales, and extracting trade credits; the other is through dividend policies so that corporate resources are kept in the firm and under their control. We show that expropriation significantly reduces firm performance. Moreover, exploiting variations in pre-privatization restructuring, we demonstrate that large shareholders' incentive to expropriate depends critically on the firm's organizational form, which is shaped by the privatization process.

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I. Introduction

Waves of privatization in the past two decades have provided ample evidence of improved operating efficiency under private ownership.³ There are, however, notable exceptions. For example, it has been reported that privatization in Russia has failed to improve firm performance when the firms do not have significant ownership or control by outsiders (Barberis, Boycko, Shleifer, and Tsukanova, 1996). Frydman, Gray, Hessel, and Rapaczynski (1999) document that privatization in Central European transition economies has no beneficial effects on performance when the firms are controlled by insiders. More recently, Sun and Tong (2003) show that China's share issue privatization (SIP), by far the largest SIP in history, has failed to contain costs and improve profitability. These failures raise several important questions. Why does privatization work or fail? How do ownership and control matter in privatized firms? Can countries better design their privatization schemes so that their enterprises can take greater advantage of private ownership?

This paper attempts to shed light on these questions by examining an important aspect of the privatization process, namely, the creation of large shareholders and their incentives to expropriate. Privatization is typically associated with a concentration of ownership. Boycko, Shleifer, and Vishny (1996) discuss governments' intention to promote blockholding as a governance mechanism to monitor managers during mass privatization, which, according to Frydman et al. (1999), results in highly concentrated ownership with the largest shareholders holding more than 50 percent of the shares.⁴ More generally, Jones, Megginson, Nash, and Netter (1999) document that privatizing governments around the world consistently use ownership allocation to further their political and economic objectives, which leads to a concentration of ownership in the hands of favored interest

³ See Megginson, Nash, Netter, and Schwartz (2001) for an excellent survey of empirical studies on the effect of privatization on firm performance.

⁴ Based on their sample of privatized firms in central European transitional economies, except for Czech Republic where the legal limit for privatization funds is 20 percent.

groups.⁵ Surprisingly, little is known about the role of these large shareholders in the corporate governance or the performance of the privatized firms. More specifically, while concentrated ownership has the benefit of mitigating the free-rider problem in monitoring the managers and, in the case of insider ownership, aligning managerial interests with those of shareholders, it comes with a well-known cost. That is, a large shareholder who controls corporate assets can use these assets for purposes that are detrimental to the interests of the minority investors.⁶ This is especially true in countries with weak property right protection, where much privatization occurs.⁷ However, despite a large volume of literature on the conflicts of interest between large shareholders and outside minority investors in corporations in general, there is little empirical work on how such conflicts may play out in privatized firms and influence the outcome of privatization programs.

This paper argues that, in countries with weak investor protection, large shareholders and their incentives to expropriate have a profound impact on the effectiveness of privatization. We make our point using the experience of China's share issue privatization (SIP). We show that, given the almost non-existence of corporate governance and weak enforcement power of the regulatory authority, large shareholders engage in a variety of expropriating activities at the expense of minority shareholders, including asset sales, transfer-pricing of goods and services, and extracting trade credits. More importantly, the incentive and ability of the large shareholders to expropriate depend critically on the firm's organizational form, which is shaped by the privatization process.

⁵ Insightful theoretical work by Perotti (1995) and Bias and Perotti (2002) explicitly examine how privatization terms, including initial pricing and the number of shares sold initially, can be structured to achieve various policy objectives.

⁶ For example, Johnson, La Porta, Lopez-de-Silanes, and Shleifer (2000) describe the various forms of expropriation of minority shareholders and examine how legal principles affect the extent of such expropriation. La Porta et al. (1997), Dyck and Zingales (2004) and Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2006) how private benefit of control and legal protection of minority shareholders affect the stock market development. Claessens, Djankov, Fan, and Lang (2002) and Bertrand, Mehta, and Mullainathan (2002) provide convincing evidence of expropriation in business groups in East Asia and India, respectively. However, none of the previous studies in this area has directly examined how expropriation of large shareholders may play out in privatized firms and thus influence privatization outcomes, despite that many privatization programs occur in countries with poor legal environment encourages expropriation.

⁷ In an earlier theory paper, Cornelli and Li (1997) already recognize the possibility of bidding by large shareholders with private benefit of control in a privatization auction and examine the optimal selling mechanism in such situation. However, prior to this paper, there has not been any direct evidence quantifying the empirical significance of large shareholders' private benefit of control in privatized firms.

China offers an attractive opportunity to study the effect of large shareholders on privatization outcome, for three reasons. The first is data availability. China uses the share issue method for privatizing its medium and large state-owned enterprises (SOEs). Issuing public shares and meeting disclosure requirements make available rich and systematic firm-level data both before and subsequent to privatization, including data on related-party transactions which is an important means of tunneling. Such detailed data allows us to pin down the mechanism that leads to inferior performance, that is, tunneling of corporate wealth by large shareholders.⁸ As we discuss in more detail later, this mitigates a common concern regarding performance evaluation in the privatization literature, namely, the selection bias. Second, due to differences in pre-privatization restructuring across firms, there are significant cross-firm variations in large shareholder's incentive and ability to expropriate, which allows us to investigate under what conditions conflicts of interests between large shareholders and minority shareholders are likely to affect privatization outcome. This will have important implications for the design of privatization in general.

Chinese SOEs are known for their many social-welfare responsibilities, ranging from employment to child care. Because of these policy burdens and inefficient management, they are hugely unprofitable and heavily indebted. To prepare SOEs for public listing, the government has to restructure them from traditional SOEs into share-holding companies.⁹ The goal of restructuring (*Gaizhi*) is to separate the entities to be listed on the stock exchange from the social obligations of their SOE predecessors, which involves reorganization of existing assets, injection of new capital, and layoff of excess labor. The limited financial resources of the government, however, make it

⁸ This is in contrast to privatization in many other transition economies, such as Russia and Eastern European countries. In these countries, although there has been anecdotal evidence of stealing by insiders in voucher privatization it has been impossible to systematically quantify its importance because the privatized firms are not publicly traded and thus do not have to disclose their activities (such as related-party transactions) or financial results.

⁹ This is in contrast with the mass privatization in Eastern and Central European transitional economies, where restructuring happens after privatization. However, as will be discussed later, the pre-privatization restructuring in the Chinese SOEs is more about defining the boundary and the organization structure of the firm for the purpose of going public rather than to improve efficiency.

difficult to implement all of these measures. Thus, only about a quarter of the former SOEs have gone through all of the necessary restructuring before going public (we call them completely restructured firms hereafter). The remaining firms, however, only went through an “incomplete restructuring.” In such cases, the most profitable part of the firm is carved out for public listing while the parent company keeps the excess workers, obsolete plants, and the financial and social liabilities.¹⁰ The parent company owns the majority of the shares and typically sends its own officials to serve as the CEO and / or the chairman of the privatized firms.

These two types of pre-privatization restructuring create very different incentives for their respective controlling shareholders. In a complete pre-privatization restructuring, the state-related shares are typically deposited in the State Assets Management Bureau under the control of the central or local government or other SOEs that do not have a close business relationship with the listed company. Thus, these government-controlled agencies tend to be passive shareholders.¹¹ In contrast, incompletely restructured firms become subsidiaries of SOE parent companies, which have strong incentives to expropriate resources from their listed subsidiaries to solve their own problems arising from state ownership. More importantly, the parent SOEs, being the controlling shareholder and having retained personnel connections and business relationships with the listed subsidiaries, have all the feasibility to expropriate.

As in many other emerging economies, the almost non-existence of corporate governance in China further makes expropriation possible. China’s court system is known for its weak legal protection of property rights. Regulatory enforcement, a possible alternative to the court system, is also weak. Although in recent years the Chinese Security Regulatory Committee (CSRC) has

¹⁰ Sometimes the carve-outs may come from several SOEs, in which case the parent companies may or may not merge into one entity and there is typically one main parent company who contributes most of the assets. This parent company will later become the largest shareholder of the listed company.

¹¹ In fact they are, in many cases, too passive. According to our conversations with government officials, the Bureau of State Asset Management has discussed proposals to transform them into active shareholders performing the role of monitoring.

initiated new regulations to protect small investors, it lacks the necessary investigative and prosecuting power to ensure the enforcement of the new rules.¹² Therefore, it is no secret that rules violations are wide spread, as will be clear later in our analysis.

Based on a large sample containing all 295 former Chinese SOEs that went public between 1997 and 2000 and 2616 filings of related-party transactions, we identify two channels through which the large shareholders tunnel resources. One is through related-party transactions, including payments for goods and services provided by parent companies (e.g., sales of final products, purchases of raw materials, and rental payments), asset purchases from parent companies, and generous trade credits offered to parent companies. The extent of expropriation through related party transactions is striking: 92% of incompletely restructured firms are involved in some kind of related-party transactions with their parent SOEs and the total transaction volume amounts to 13% of the listed companies' total assets. Multivariate analysis further shows that incomplete restructuring and the resulting parent-subsidary structure are significantly related to *all* types of related-party transactions.

Dividend payouts provide another perspective on the prevalence of expropriation. There is an institutional feature that makes the Chinese case particularly advantageous for identification. That is, due to its ideological aversion to capitalism and thus the need to ensure future state control, the government has defined share classes based on their relationship to the state and has restricted all state-related shares (i.e., shares owned by the large shareholders) as non-tradable. Thus, dividends are the only way large shareholders earn a return on their holdings.¹³ However, if they

¹² Our reading of CSRC enforcement cases (we discuss one of them later) and private conversations with CSRC officials suggest that enforcement is difficult for several reasons. First, there are too many violations and the CSRC lacks the man power to prosecute all of them. Second, the securities law does not impose severe enough penalties to deter violations; in most cases, the company involved is only penalized with a fine of a nominal amount. Lastly, the CSRC is a minister-level government agency. When the cases involve an official above that level, the CSRC does not have the independent power to conduct investigations.

¹³ Controlling shareholders' demand for dividends when holding non-tradable shares is demonstrated in a case study of the Times Mirror Company by DeAngelo and DeAngelo (2000).

have other means of extracting cash from the firm, e.g., through tunneling, their preference for dividend would be substantially reduced, because 100 percent of the cash tunneled out of the company goes to the controlling shareholders whereas they get only part of the cash disbursed as dividends (minority shareholders get the rest). Consistent with the large shareholders' incentive to expropriate, we find (1) that incompletely restructured firms tend to pay fewer dividends and (2) that the large shareholders' incentive to push for dividends is lower for incompletely restructured firms. These results are robust to various measures of dividend payout ratios.

Finally, we examine whether pre-privatization restructuring is related to inferior post-privatization performance and to what extent the observed performance differences can be attributable to expropriation by large shareholders. We find that incompletely restructured firms significantly under-perform completely restructured firms based on various profitability measures. The effect is economically important. Incomplete restructuring is associated with an efficiency loss of 4.3 percentage points in return on assets (ROA) and 5.9 percentage points in return on sales (ROS). About 40% of the efficiency loss is attributable to tunneling of resources by the controlling shareholders.

The rest of the paper proceeds as follows. The next section describes the privatization of China's state-owned enterprises. Sections III and IV present evidence of expropriation through related-party transactions and dividend payouts, respectively. Section V presents the contrasting performance of SOEs that went through different types of pre-privatization restructuring. Section VI discusses the implications of our results. Finally, Section VII concludes.

II. Background

2.1 Reform of China's State-Owned Enterprises

More than twenty years of reform in China are marked by the government's piecemeal and gradual approach. Reform of the state-owned enterprises is no exception. Instead of outright privatization, China concentrated first on productivity improvement by first initiating enterprise governance structure that stressed autonomy and better incentives and then later on adopting long-term managerial contracts with pre-specified financial targets (such as profits and taxes). Instead of introducing markets and liberalizing prices overnight, China instituted markets at the margin, parallel to planning, by introducing the "dual-track system"¹⁴ in the state industrial sector and by lowering bureaucratic barriers to entry to the once state-monopolized industries. Admittedly, the reforms brought about fundamental improvements in output and productivity. The marginal productivity of labor increased by 54% and the growth in total factor productivity (TTP) was 4.68-6% per year during 1980-89 (Li, 1997; Groves, Hong, McMillan, and Naughton, 1994).

This gradual reform approach, however, had its limits. When the reforms started in 1979, most of SOEs were profitable. Since the reforms, despite significant output expansion and productivity gains, the profitability of the SOEs declined substantially and about 40% SOEs were losing money in the early 1990s. As a result, many SOEs were deeply in debt and, by 1994, close to half of the SOEs had zero or negative equity. The decline in profitability was due to two reasons. First, without clear allocation of property rights, the SOEs' obligations were on the profit side but not on the loss side, which reduced the SOEs' incentives to improve their operating efficiencies. Second, SOEs operated under unfavorable conditions due to both their many social responsibilities

¹⁴ In the dual-track system, the SOEs were allowed to sell their above-quota outputs to the markets at market-determined prices, after fulfilling compulsory delivery obligations. They were also permitted to purchase inputs from the markets to increase production or to expand production capacity according to the market demand (Byrd, 1989, Naughton, 1995, Li, 1997).

(e.g., social security, housing, and education) and external price controls imposed by the dual-track system. These policy burdens put the SOEs at a disadvantaged position in their competition with the rapidly growing private sector. Policy burdens also made it difficult for the state to impose hard budget constraints via bankruptcy of money-losing enterprises. Meanwhile, the dual-track system created enormous opportunities for corruption. In the end, the state acted as the residual claimant, absorbing the losses and the consequences of the diversion of state assets. This imposed a severe strain on the country's banking system. With SOEs taking in 70% to 80% of all bank credit, banks were saddled with as much as \$200USD billion in uncollectible debt, which accounted for, by conservative estimates, a quarter of all outstanding bank loans (USA Today, Sept. 8, 1997).

These problems ushered in a new stage of more fundamental reform. In 1993, the Third Plenum of the Fourteenth Chinese Communist Party Congress endorsed the creation of a modern enterprise system. In particular, it approved the development of diversified forms of ownership through privatization, which would allow SOEs to compete on equal terms in the marketplace. The Fifteenth Communist Party Congress in the fall of 1997 further approved a broadening and an acceleration of this initiative.

2.2 Share Issue Privatization (SIP)

Share issue privatization (SIP) became an important vehicle in the new phase of ownership reform. Two stock exchanges, the Shanghai Stock Exchange and the Shenzhen Stock Exchange, were established in the early 1990s and large scale SIP started in 1997. By 2002, the total value of SIP offerings reached 100 trillion US dollars, making China by far the largest SIP in history.^{15,16}

¹⁵ This number is a conservative estimate based on data provided by Walter and Howie (2003). By 2002 Chinese companies had raised 129 trillion US dollars both at home and abroad. At least 80% of listed companies are former SOEs (Hu, 2002); assuming equal size of SOEs and non-state firms, over 100 trillion was raised by SOEs. This however, is a conservative estimate, because the listed SOEs were considerably larger than non-state firms.

¹⁶ The country with the second largest total value of SIP is the U.K. Between 1981 and 1996, SIP offerings were 53 trillion US dollars in the U.K. (Megginson et al, 2000).

The objective of SIP in China is was to reform and recapitalize state-owned enterprises. To ensure the stability of the newly developed capital markets, the Chinese Security Regulatory Committee (CSRC), the regulator of the securities markets, imposes profitability and capital requirements on SOEs planning an IPO. For example, IPO firms had to have a history of positive profit for three years and the total debt ratio could not exceed 70% at the time of IPO.

Given the money-losing situation of most SOEs, restructuring (*Gaizhi*) is necessary before share issue privatization. This, however, is very costly. The biggest challenge was perhaps to trim the redundant labor force. Since SOEs accounted for most of the urban employment in China, large-scale layoffs would lead to serious unemployment and social instability. Another challenge was to pay back bank loans so that the debt ratio could be reduced to below the 70% limit, which meant injection of new capital for many firms. The government came up with two ways to cover such costs. One was for the government to absorb the costs directly. The less costly and painful way, however, was to let the company itself absorb the costs by structuring the company into a parent-subsidary structure with only the subsidiary company being listed. The old problems under state ownership were then kept and hidden in the parent company. We will discuss the two restructuring models in more detail later.

Another challenge facing the state was, due to its ideological aversion to capitalism, how to ensure state control during SIP. This was done by defining equity ownership classes. Unlike in the West where equity shares are defined in terms of the specific rights attached to the shares, China took a primitive approach in defining the voting or economic rights: all shares are equal by law. In contrast, much time and energy was spent on defining share classes so that the state's absolute majority ownership and ultimate control were not challenged in the future.¹⁷ For this purpose, the

¹⁷ In 1992, the government issued the Standard Opinion (*guifan yijian*), which was the first systematic codification of the legal basis of an enterprise as a corporate form, rather than simply a production line of a large centrally planned and

government devised a system that defines shares in terms of the relationship of the holder to the state and then made all state-related shares non-tradable. This way, state ownership could not be transferred to the private sector through future trading and the state's control was secured. Thus, the broadest categories of shares in China are tradable shares sold to the public and non-tradable shares left in the hands of the state. Tradable shares consist of individual shares (shares held by retail investors and employees) and foreign shares. Non-tradable state-owned shares are further classified into state shares and legal person shares. State shares are the consequence of a government agency – for example a ministry or a local government – contributing its lawfully held assets to the formation of a shareholding company. Legal person shares represent the contribution by state-owned enterprises of their legally owned shares. It is important to note that SOEs owning assets which the state itself does not directly own is a consequence of the contract-responsibility system as discussed earlier, which allowed SOEs to retain profits over a certain guaranteed level. These profits were then used to invest in assets that later became the basis for legal-person shares of various types. Therefore, the division between state and legal shares is based on their relation to the state, rather than the ultimate ownership or control of the shares.

2.2 Comparison of Pre-Privatization Restructuring Processes

As discussed earlier, the limited financial resources of the government in many cases made it impossible to implement all the necessary measures when the money losing and heavily indebted SOEs were restructured before privatization. Thus, only about a quarter of the former SOEs went through what we call “complete restructuring,” in which they went through the necessary restructuring, including injection of funds to repay excess bank debt to meet the listing requirement and layoff (or redeployment) of excess work force. In this type of restructuring, the companies came

organized Soviet-type “Single Factory.” The Standard Opinion formed the basis for China's first company law issued in 1994 and has had profound influence on share class definitions today.

out clean and went public as an independent entity. Sometimes, a new state-owned entity was formed to absorb assets and liabilities not related to the core productive business, but the listed firm was independent of the new state-owned entity. This model of restructuring obviously is painful and requires considerable government resources.

The alternative and less costly way to is “incomplete restructuring,” in which the SOE is transformed into a parent-subsidary structure with only the carved-out subsidiary being listed. The carve-out usually includes the most profitable assets or lines of businesses and productive workers of the old enterprise, while the parent company remained state-owned and kept the excess workers, obsolete plants, and the financial and social liabilities. It was expected that the market-driven listed firm would bring in both business and financial resources to “revive” and deepen the reform in the old system. Despite that the parent companies later will be found to expropriate from the listed subsidiaries, at the time this practice received much criticism for the “drainage of state assets.”¹⁸ Indeed, it is noteworthy that the listed entities are not typically weaker or non-performing firms, even compared with completely restructured firms. Such a parent-subsidary structure has important implication for future corporate governance of the listed companies: the parent company held the majority of shares in the listed firm and became the controlling shareholders.¹⁹ It is a common practice for the parent company to send one of its own managers to become the CEO or chairman of the listed firm.

The two types of restructuring resulted in two different organizational forms. In the complete restructuring, the listed firms became independent entities, whereas in the incomplete

¹⁸ A case in point is China Nonferrous Metal Limited Co. The restructuring process led to a parent-subsidary structure and the subsidiary was listed in Shenzhen Stock Exchange. During the restructuring, the assets in terms of book value were split roughly equally between the parent and the subsidiary. However, the subsidiary kept higher quality assets, resulting in a much higher percentage of assets in market values. Only 600 out of the 20,000 people were placed in the listed subsidiary; among them were the better educated ones – most of the workers with collage degrees were put in the subsidiary. The remaining workers were kept at the parent company.

¹⁹ In some cases, the carve-outs may have come from several SOEs, typically with one SOE contributing the most assets. While the parent companies may not have merged into one entity, the company contributing the most assets would become the controlling shareholder of the listed firm.

restructuring, the listed firms became subsidiaries of the SOE parent companies. These two organizational forms created very different incentives for the entities that held the controlling government shares. In completely restructured firms, the state-owned shares were typically deposited in the State Asset Management Bureau under the control of central or local government or SOEs that did not have any close relationship with the listed company. These entities tended to be passive shareholders. In contrast, the state-controlled shares of incompletely restructured firms stayed with the SOE parent companies, which had strong incentives to expropriate resources from the listed firms to solve their own problems under state ownership.

As in many emerging markets, the almost non-existence of corporate governance further made it possible for large shareholders to expropriate. China's gradual approach to reform has not brought about strong legal protection of property rights. Regulatory enforcement, which could be an alternative to judicial enforcement, is lacking as well. Take the example of the corporate board. It was not until 2001 that the CSRC established the requirement that each listed company should have two independent directors on its board of directors.²⁰ In practice, however, it is no secret that companies frequently twist the rules and place related parties on their boards. Although in recent years the CSRC has initiated new regulations in an attempt to protect small investors, it does not have the necessary investigative and prosecuting power and resources to enforce the rules.

Finally, we note that the choice of pre-privatization restructuring is not completely random. However, our results are not likely to be driven by a selection bias, for two reasons. First, as in most transition economies, restructuring and the resulting organizational forms are largely determined through political and administrative processes which are not directly related to post-privatization performance. In the Chinese setting, such a political process is mainly driven the cost of

²⁰ Following the German two-tier board structure, Chinese company law requires firms to have a supervisory board. However, like boards of directors, supervisory boards are not independent and have little authority to monitor firm behavior and to protect minority shareholder.

restructuring, such as layoffs, debt needs to be repaid, etc, in comparison with the financial resources and capacity of the government to absorb the laid-off workers and to provide funding to pay off debt. While incomplete restructuring is more likely to be chosen when the cost of is high, it is typically the most productive assets and efficient workers that are carved out for public listing. As a result, incompletely restructured firms are not less profitable than completely restructured firms at the time of IPO, as will be shown later. Second and more importantly, we reach our conclusion not by simply comparing post-privatization performance of the two types of firms, but rather, we empirically identify the mechanism that leads to inferior performance of incompletely restructured firms, that is, tunneling of corporate wealth by large shareholders. We will provide further evidence on causality later in our empirical analysis.

In what follows, we document two channels through which large shareholders, i.e., SOE parent companies, expropriate resources at the expense of minority shareholders. One is through related transactions. The other is through dividend policies. We later show that, at least partly due to such expropriation, incompletely restructured firms perform worse than the control group (i.e., completely restructured firms).

II. The Sample

We hand collect data on pre-privatization restructuring and related transactions for a sample of 295 former SOEs that went public between 1997 and 2000. Our focus on post-1997 IPOs is based on several considerations. First, prior to 1997, listed companies did not have to report detailed information on pre-privatization restructuring and the resulting organizational form at the time of IPO. Second, in 1997, there was a change in the regulation of IPOs that imposed restrictions on both the total amount of funds raised through IPO and the total number of public offerings. Since pre-privatization restructuring has the objective of meeting the IPO quota system, a change in the

system might affect the restructuring process. Focusing on post-1997 IPOs has the benefit of uniform IPO regulation. Third, China introduced accounting standards set forth by the International Accounting Standards Committee (IASC) in 1994. Since some of our statistical analysis involves accounting data three-years prior to IPO, a sample of post-1997 ensures consistency in the accounting data. Lastly, large-scale privatization through SIP occurred after the Fifteenth Communist Party Congress in 1997 and therefore our sample is representative of China's privatized SOEs.

For each firm, we manually collect information on pre-privatization restructuring mainly from the firm's IPO prospectus. If the IPO prospectus does not give sufficient information on the pre-privatization restructuring, we supplement it by searching the companies' websites. The IPO prospectus gives information on the history of the firm, e.g., how it evolved from a former SOE into a shareholding company, on the firm's controlling shareholder and, in case of a carve-out, on the parent company that contributes assets to the firm.

Related-party transaction data are manually collected from annual reports. Chinese listed firms are required to report transactions with parties controlled by its largest shareholders separately from those with parties not controlled by its largest shareholders. Financial data, stock returns, and ownership structure are obtained from the China Stock Market and Accounting Research (CSMAR) database compiled by GTA Technology Company. Among the 295 firms that went public between 1997 and 2000, there were ten firms that did not report detailed accounting information for the three years prior to IPO. Thus, our final sample contains 285 firms and 2616 filings of related-party transactions with controlling shareholders.

In Table 1, we report the summary statistics of the firms at the time of IPO. Among the 285 firms, 213 firms went through incomplete pre-privatization restructuring, resulting in a parent SEO as the controlling shareholder. The remaining 72 went through complete restructuring and became

independent firms. Table 1 indicates that firms with incomplete pre-privatization restructuring tend to be larger in terms of total assets, sales, and market capitalization. It is, however, a little unclear as to whether they tend to be more profitable. We report two measures of profitability. One is return on assets (ROA), defined as operating income over total assets; the other is return on sales (ROS), defined as operating income over total sales. The firms with incomplete restructuring are significantly more profitable by the ROA measure (at the 5% level for the mean and the 10% level for the median) but not by the ROS measure. The two types of firms do not differ significantly in leverage.

As a result of the partial privatization of SOEs, the ownership structure of the firms is concentrated, with more than half of the shares (a mean of 54% and a median of 57%) in the hands of the largest shareholders. In the incomplete restructuring process, the largest shareholders control a significantly higher percentage of ownership shares than do the largest shareholders of completely restructured firms (at the 1% level for both the mean and the median). Moreover, incompletely restructured firms are much more likely to appoint their own personnel as the chairman (in 86% of the cases v. 46% in completely restructured firms) or CEO (51% v. 16%) of the listed firms.²¹

A number of studies report that who owns the shares affects the firm's post-privatization behavior. (e.g., D'Souza and Megginson, 1999 and Frydman et al. 1999). Therefore, we report the breakdown of different share classes. Consistent with our earlier discussion that share class definition in China is the result of ensuring state control rather than delimiting voting or economic rights, the two types of firms do not significantly differ in the percentage of tradable shares (as opposed to state-owned non-tradable shares). Among state-owned shares, the two types of firms do not have significantly different proportions of legal shares. The incompletely restructured firms,

²¹ In the IPO prospectus of 17 firms, no information was reported as to whether CEO or chairman comes from the controlling shareholder. For one other firm we could not determine whether CEO is from the controlling shareholder. We exclude these firms in calculating the relevant summary statistics.

however, do have significantly more state shares, which implies that, in incomplete restructuring, assets contributed to the listed firms are directly owned the state rather than acquired by the parent SOEs using retained profits. Later we show that, since share class definition is not meant to assign voting or economic rights but to ensure state control, what matters for post-privatization performance is not how ownership is divided among different share classes, but rather how the incentives implied in the different organizational forms play out in firms' post-privatization operations.

Among tradable shares, we find that the share of foreign ownership is tiny – less than 1% on average and zero in median. The two types of firms do not differ in their foreign ownership. Although foreign shares are found to be related to better post-privatization performance in other emerging economies, China does not seem to be able to benefit effective foreign ownership in governing their privatized SOEs. Incompletely restructured firms do, however, have significantly fewer employee shares, possibly reflecting that they are carve-outs of assets and workers.

One notable feature of SOE privatization in China is that many listed firms did not operate as separate entities for the three years before the IPO. Rather, they were privatized shortly after the restructuring. The regulatory authorities, however, required the firms to report three years of operating history. Therefore, the firms needed to provide what is called “virtual accounting.” Conceivably this provides much room for accounting manipulation and window dressing to boost pre-privatization performance, which would mechanically lower performance changes after IPO. It is not surprising that incompletely restructured firms, which are carve-outs of parent SOEs, are significantly more likely to submit virtual accounting (at the 1% level).²² However, as we show later, virtual account does not drive performance between these two types of firms.

²² The need for virtual accounting is not limited to firms with incomplete restructuring. Many completely restructured firms are former SOEs with their less efficient parts being combined into a separate (albeit independent) entities and thus do not have independent operating histories.

III. Expropriation through Related-Party Transactions

In this section, we examine how controlling shareholders, created during privatization, expropriate minority shareholders through related-party transactions. Here related parties are entities controlled by the largest shareholder. Recall that the largest shareholders on average hold more than 50% of the total shares outstanding. They are by far the controlling shareholders.

A careful reading of the 2616 related-party transactions during a 3-year period after IPO (of which 83% are filed by incompletely restructured firms) reveals three types of transactions through which largest shareholders, especially parent companies created in the incomplete restructuring process, can potentially expropriate resources to the detriment of minority shareholders. The first type of transaction is transfer pricing for goods and services. It occurs during a firm's day-to-day operations, such as the sale of products, purchase of raw materials, and rental of plants and equipment, in which a related party provides goods or services to the listed firm. Consistent with the fact that the carve-outs of former SOEs do not own all the assets necessary for production, they frequently turn to their parent companies for raw materials, equipment and plants, and marketing of final products. It is conceivable that the largest shareholders can tunnel cash out of their subsidiary firms by setting unfair transfer prices.

The second is asset sales.²³ As discussed earlier, during incomplete restructuring, the listed firms are carve-outs from the parent companies and the operating assets carved out are sometimes not sufficient for the listed firms to operate independently. About one-third of the listed firms subsequently purchase assets from the parent companies, which leaves additional room for expropriation.

²³ Eight firms (among which two are complete restructuring and six are incompletely restructured) reported asset purchases from related parties but did not disclose the amounts of the transactions. We do not include them in calculating the corresponding summary statistics.

Lastly, large shareholders can force listed firms to provide generous trade credits for the business transactions in the form of accounts receivable and advance payments. Thus, the listed firms are essentially financing the working capital of the related parties. This practice is so widely spread that it has caught the attention of the regulators. The CSRC has recently introduced a new regulation that prohibits large shareholders from forcing trade credits from the firms they control (CSRC 2003, Ruling 56; CSRC 2004, Ruling 118; Security News, Dec. 18, 2003).

3.1 Empirical Specifications

We now investigate how pre-privatization restructuring affects the extent of related-party transactions. We hypothesize that incompletely restructured firms engage in more related-party transactions. Since a bigger ownership gives the largest shareholders more control and thus greater ability to expropriate, we also hypothesize that expropriation through related-party transactions increases with the largest shareholder's ownership stake.²⁴ Finally, when the large shareholders in incompletely restructured firms have a higher ownership, they expropriate more. Thus we estimate the following model:

$$RPT = a + b \text{ Incomplete Restructuring} + c \% \text{Ownership} + d \% \text{Ownership} * \text{ Incomplete Restructuring} + e \text{ Size} + \text{ Industry Dummies} + \text{ IPO-Year Dummies} + \varepsilon, \quad (1)$$

where *RPT* is different types of related party transactions during the three years after the IPO.

Incomplete Restructuring is a dummy indicating incomplete restructuring. *%Ownership* is the percentage ownership of the largest shareholder and *Size* is the natural log of total assets. Since we use the three-year sum of related party transactions to reduce noises, these two independent

²⁴ Ownership may have a non-linear effect: as the ownership gets really high then the benefit of expropriation may not outweigh the cost. We also try a specification including the square of ownership as the independent variable. The quadratic term is not statistically significant. The basic results do not change qualitatively and the estimation becomes noisier. Taken together, within the empirical range of the large shareholders' ownership, its effect is close to being linear.

variables are taken as the three-year average after SIP. To ensure our results are not driven by certain industry-wide factors, we include industry dummies.²⁵ The main coefficients of interest of b , c and d , all are expected to be positive.

Some firms in our sample do not have related-party transactions in the form of asset purchases and payments for goods and services, which means that they are censored at zero. Estimating the model with ordinary least squares (OLS) ignores this censoring and the estimates tend to be biased toward zero. Therefore, we estimate a Tobit model when the dependent variable is asset purchases and payments for goods and services.

3.1 Simple Statistics of Related-Party Transactions

Panel A of Table 2 examines related-party transactions involving the listed firms paying for goods and services provided by related parties. We use three measures of such transactions, namely product sales as a percentage of total sales, raw materials purchases as a percentage of total cost of goods sold, and rental payments as a percentage of total costs. On average, firms with incomplete restructuring have significantly more of these transactions (all at the 1% level for both the mean and the median). Each of the three measures is about three times more than the control group.

Panel B of Table 2 shows that firms with incomplete restructuring are almost four times more likely (38.5% vs. 9.7%) to purchase assets from their parent SOEs. The assets purchased on average account for 12.1 % (with a median of 8.7%) of their total assets and can be as high as 61%, whereas as the control group only purchase 6.4% of total assets (the median is 0.6%) with a maximum of 18.3%. The differences in both the mean and the median are statistically significant at the 1% level.

²⁵ While some Chinese studies (e.g., Sun and Tong, 2003) use a 14-industry classification which is roughly comparable to the one-digit SIC industry classification, we adopt a more refined classification, which is comparable to two-digit SIC, to better control for industry-wide effects. We have a total of 58 industries in our sample.

Panel C of Table 2 reports the extent to which the listed firms provide trade credits and thus finance the working capital of related parties. Firms with incomplete restructuring on average have 4.7% (with a median of 1.0%) of their assets tied up in account receivables from related parties, which is four times as much as firms in the control group have. Since the listed firms also have some accounts payable with related parties, we calculate the net trade credits offered to related parties. Incompletely restructured firms provide significantly more net trade credits, which accounts for 3.3% of total assets (with a median of 0.4%), whereas completely restructured firms do not on net provide trade credits to related parties. The difference is statistically significant at the 1% level for both the mean and the median. In one particularly notable example, a company called Triple Nine Pharmaceutical Company (*Sanjiu Yaoye*), the total net trade credit offered is as high as almost 90% of its total assets. The parent company's practice of forcing trade credits was so outrageous that the regulatory authority, CSRC, imposed a penalty on the parent company and its top managers (CSRC, July 4, 2002).²⁶

In the above discussion, we emphasize the impact of pre-privatization restructuring on expropriation through related party transactions. It should be noted, however, that even completely restructured firms have considerable related transactions with their controlling shareholders. This could contribute to the overall limited success of privatization in improving operational efficiency and profitability in China.

While the univariate analysis is revealing, one cannot rule out the possibility that other firm characteristics, rather than the restructuring processes, drives the differences in the observed patterns in related-party transactions. This calls for a regression analysis, which is done in the next section.

²⁶ The parent company was fined a 500K Yuan (a little more than 60K US dollars by the exchange rate at the time). The chairman was fined 100K Yuan (12K US dollars); a few other top officers were fined 30-50K Yuan (about 4K-6K US dollars).

3.2 Regression analysis of Related-Party Transactions

In Panel A of Table 3, the dependent variables are related-party transactions involving provisions of goods and services by the related parties. Firms with incomplete restructuring sell significantly more of their final product to their controlling shareholders (i.e., parent SOEs) than do completely restructured firms (at the 5% level). They also purchase more raw materials from their parent SOEs. Although the coefficient is only marginally significant at the 15% level, since we are actually testing a one-sided hypothesis, it suggests a significant impact of pre-privatization restructuring on this type of transaction. The rental payment to the related parties is also significantly higher for incompletely restructured firms (at the 1% level).²⁷ Consistent with the large shareholders increased ability to expropriate when their ownership is higher, *%Ownership* and its interaction with the *Incomplete Restructuring* dummy are positive as expected. The ownership variable is statistically significant in the regression of purchase of raw materials and the interaction term is significant in the regression of sales of final products and rental payments.

In Panel B of Table 3, the dependent variable is asset purchases from related parties. The *Incomplete Restructuring dummy* is, again, significantly positive at the 5% level. The largest shareholder's ownership and its interaction with the *Incomplete Restructuring* dummy have the expected sign but are not statistically significant.

In Panel C of Table 3, the dependent variable is the net trade credit provided to related parties controlled by the largest shareholders. Since the dependent variable is not truncated, we obtain coefficient estimates via OLS estimation. Again, incomplete restructuring is significantly associated with more trade credits offered to related parties (at the 10% level). Although the

²⁷ Firms may lease under capital leases or operating leases. In the case of operating leases, leasing and paying fixed rental resemble purchases financed by debt. In this sense, it may be a substitute for debt financing. In the case of capital leases, the firm has to book the value of the leased item as debt. In both cases, leasing could be affected by the debt choices of the firms. Therefore, in an unreported regression, we control for leverage. The debt ratio turns out to be statistically insignificant, probably reflecting the fact that we do not observe whether the lease contract is a capital lease or an operating lease. Our main results (and their statistical significance) remain unchanged.

ownership variable and its interaction with the *Incomplete Restructuring* dummy have the expected signs, they are not statistically significant.

In sum, we provide evidence suggesting that large shareholders created during privatization have incentives to expropriate listed firms through related-party transactions. Such expropriation is particularly severe among parent SOEs of listed firms, who struggle to support the unprofitable business and excess labor force of the pre-privatization SOEs. Since we do not know the exact terms of these related-party transactions, we cannot directly quantify the dollar amount being tunneled. Later in Section V, we link related-party transactions to firms' accounting performance.

IV. Expropriation and Dividend Policies

In this section, we present another perspective on expropriation, that is, dividend policies. What makes the Chinese case particularly interesting is the fact that state-owned shares are not tradable. Thus we focus on the incentive of the parent SOEs of incompletely restructured firms both as large shareholders with non-tradable shares and controlling shareholders with the ability to divert corporate resources.

4.1 Empirical Specifications

To capture the large shareholder's incentive to expropriate through its influence on the firm's dividend policy, we estimate the following model:

$$\text{Payout} = a + b \% \text{Ownership} + c \text{ Incomplete Restructuring} + c \% \text{Ownership} * \text{Incomplete Restructuring} + e \text{ Firm Controls} + \text{Industry Dummies} + \text{IPO-Year Dummies} + \varepsilon, \quad (2)$$

where *Payout* is the dividend payout ratio; *%Ownership* is the percentage ownership of the largest shareholder, and *Incomplete Restructuring* is the dummy indicating incomplete restructuring.

The first three independent variables are related to the large shareholder's incentive and preference for dividends. As discussed earlier in Section 2.2, the large shareholders represent state-related shares and are not tradable. Thus they generally have a preference for more dividends, since this is the only means for them to realize their investment gains. Such a preference is more likely to be reflected in a firm's payout policy when its large shareholder has a higher ownership stake and thus has a bigger say in corporate decisions. Therefore, coefficient b is expected to be positive. If the large shareholders engage in expropriation, as in the case of incompletely restructured firms, they have incentive to pay fewer dividends so that corporate resources are kept in the firm and under their control (Easterbrook, 1984, La Porta et al., 2000 and Faccio, Lang, and Young, 2001). Thus the coefficient c is expected to be negative. Moreover, the greater ability to expropriate in incompletely restructured firms should reduce the marginal incentive of the large shareholders to push for dividends. Therefore, coefficient d is expected to be negative.

We examine four measures of payout ratios. The first is the most commonly used measure, the dividend-earnings ratio, where earnings are operating earnings after interest and taxes but before extraordinary items (La Porta et al., 2000 and Faccio et al., 2001). Since Chinese regulators examine the dividend-over-net-income ratio when the firms request to issue seasoned equity, our second measure is dividend-over-net-income. There are, however, two problems with these measures. First, diversion of resources occurs before earnings or net income is reported. Therefore, they tend to overestimate the true proportion of earnings that is paid out as dividends for incompletely restructured firms. Second, operating earnings and net income can be easily manipulated.²⁸ To guard against these problems, we use two other measures, namely, dividend-sales ratio and dividend-market-capitalization ratio. We note that reported sales may be affected by

²⁸ The literature also uses the dividend-cash-flow ratio. Probably reflecting diversion of cash by the controlling shareholders, cash flow of many firms is negative (even if net income is positive), rendering this measure of payout ratio meaningless. Therefore, we only report dividend-net-income ratio. In cases of negative dividend-earning (9 firm-years) or dividend-net-income (2 firm-years) we exclude them from our analysis.

expropriation through sales of final product to related parties, whereas market capitalization is subject to the volatile price movements in the stock market. While there is no perfect measure of payout ratios, the diversity of our measures should help prevent us from drawing wrong conclusions due to biases in individual measures.

Firm controls include those commonly used in the literature (see e.g., La Porta et al., 2000; and Faccio et al., 2001). They are size (defined as the log of assets), leverage (defined as total debt over total assets), annual sales growth (defined as the difference in the log of sales between the current year and the previous year). Leverage is expected to have a negative effect on dividend payout because higher leverage is likely to lead to higher interest rates and more restrictive debt contracts preventing events (such as dividend payments) that result in a wealth transfer to shareholders. The effect of annual sales growth on dividends is generally considered to be negative, because higher growth might call for retention of profits to finance future investment projects (e.g., La Porta et al., 2000 and Faccio et al., 2001). In the Chinese setting, however, there are at least three reasons for growth to have a positive impact. First, the Chinese state-owned banks lend to SOEs with few questions asked, which makes internal financing less important. Second, higher sales growth is likely to be associated with a firm's cash-generating ability. When large shareholders holding non-tradable shares push for dividend payments, they tend to press harder when the firm has more cash. Third, the Chinese stock market regulators require firms making seasoned equity offerings to have at least three-years of dividend history and demand explanations for low payout ratios. Since higher growth firms are more likely to issue additional equity, they may have higher payouts due to these regulatory concerns.

In our sample, we have about 10% (26) of the firms that do not pay dividends. Thus, our dependent variable is truncated at zero and we estimate a Tobit model.²⁹ Similar to Faccio et al.

²⁹ An OLS model yields similar results (and significance levels).

(2001), we average the payout ratios over the three post-IPO years to smooth out the noise; as a result, the independent variables are also taken as the averages.

4.1 Simple Statistics of Dividend Payout Ratios

Table 4 presents the mean and the median of dividend payout ratios across firms with different restructuring processes during privatization. The ratios are calculated as the average of the three years after IPO. A median firm pays out about 36% of its earnings, which is in line with the 30% payout ratio around the world as reported in La Porta et al. (2000). Despite a lack of investor protection, privatized Chinese firms have payout ratios higher than the median of civil law countries (25%). There are two possible reasons for this observation. One is that the controlling shareholders cannot trade their shares and therefore push for dividend payments. The other reason is that share repurchases are not allowed in China, which makes dividends the only means of payout.

Table 4 shows that, although dividend payouts in incompletely restructured firms do not appear to significantly differ from the control group at the aggregate level (Panel A), based on industry-adjusted ratios, incompletely restructured firms pay significantly fewer dividends for all four measures and both in terms of the mean and the median.

4.2 Regression Analysis of Dividend Policy

As shown in Table 5, the results across different measures of payouts are remarkably similar. Consistent with the expropriating shareholders' incentive to pay fewer dividends, the *Incomplete Restructuring* dummy enters with a negative sign and is statistically significant at the 1% or the 5% level (Model (1) in Panel A-D of Table 5). To understand the magnitude of the estimates, let us use the example of the dividend-earnings ratio. Our estimates imply that, all else being equal, incompletely restructured firms tend to have a 13.9 percentage point higher payout.

Consistent with the inability of large shareholders to trade their shares, their ownership stake is significantly positively related to the payout ratio at the 1% level. The coefficients on size and leverage generally have signs consistent with the previous literature. The coefficient on sales growth is positive although sometimes insignificant, which is consistent with our earlier discussions. Lastly, consistent with the reduced incentive to push for dividend when expropriation is possible, the interaction term between the large shareholder's ownership and the *Incomplete Restructuring* dummy is significantly negative, at either the 1% or the 5% level (model (2) in Panels A-D of Table 5).³⁰

In summary, this section and the preceding section provide strong evidence that the incomplete pre-privatization restructuring process creates a large shareholder, namely the SOE parent company, that has both the incentive and the ability to expropriate minority shareholders. They do so through related-party transactions, such as asset sales, transfer pricing, and extracting trade credits. To facilitate these transactions, they pay fewer dividends so that corporate resources are kept in the firm and under their control.

V. Pre-Privatization Restructuring and Firm Performance

This section asks two questions. First, is post-privatization performance related to how firms are restructured during the privatization process? Second, to what extent can observed performance differences be attributed to expropriation by the large shareholders and, in the case of incompletely restructured firms, the parent SOEs?

Similar to the existing studies (e.g., Megginson, Nash, and Randenborgh, 1994; Boubakri and Cosset, 1998; Dewenter and Malatesta, 2001; D'Souza and Megginson, 1999; D'Souza,

³⁰ We find that this interaction term is highly correlated with the ownership variable (0.75 correlation with a p-value of 0.001) and the Incomplete Restructuring dummy (0.86 correlation with a p-value of 0.001). As a result, when we include all three variables in the regression, the estimation is noisy and only ownership is significant. Since we intend to examine the non-linear effect of ownership due to the opportunity to tunnel provided by incomplete pre-privatization restructuring, we do not include the Incomplete Restructuring dummy in this estimation.

Meggison, and Nash, 2000; and Sun and Wong, 2003), we examine the change in average performance three years before and after the privatization. We use two measures of performance, both calculated in real terms. The first is the most common accounting measure of performance, return on assets (ROA), defined as pre-tax income over total assets.³¹ Note that SOE privatization in China is through primary offerings, which means that capital raised through SIP is mostly kept in the SIP firm, resulting in a mechanical increase in the total assets by the amount of the offering.³² Therefore, we adjust the total assets after the privatization based on the method proposed by Aharony, Lee, and Wong (2000).

To guard against the noise in the ROA measure, we employ another measure of performance, namely return on sales (ROS), defined as pre-tax income over total assets. This measure, however, may be overstated if the firm sells their final products to their related parties at unfavorable prices, which potential biases against finding any relationship between pre-privatization restructuring and performance. While there is no perfect measure of performance, we use two measures to reduce biases in our conclusions. Moreover, we keep in mind the biases in individual measures when interpreting our results.

Dewenter and Malatesta (2001) document that results regarding privatization outcome can be sensitive to whether operating-income (EBIT) or net-income based measures are used. The difference could be due to the fact that SOE firms tend to be more leveraged before privatization, both due to limited alternative sources of funds and due to government loan guarantees (Meggison et al., 1994). In the Chinese setting, however, privatized firms are not found to be less leveraged after privatization and profitability comparisons based on these two measures are not qualitatively different (Sun and Tong, 2003). This is probably because, as discussed earlier, in order to meet the

³¹ Some studies define ROA as net income over assets. We use a pre-tax income measure, since some firms may have received certain (temporary) preferential treatment in taxes, which adds noises to net income as a measure of earning power.

³² This differs from secondary offerings in many other countries, during which the government sells existing equities and receives all the sales proceeds and the only effect on the privatized firms is an ownership change.

listing requirements, Chinese SOEs go through a pre-privatization restructuring process during which most of the excess debt burden is eliminated. Moreover, in this paper, we compare the relative performance of two sub-groups of privatized firms (completely v. incompletely restructured firms) which do not exhibit significant differences in leverage (Table 1).³³ Therefore, we do not expect that the choice between operating income v. net income as the performance measure would significantly affect the results. Indeed, when we use EBIT as an alternative performance measure, we obtain very similar results. For conversation of space, we only report results using net-income based performance measures.

The privatization literature sometimes uses long-run stock market returns as an additional performance measure (e.g., Megginson et al., 2000). Unfortunately, as pointed out by Sun and Tong (2003), such a measure is not applicable to the Chinese setting because almost all listed stocks in China are privatized SOEs so that there are no valid benchmarks of market portfolios to make return adjustments. Therefore, in this paper we focus on accounting performance.

5.1 Pre-privatization Restructuring and Firm Performance

We first examine the simple statistics on post-privatization performance of China's SOEs. Consistent with the findings by Sun and Tong (2003), we find that privatization in China has not brought about improvements in profitability. For both ROA and ROS measures, profitability is significantly lower after privatization (columns (1) and (2) in Panel A of Table 6). While this holds for both types of pre-privatization restructuring (columns (3)-(6) of Table 6), incompletely restructured firms experience significantly larger profitability drops.

³³ Leverage is mechanically lower after SIP due to a change in total equity and thus assets, which make it difficult to compare leverage before and after privatization. For this reason, Sun and Tong (2003) use interest coverage and cash flow to debt to measure leverage. In our own analysis, we adjust total assets based on the method in Aharony et al. (2000) and then examine the change in debt ratio across completely and incompletely restructured firms. We find that they there are not any significant differences in leverage changes across the two groups, both in terms of raw leverage and industry-adjusted leverage.

To quantify the marginal impact of pre-privatization restructuring on firm performance, we estimate the following model:

$$\Delta Performance = a + b \text{ Incomplete Restructuring} + c \text{ Firm Controls} + \text{ Industry Dummies} + \text{ IPO-Year Dummies}, \quad (3)$$

where $\Delta Performance$ is the difference between the three-year average of performance measures after and before privatization. Again, *Incomplete Restructuring* is a dummy variable indicating an incomplete pre-privatization restructuring process. In the baseline regressions, we include two control variables commonly used in the literature, namely size (defined as the natural log of total assets) and leverage (defined as book value of debt over total assets). The previous literature on privatization has documented the importance of outside ownership and of the structure of government-owned shares (e.g., D'Souza and Megginson, 1999; and Sun and Tong, 2003). Thus we control for the percentage of foreign ownership, employee ownership, and legal-person shares.³⁴ The previous literature finds somewhat mixed evidence of the impact of a regulated industry on performance (e.g., D'Souza and Megginson, 1999, La Porta and Lopez-de-Silanes, 1999, and D'Souza et al., 2001). Therefore, we include industry dummies to control for government regulation and industry-wide shocks. We also include dummies indicating the IPO years to control for macroeconomic shocks. To be consistent with the dependent variable, the independent variables are also averaged across the three years after IPO.

As presented in the first rows of Panel A and Panel B in Table 7, the *Incomplete Restructuring* dummy has a significantly negative impact on accounting performance measured in both ROA and ROS (at the 1% or 5% levels). Consistent with our earlier discussions that the share

³⁴ In a robustness check, we also controlled the percentage of state shares and total tradable shares. None of them is significant and their inclusion does not change the main results or significance levels. In the interest of brevity, we do not report these results; but they are available upon request.

classes in China reflect the shares' relation with the state rather than ultimate ownership and control, various ownership variables do not appear to have a significant impact on performance.

To ensure that our earlier results are not mechanically driven by virtual accounting as discussed earlier, we include a dummy variable indicating whether the firms conducted virtual accounting at the time of their IPO. The results are reported in the second rows of Panel A and Panel B in Table 6. Virtual accounting has, as expected, a negative sign but is not statistically significant. Meanwhile, our main variable of interest, the *Incomplete Restructuring* dummy, and its significance level remain the same. More importantly, our estimates suggest an economically important impact of restructuring process on performance: incompletely restructuring lowers performance by 4.3 percentage points in ROA and 5.9 percentage points in ROS.

5.2 Reverse Causality

One alternative explanation of our results is that weak firms are selected for incomplete restructuring. Thus, these firms under-perform later not because of incomplete pre-privatization restructuring but because they are less profitable firms to begin with. We do not believe this is the case, for two reasons. First, as we discuss in detail in section 2.2, while it is true that incompletely restructuring is more likely to be chosen when the cost of restructuring is high, it is typically the better parts, i.e., more productive assets and workers, of the former SOEs are carved out for public listing. In fact, this practice received many criticisms at the time for “drainage of state assets.” Second, the results in our earlier sections point out one particular channel through which incomplete restructuring lowers performance, that is, expropriation by controlling shareholders through related-party transactions. Nevertheless, reverse causality is an important concern. In this section, we explicitly deal with this concern by, first, examining the determinants of the choice between

complete v. incomplete restructuring and, second, linking related-party transactions to firm performance.

5.2.1 Determinants of restructuring choices

Before we present our multivariate analysis, we would like to point out that, in Table 1, incompletely restructured firms are not in any way less profitable than completely restructured firms (in fact they are more profitable by ROA measure). To further confirm that performance is not an important factor in the choice of incompletely restructuring, we estimate the following logit model:

$$\text{Incomplete Restructuring} = a + b \text{ Profitability} + c \text{ Leverage} + d \text{ Size} + \text{Industry Dummies} + \text{IPO-Year Dummies}. \quad (4)$$

Following Sun and Tong (2003), *Profitability* is the three-year average return on sales (as shown earlier, the better measure of accounting profits than ROA) prior to listing. *Size* is the three-year average log of sales before listing. *Leverage* is the three-year average of debt-to-asset ratio. We notice that, since we use a refined industry classification with fifty-eight industries to better control for industry characteristics, in some industry – years, the same restructuring model were chosen for all firms in the industry. These firms have to be excluded in the estimation if industry fixed effects are included. Therefore, in columns (1) and (2) of Table 8 we first report results without industry fixed effects.

As reported in column (1) of Table 8, profitability is not statistically significant in determining the restructuring choices. Using EBIT over sales to measure profitability yields similar results (column (2) of Table 8). In columns (3) and (4) of Table 8 when industry fixed effects are included, the results remain qualitatively unchanged. Throughout, only firm size is consistently related to restructuring choices. In particular, larger firms tend to be restructured incompletely,

which is not surprising since the cost of restructuring tends to be higher for larger firms and thus is difficult to be fully absorbed by the government. Other control variables, such as leverage and the year in which the firm is listed, are not statistically significant.

These results support our earlier discussion that the inferior performance of incompletely restructured firms is not likely to be driven by self-selection of less profitable firms into incomplete restructuring. In the following analysis, we further demonstrate that it is expropriation from parent company that causes the inferior performance of incompletely restructured firms.

5.2.2 Linking Related-Party Transactions to Firm Performance

Of the three types of related-party transactions, namely transfer pricing of goods and services, asset purchases, and working capital financing, the case for transfer pricing is the easiest to make. Unfavorable terms of transfer prices directly affect earnings because they result in lower revenue (in the case of product sales to related parties) or higher costs (in the case of purchases of raw materials and rental payments).

Trade credits offered to related parties do not directly translate to lower earnings. However, there are two reasons why they may hurt firm performance. First, since trade credits are offered during related-party transactions, they may reflect the extent of these transactions and thus represent a “catch-all” measure of related-party transactions. Second, they may indirectly affect performance if the firms are financially constrained and need to rely on internally generated cash to finance profitable investment projects. To the extent that the firms need to forego such investment opportunities due to a shortage of cash, excessive trade credits hurt earnings.

The effect of asset purchases is somewhat ambiguous. On the one hand, asset purchases at unfavorable prices use up cash and may reduce performance if firms are financially constrained. In addition, asset purchases may be correlated with the extent of other types of related-party

transactions and thus would have a negative effect on profitability. On the other hand, such purchases reduce the chance of future expropriation through transfer pricing because, with newly acquired assets, the listed firms do not need to rely as much on goods and services provided by the related parties. Therefore, their impact on performance is an empirical matter.

Notably, many related-party transactions, at the same time as they transfer profits out of the firms, have implications for the size of their assets. For example, when a firm purchases most of its raw materials from related parties, it does not have to own the facilities related to materials purchases (e.g., offices for locating suppliers and negotiating prices). Or, when a firm rents facilities from the related parties, it does not have to own the facilities as part of its assets. All these reduce asset size and, all else being equal, increase performance measured by ROA, which reduces the power of the tests.³⁵ Therefore, we use return on sales (ROS) as the performance measure.

We estimate the same model as in Equation (3) except that we add a new variable measuring the extent of related-party transactions. The results support the view that tunneling by the controlling shareholders, especially SOE parent companies of incompletely restructured firms, hurts firm performance. In Panel A of Table 9, transactions involving transfer pricing, raw material purchases and rental payments are significantly negatively related to performance (at the 10% and the 5% levels respectively). The coefficient on product sales to related parties is not significant, probably because product sales, at the same time as they reduce revenue and thus earnings, reduce the denominator in the performance measures and thus bias the estimate towards zero. In Panel B of Table 9, the coefficient on asset purchases is not statistically significant, probably reflecting the offsetting effect of less cash and less chance of future expropriation discussed earlier. Lastly, as reported in Panel C of Table 9, trade-credit provision to related parties is negatively related to performance (at the 1% level).

³⁵ It is true that this also reduces earnings due to an increase in rental costs. However, as long as the “rental yield” on the facility is lower than ROA under the owning scenario, the ROA under renting will be higher.

In all these regressions, the effect of the *Incomplete Restructuring* dummy on performance is weakened: both the point estimates and their statistical significance levels are lower.³⁶ Thus, expropriation through related-party transactions is at least partially responsible for the worse performance of incompletely restructured firms. Its actual economic magnitude is difficult to quantify, since we put in the regressions one class of transaction at a time (otherwise we have a multi-collinearity problem). Note, however, that the coefficient on *Incompletely Restructuring* is lowest and least significant when related-party transactions are measured as trade credits. Since trade credits occur during related-party transactions and can be viewed a “catch all” measure of the extent of these transactions, the fact that the *Incomplete Restructuring* dummy is close to 40% lower suggests that at least 40% of inferior performance of incompletely restructured firms is attributable to tunneling by their parent SOEs.

That the *Incomplete Restructuring* dummy remains significantly negative implies that there are other channels through which this type of restructuring affects performance. For example, expropriation may weaken the incentive of listed firms to improve efficiency and to take risky investment with positive-NPV projects, since they do not get to keep all the upside gains but bear all the costs. Although pinning down exactly what these other channels are is beyond the scope of this paper, their very existence suggests that pre-privatization restructuring has other influences on post-privatization performance and, ultimately, on the success of privatization.

VI. Discussions

So far we have found that creation of large shareholders during the privatization process has profound impact on post-privatization firm performance due to these largest shareholders’

³⁶ The *Incomplete Restructuring* dummy is significant at the conventional level in Panel A and B. In Panel C, it is only significant at the 10% level by a one-sided test. However, given that we are really testing a one-sided hypothesis, incomplete restructuring is still significantly associated with worse performance.

incentives to tunnel resources out of the company. These results raise some questions. First, if expropriation is so widespread, why do minority shareholders buy shares in such companies in the first place? Second, to what extent do our results generalize outside of China? Third, what are the policy implications of our results? We devote this section to discussion of these questions.

We feel that expropriation persists in China's listed firms due to two factors. First, minority shareholders may not recognize the extent of expropriation that will take place in the firm at the time of the IPO and later, due to weak property right protection, they do not have the means to protect their interests. With the market being a total new concept merely 15 years ago, there is a learning process by investors. Indeed, after 10 years of a bull market and share frenzy, the market had been low since 2001 and did not rebound till 2006, despite the country's rapid economic growth and overall confidence about its future growth.³⁷ Second, state ownership may have other benefits, which partially offsets the costs imposed by tunneling. For example, Mok and Hui (1998) argue investors may interpret equity retention by the state as the government's confidence in the company and as a business guarantee. Indeed with the state still controlling many economic resources, it is expected that it will stand as the last resort.

As for the implication of our results for other countries, our analysis points to a perhaps unintended consequence of privatization due to the creation of large shareholders, that is, their incentives to expropriate. A number of studies have suggested that privatization is often accompanied by concentration of ownership. Sometimes this is due to the government's intention to promote block shareholders to monitor the management, as is in the voucher privatization in central and Eastern European countries (e.g., Boycko, Shleifer, and Vishny, 1994). In many other cases, since most privatization programs are partial in nature in which the government sells non-controlling shares of firms to the public, the government remains the controlling shareholder (Jones

³⁷ The recent rebound is at least partially due to the reform of state-related shares and an effort to push for complete restructuring which would mitigate the problem of expropriation by large shareholders.

et al., 1999 and Gupta, 2005). More generally, Jones et al. (1999) report that privatizing governments all over the world have used share allocation during SIP, the most common way of privatization, as a means to achieve political and economic objectives, which means concentration of ownership in the hands of favored interest groups. Meanwhile, much of privatization occurs in emerging economies where institutions protecting minority shareholders are weak, which makes the conflicts of interest between large shareholders and small investors an important determinant of corporate governance and performance in privatized firms.

More importantly, our paper suggests that, given the institutional environment, the incentives and abilities to expropriate depend critically on the firms' organizational forms shaped during the privatization process. A strand of privatization literature has begun to recognize the importance of the privatization process itself (e.g., Barberis et al., 1996, Frydman et al, 1999, and La Porta and Lopez-de-Silanes, 1999). This paper complements and extends this literature by empirically identifying a particular way in which the process of privatization matters.

We now discuss two policy implications of our analysis. First, in designing privatization schemes, policy makers should explicitly consider the incentives of large shareholders to expropriate. Our results suggest that large shareholders' incentives to expropriate can be mitigated through investor protection in the country and through the organizational forms shaped by the privatization process. Additionally, our analysis of the restructuring process suggests a particular way in which public firms obtain their "political connections": formal government officials of SEOs become the top managers of the privatized firms.³⁸ There has been a growing interest in understanding the costs and benefits of personal connections between politicians and firms (e.g., Fisman 2000; Johnson and Mitton, 2003; Faccio et al., 2004, Bertrand et. al., 2005). Our analysis points to one such cost: a politician-dominated management may attempt to achieve social

³⁸ This source of political connection is consistent with Bertrand et al. (2005) in their study of French firms.

objectives, in the Chinese case solving the problems of state ownership, at the expense of minority shareholders.

Second, our analysis suggests that there is a large loss of economic efficiency as a result of expropriation: expropriation is not a zero-sum game and incompletely restructured firms underperform beyond expropriation itself. Moreover, earlier work has shown that weak corporate governance and the resulting expropriation discourages the development of well-functioning capital markets (La Porta et al., 1997) and makes equity markets more prone to financial crises (Johnson, Boone, Breach, and Friedman, 2000). Thus, preventing expropriation in privatized firms through better enforcement of law and more stringent regulations is of vital importance to resource allocation, economic efficiency, and ultimately long-run economic growth and stability.

VII. Conclusion

By examining the world's largest share issue privatization taking place in the largest emerging economy, China, we attempt to understand what makes privatization work (or fail). We focus on one particular aspect of privatization: that is, creation of large shareholders and its implications for corporate governance and performance in privatized firms.

In the Chinese case, as a less costly and painful way of restructuring, some firms went through what we call "incompletely restructuring," where the most productive part of the firm is carved out for public listing, leaving the parent SOEs to keep all the policy burdens under state ownership. Being the controlling shareholder, the parent SOEs have strong incentives to transfer resources out of the listed firms to solve their own problems. They do so by letting the listed firms engage in a wide range of related transactions, ranging from transfer pricing to working capital financing (through generous trade credits). They also achieve this by paying fewer dividends so that corporate resources are kept in the firm and under their control. At least partly due to such

expropriation, incompletely restructured firms significantly under-perform the completely restructured firms.

Our paper makes three contributions. First, we extend the literature on how privatization works (or fails) by providing systematic evidence on the role of large shareholders created during privatization and their incentive to expropriate in determining the effectiveness of privatization. Second, we demonstrate how the incentive and ability of a large shareholder to expropriate depend critically on a firm's organizational form as shaped by the privatization process. Third, our paper contributes to the large literature on corporate governance. To our knowledge, it is the first empirical study that examines how governance and particularly the conflict of interest between large shareholders and small investors play out in privatized firms.

Our findings have implications for the design of privatization schemes in general, given that privatization typically leads to concentration of ownership. Our results suggest that large shareholders' incentives to expropriate can be mitigated through investor protection and through the organizational form shaped by the privatization process. Moreover, given the importance of privatized firms in transitional economies and the negative impact of expropriation on the development and stability of a country's capital markets, our results suggest that preventing expropriation in privatized firms is of great importance to resource allocation, economic efficiency, and ultimately long-run economic growth and stability.

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Table 1 Summary Statistics of Privatized SOEs at IPO

This table presents a summary of the main characteristics of privatized SOEs in the year of IPOs. Total market capitalization is calculated as the total share outstanding (tradable and non-tradable) multiplied by share prices. Return on assets (ROA) is defined as earnings before extraordinary items and taxes over total assets, where assets are adjusted by the increase in assets due to share offerings. Return on sales (ROS) is defined as earnings before extraordinary items and taxes over total sales. Significance levels are based on two-tailed tests of differences between the two sub-samples of firms with complete restructuring and with incomplete restructuring during privatization; significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

	Whole Sample		Incomplete Restructuring		Complete Restructuring	
	Mean	Median	Mean	Median	Mean	Median
<i>Panel A. Financial Variables</i>						
Total assets (millions of Yuan)	1,390	950	1510***	973**	1,040	796
Total sales (millions of Yuan)	811	401	931***	428**	454	354
Total market capitalization	3,750	2,860	3940**	2,960	3,190	2,710
Return on assets (ROA)	0.097	0.088	0.101*	0.092*	0.088	0.074
Return on sales (ROS)	0.167	0.139	0.165	0.134	0.173	0.149
Leverage ratio	0.353	0.347	0.354	0.345	0.349	0.368
<i>Panel B. Ownership and Governance Variables</i>						
% Ownership of the largest shareholders	53.7%	56.5%	57.2%***	60.1%***	43.4%	43.7%
% President holding positions in the controlling shareholders	76.1%	n.a.	86.4%***	n.a.	46.4%	n.a.
% CEO holding positions in the controlling shareholders	41.9%	n.a.	51.0%***	n.a.	15.9%	n.a.
% Total tradable shares	29.7%	29.2%	29.4%	29.0%	30.9%	29.3%
<i>Non-tradable (state-owned) shares:</i>						
% State share	33.9%	38.7%	35.9%**	44.0%*	27.8%	27.4%
% Legal person share	32.2%	24.2%	31.4%	17.9%	34.7%	30.4%
% Foreign share	0.8%	0.0%	0.5%	0.0%	1.5%	0.0%
% Employment share	3.4%	0.0%	2.8%**	0%***	5.1%	2.5%
% Firms submitting virtual accounting at IPO	64.9%	n.a.	79.8%***	n.a.	20.8%	n.a.
Number of Observations	285		213		72	

Table 2. Related-party Transactions of Privatized SOEs with Their Largest Shareholders

This table presents the related-party transactions between listed firms and their largest shareholders in the three years after IPO. All numbers are calculated as the three year average except % Occurance which is calculated as the occurrence in the three years. Significance levels are based on two-tailed tests of differences between the two sub-samples of completely restructured and incompletely restructured firms; significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

	Incomplete Restructuring				Complete Restructuring			
	Mean	Median	Max	Min	Mean	Median	Max	Min
<i>Panel A. Transfer pricing of goods and services</i>								
Sales of final products to related parties / Sales	9.3%***	1%***	98.8%	0.0%	3.1%	0.0%	60.9%	0.0%
% Occurance	58.7%***				35.6%			
Purchases of raw materials from related parties / COGS	11.9%***	0.6%***	98.8%	0.0%	3.3%	0.0%	54.6%	0.0%
% Occurance	54.6%***				31.5%			
Rental payment to related parties / Total costs	0.3%***	0.0%***	16.9%	0.0%	0.1%	0.0%	9.1%	0.0%
% Occurance	44.8%***				14.4%			
<i>Panel B. Assets purchased from related parties</i>								
Asset purchases from related parties / total firm assets	12.1%***	8.7%***	61.4%	0.0%	6.4%	0.6%	18.3%	0.2%
% Occurance	38.5%***				9.7%			
<i>Panel C. Trade credits</i>								
Total account receivables / assets	4.7%***	1%***	87.3%	0.0%	1.1%	0.0%	15.7%	0.0%
Total account payable / assets	1.4%***	0.1%	26.2%	0.0%	1.1%	0.0%	34.5%	0.0%
Net working capital / assets	3.3%***	0.4%***	86.4%	-22.5%	0.0%	0.0%	12.8%	-21.5%
% Occurance	71.8%***				38.9%			
Total number of firms	213				72			
Total number of transactions disclosed to CSRC	2,187				429			

Table 3 Regression Analysis of Related-party Transactions of Privatized SOEs

This table presents the regression analysis of the determinants of related party transactions. Incomplete Restructuring is a dummy variable indicating whether the firm went through an incomplete restructuring process % Ownership is the percentage ownership of the largest shareholder. % Ownership*Incomplete Restructuring is an interaction term between % Ownership and the Incomplete Restructuring dummy. In Panel A and B, coefficient estimates are obtained via Tobit estimation and standard errors are presented in parentheses. In Panel C, estimated from OLS regressions are presented and robust standard errors are presented in parentheses. Significance at the 10% level by a one-sided test is indicated by^b.

Dependent Variables	Incompletely Restructuring	% Ownership	% Ownership * Incomplete Restructuring	Log(assets)	Number of Observations	R-square
Panel A: Transfer Pricing of Goods and Services Provided by Related Parties as the Dependent Variable						
Product sales	0.189** (0.091)	0.092 (0.090)	0.245 ^b (0.176)	0.025 (0.020)	285	0.51
Rent payment	0.019*** (0.007)	0.005 (0.006)	0.026** (0.013)	0.002 (0.001)	285	0.18
Raw material purchases	0.158 ^a (0.110)	0.349*** (0.107)	0.164 (0.213)	0.077*** (0.020)	285	0.33
Panel B: Asset Purchses from Related Parties as the Dependent Variable						
Asset purchases	0.320** (0.155)	0.039 (0.127)	0.303 (0.295)	0.019 (0.028)	285	0.53
Panel C: Net Trade Credit Provided to Related Parties as the Dependent Variable						
Net trade credit	0.048* (0.028)	0.005 (0.043)	0.028 (0.056)	0.005 (0.016)	285	0.17

Table 4 Dividends by Types of Pre-Privatization Restructuring

This table presents the dividend payouts in the three years after IPO. All numbers are calculated as the three year average. Earnings are operating earnings after interest and taxes but before extraordinary items. Market Capitalization is calculated as the number of shares outstanding (tradable and non-tradable) multiplied by share prices. Significance levels are based on two-tailed tests of differences between the two sub-samples of completely restructured and incompletely restructured firms; significance at the 1%, 5%, 10%, and 15% levels is indicated by ***, **, *, and ^a, respectively.

	Whole Sample		Incomplete Restructuring		Complete Restructuring		Difference	
	Mean (1)	Median (2)	Mean (3)	Median (4)	Mean (5)	Median (6)	Mean (3)-(5)	Median (4)-(6)
<i>Panel A: Dividend Measures</i>								
Dividends / Earnings	41.5%	35.8%	40.8%	35.8%	43.4%	32.1%	-2.6%	3.8%
Dividends / Net Income	35.8%	31.1%	35.5%	32.2%	36.4%	30.1%	-0.9%	2.1%
Dividends / Sales	4.3%	2.8%	4.2%	2.6%	4.4%	3.4%	-0.2%	-0.8%
Dividends / Market Capitalization	0.9%	0.7%	0.9%	0.6%	0.9%	0.7%	-0.0%	0.0%
<i>Panel B: Industry-Adjusted Dividend Measures</i>								
Dividends / Earnings			0.5%	0.0%	9.4%	0.0%	-8.9%**	-0%**
Dividends / Net Income			1.1%	0.0%	6.6%	0.0%	-5.4%*	-0%*
Dividends / Sales			0.4%	0.0%	1.1%	0.0%	-0.7% ^a	-0%**
Dividends / Market Capitalization			0.1%	0.0%	0.3%	0.0%	-0.2%**	-0%*
Number of observations	275		204		71			

Table 5 Regression Analysis of Dividend Policies of Privatized SOEs

This table presents the regression analysis of the determinants of dividend payouts. Estimates from a Tobit model is presented. Incomplete Restructuring is a dummy variable indicating whether the firm went through an incomplete restructuring process. % Ownership is the percentage ownership of the largest shareholder. % Ownership*Incomplete Restructuring is an interaction term between % Ownership and the Incomplete Restructuring dummy. Robust standard errors are presented in parentheses. Significance at the 1%, 5%, and 10% levels is indicated by ***, **, *, respectively.

	Incompletely Restructuring	% Ownership	% Ownership * Incomplete Restructuring	Log(assets)	Sales Growth	Leverage	Number of Observations	R-square
Panel A: Dividend-Earnings Ratio as the Dependent Variable								
(1)	-0.139*** (0.045)	0.414*** (0.134)		0.069* (0.036)	0.139* (0.081)	-0.579*** (0.151)	275	0.36
(2)		0.607*** (0.163)	-0.292*** (0.093)	0.077** (0.036)	0.132 (0.081)	-0.594*** (0.151)	275	0.36
Panel B: Dividend-Net-Income Ratio as the Dependent Variable								
(1)	-0.092** (0.038)	0.310*** (0.112)		0.081*** (0.030)	0.144** (0.068)	-0.509*** (0.126)	275	0.28
(2)		0.455*** (0.136)	-0.210*** (0.077)	0.086*** (0.030)	0.137** (0.068)	-0.520*** (0.126)	275	0.27
Panel C: Dividend-Sales Ratio as the Dependent Variable								
(1)	-0.012** (0.005)	0.032** (0.015)		0.007* (0.004)	0.034*** (0.009)	-0.148*** (0.017)	275	0.74
(2)		0.049*** (0.018)	-0.025** (0.010)	0.007* (0.004)	0.034*** (0.009)	-0.149*** (0.017)	275	0.74
Panel D: Dividend-Market-Capitalization Ratio as the Dependent Variable								
(1)	-0.004*** (0.001)	0.012*** (0.003)		0.005*** (0.001)	0.006*** (0.002)	-0.018*** (0.003)	275	0.48
(2)		0.017*** (0.004)	-0.007*** (0.002)	0.006*** (0.001)	0.005*** (0.002)	-0.019*** (0.003)	275	0.48

Table 6 Performance Change after Share Issue Privatization

This table presents the profitability measures in the three years before and after share issue privatization. All numbers are calculated as the three year average. Return on assets (ROA) is defined as earnings before extraordinary items and taxes over total assets, where assets are adjusted by the increase in assets due to share offerings. Return on sales (ROS) is defined as earnings before extraordinary items and taxes over total sales. Significance levels are based on two-tailed tests of differences between the two sub-samples of firms with complete restructuring and with incomplete restructuring during privatization; significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

	Whole Sample		Incomplete Restructuring		Complete Restructuring		Difference	
	Mean (1)	Median (2)	Mean (3)	Median (4)	Mean (5)	Median (6)	Mean (3)-(5)	Median (4)-(6)
<i>Panel A: Performance Measures</i>								
<i>ROA as the performance measure:</i>								
3-Year Average before SIP	13.5%	12.0%	14.7%	13.1%	10.0%	9.7%	4.7%	3.4%
3-Year Average after SIP	6.0%	5.5%	5.7%	5.3%	7.0%	6.7%	-1.3%	-1.4%
Change after SIP	-7.5%***	-6%***	-9%***	-7.3%***	-3.2%***	-3%***	-5.8%***	-4.3%***
<i>ROS as the performance measure:</i>								
3-Year Average before SIP	17.2%	14.5%	17.0%	14.2%	17.8%	14.5%	-0.8%	-0.3%
3-Year Average after SIP	9.4%	9.6%	8.0%	8.7%	13.7%	11.0%	-5.7%	-2.3%
Change after SIP	-7.8%***	-3.8%***	-9%***	-4.4%***	-4%***	-2%***	-5.0%***	-2.4%***
<i>Panel B: Industry-Adjusted Performance Measures</i>								
<i>ROA as the performance measure:</i>								
3-Year Average before SIP	7.6%	6.5%	8.7%	7.3%	4.4%	4.3%	4.3%	3.0%
3-Year Average after SIP	1.5%	1.3%	1.0%	1.2%	2.6%	2.6%	-1.6%	-1.4%
Change after SIP	-6.1%***	-4.7%***	-7.6%***	-6.2%***	-1.8%***	-1.9%***	-5.8%***	-4.3%***
<i>ROS as the performance measure:</i>								
3-Year Average before SIP	6.0%	4.0%	5.7%	3.7%	7.1%	4.3%	-1.4%	-0.6%
3-Year Average after SIP	1.1%	1.9%	-0.5%	0.9%	5.8%	4.3%	-6.3%	-3.4%
Change after SIP	-5.0%***	-1.5%***	-6%***	-2.0%***	-1.2%	0.0%	-4.8%**	-2.0%***
	285		213		72			

Table 7. The Effect of Pre-Privatization Restructuring on Post-Privatization Performance

This table presents the regression analysis of the effect of pre-privatization restructuring on post privatization performance. Return on assets (ROA) is defined as earnings before extraordinary items and taxes over total assets, where assets are adjusted by the increase in assets due to share offerings. Return on sales (ROS) is defined as earnings before extraordinary items and taxes over total sales. Incomplete Restructuring is a dummy variable indicating whether the firm went through an incomplete restructuring process. % Foreign Ownership is the percentage ownership of foreigners. % Employee Ownership is the percentage ownership of employees. Virtual Accounting is a dummy variable indicating whether the firm provided virtual accounting at the time of IPO due to an operating history less than three years. Robust standard errors are presented in parentheses. Significance at the 1%, 5%, and 10% levels is indicated by ***, **, * respectively.

	Incompletely Restructuring	Log(assets)	Leverage	% Foreign Ownership	% Employee Ownership	% Legal Person Ownership	Virtual Accoutning	Number of Observations	R-square
Panel A: Return on Assets (ROA) as the Dependent Variable									
(1)	-0.051*** (0.012)	0.006 (0.009)	0.077* (0.044)	-0.06 (0.126)	0.156 (0.100)	-0.006 (0.020)		285	0.34
(2)	-0.043*** (0.014)	0.008 (0.009)	0.072 (0.044)	-0.082 (0.128)	0.083 (0.124)	-0.009 (0.020)	-0.017 (0.017)	285	0.34
Panel B: Return on Assets (ROS) as the Dependent Variable									
(1)	-0.060** (0.025)	0.039** (0.019)	-0.143 (0.090)	-0.071 (0.258)	0.086 (0.205)	(0.042) (0.040)		285	0.25
(2)	-0.059** (0.029)	0.039** (0.019)	-0.144 (0.091)	-0.076 (0.263)	0.073 (0.255)	-0.043 (0.041)	-0.003 (0.036)	285	0.25

Table 8. Determinants of Restructuring Models

This table presents logit regression results on the ex ante determinants of restructuring models. The dependent variable is the Incomplete Restructuring dummy indicating whether the firm went through an incomplete restructuring process. Profitability is the three-year average return on sales prior to listing. Size is the three-year average log of sales before listing. Leverage is the three-year average of debt-to-asset ratio. Robust standard errors are presented in parentheses. Significance at the 1%, 5%, 10% levels is indicated by ***, **, and *.

Independent Variables	(1)	(2)	(3)	(4)
<i>Profitability measures</i>				
Return on Sales	1.594 (1.560)		1.578 (2.337)	
EBIT/Sales		0.013 (0.015)		0.008 (0.022)
<i>Other firm characteristics</i>				
Size	0.766*** (0.175)	0.754*** (0.174)	0.593** (0.232)	0.558** (0.229)
Leverage	-1.222 (1.300)	-1.307 (1.297)	-1.05 (1.524)	-1.14 (1.518)
SIP in 1997	-0.291 (1.378)	-0.314 (1.337)	0.248 (1.380)	0.26 (1.391)
SIP in 1998	0.052 (0.341)	0.033 (0.341)	-0.204 (0.386)	-0.195 (0.391)
SIP in 1999	-0.118 (0.349)	-0.118 (0.350)	-0.149 (0.389)	-0.139 (0.391)
Industry Dummies Included?	No	No	Yes	Yes
Number of Observations	285	285	217	217
Log Likelihood	-150.35	-150.536	-90.258	-90.417

Table 9. Linking Expropriation to Performance

This table links expropriation to post-privatization performance. The results are presented separately in three panels for three different measures of related-party transactions. Incomplete Restructuring is a dummy variable indicating whether the firm went through an incomplete restructuring process. Related-Party Transactions are measured based the first column in the table. % Foreign Ownership is the percentage ownership of foreigners. % Employee Ownership is the percentage ownership of employees. Virtual Accounting is a dummy variable indicating whether the firm provided virtual accounting at the time of IPO due to an operating history less than three years. Robust standard errors are presented in parentheses. Significance at the 1%, 5%, 10%, and 15% levels is indicated by ***, **, *, significance at the 10% level by a one-sided test is indicated by ^b.

Measures of Related Party Transactions	Incompletely Restructuring	Related Party Transactions	% Foreign Ownership	% Employee Ownership	% Legal Person Ownership	Log(assets)	Leverage	Virtual Accounting	Number of Observations	R-square
Panel A: Related-Party Transactions Measured as Payment for Goods and Services										
Product sales	-0.058** (0.029)	-0.030 (0.082)	-0.075 (0.264)	0.076 (0.256)	0.040** (0.019)	-0.144 (0.091)	-0.044 (0.041)	-0.002 (0.036)	285	0.250
Rent payment	-0.055* (0.029)	-3.073** (1.310)	-0.092 (0.260)	0.053 (0.252)	0.041** (0.019)	-0.156* (0.090)	-0.040 (0.040)	-0.003 (0.035)	285	0.260
Raw material purch	-0.053* (0.029)	-0.152* (0.079)	-0.108 (0.262)	0.055 (0.254)	0.049** (0.020)	-0.140 (0.090)	-0.038 (0.041)	-0.002 (0.036)	285	0.260
Panel B: Related-Party Transactions Measured as Asset Purchses from Related Parties										
Asset purchases	-0.058* (0.030)	-0.031 (0.127)	-0.061 (0.270)	0.072 (0.256)	0.040** (0.019)	-0.145 (0.091)	-0.043 (0.041)	-0.003 (0.036)	285	0.250
Panel C: Related-Party Transactions Measured as Net Trade Credit Provided to Related Parties										
Net trade credit	-0.038 ^b (0.028)	-0.696*** (0.128)	0.010 (0.248)	0.137 (0.240)	0.028 (0.018)	-0.072 (0.086)	-0.024 (0.038)	0.012 (0.034)	285	0.340