

TUNNELING OR NOT? THE CHANGE OF LEGAL ENVIRONMENT ON THE
EFFECT OF POST-PRIVATIZATION PERFORMANCE¹

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This version: Dec 2013

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Abstract

Motivated by Hoff and Stiglitz (2004)'s theory, we examine empirically how the creation of "rules of the game" affect the behavior of economic agents in a transition economy. Using a sample of Chinese state-owned enterprises (SOEs) in which controlling ownership was transferred to private acquirers between 1994 and 2006, we find that the post-privatization performance (PPP) of firms depends on institutional factors. Before 2003, we observe severe post-privatization tunneling behaviors by acquirers and worse PPP. However, from 2003, when the State issued regulations against tunneling and strengthened enforcement, the incidence of tunneling behaviors declined and PPP improved. We find that better implementation of ownership transfer and more prior experience of private acquirers are key factors that contribute to the improvement.

Keywords: tunneling, privatization, investor protection, law and finance, ethics

JEL: G34, M13, N25, N45

1. Introduction

What effect does privatization have on firm performance? On the one hand, a number of studies show that privatization revitalized inefficient state-owned enterprises (SOEs) in different countries (For example, Megginson et al., 1994; Boubakri and Cosset, 1998; D'Souza and Megginson, 1999; Megginson and Netter, 2001). On the other hand, some recent studies provide evidence of severe tunneling by private acquirers after privatization, which hurt corporate performance following privatization, such as Atanasov (2005) and Atanasov et al. (2010) in Bulgaria, Black et al. (2000) in Russia, and Jiang et al. (2010) and Li (2010) in China.

One major obstacle to a successful privatization program is weak investor protection in transition economies (La Porta et al., 1999; Claessens et al., 2000; Johnson and Shleifer, 2003). Hoff and Stiglitz (2004) suggest that individuals who control assets make the economic choice to either build value or strip assets and the decision is influenced by the state of law and the agent's own ability. In a country where the legal system does not protect minority shareholders from blockholder misconduct, it is relatively easier for the acquirer to strip assets from the target firms. As the legal institutions evolve, it may become harder to strip assets, and the acquirer may choose instead to build value.

It is challenging to explain why privatization improved performance in certain countries, but failed to do so in others, given that different studies using different datasets covering different countries produce divergent results. This study focuses on one of the biggest markets undergoing privatization in the last 20 years, China. We investigate post-privatization performance (PPP) of Chinese firms to find out whether the evolution of legal institutions affects PPP. Compared with existing studies, we find that we cannot reach a simple conclusion on whether privatization is beneficial or harmful to firms' performance in China. Instead, we argue that PPP depends on the legal environment when privatization takes place.

The existing studies on privatization are mostly cross-sectional international studies,

which makes identifying the driving forces of PPP difficult. The difference in PPP across countries could be attributed to many sources such as legal origin, ethics, and culture. It is always a challenge to pin down a specific factor as the main driving force for PPP. In this study, we explore time-series variations in one country, China, where substantial privatization has taken place over the past two decades. China has privatized SOEs gradually over time rather than as a “Big Bang” of rapid mass privatization. During this privatization process, legal institutions have evolved. As many factors such as legal origin, ethical background, and culture remain constant, we are able to examine the effect of changing institutional factors on PPP.

We find that improving legal investor protection for investors in China significantly impacted PPP. Before 2003 the existing laws against tunneling were incomplete and went largely unenforced, PPP deteriorated due to severe tunneling by private acquirers. We find that a significant percentage of our sample firms exhibit tunneling behaviors, and the return on asset, the return on sales, and stock performance all deteriorated following privatization. From 2003, the Chinese government enacted regulatory changes and tightened enforcement against tunneling, fund misappropriation and related-party transactions. Since 2003, there have been a number of cases where individual acquirers were arrested and convicted for tunneling behaviors. As a result, we observe a significant decline in tunneling behaviors and improvement in PPP.

We further investigate a couple of key factors that may contribute to better PPP: the implementation of the transfer process and the prior experience of private acquirers. We find that before 2003 a significant fraction of acquirers were able to gain effective control of the privatized firm before the deals were approved and before the final payments were made (*premature control*), leading to more tunneling and poorer PPP. We also find that less experienced acquirers are more likely to tunnel and produce worse PPP. From 2003, the incidence of premature control and the percentage of inexperienced acquirers have dropped

significantly, which are associated with less tunneling and better PPP.

Our study contributes to the literature in the following ways. First, for the literature on SOE privatization, we emphasize the importance of the institutional environment in the privatization process. We show that the establishment and enforcement of anti-measures to prevent tunneling affects PPP. We observe both deterioration in PPP prior to anti-tunneling regulation and enforcement and improved PPP after the establishment of anti-tunneling measures in the same country. The only paper we find showing PPP change over time is Atanasov et al. (2010). They show that in Bulgaria Tobin's Qs of privatized firms improved after the legal changes implemented in 2002 to limit equity tunneling. However, as their sample firms were all privatized in 1998, the evidence does not show the direct effect of privatization but rather the effect of legal changes on all firms after four years of privatization. In contrast, our study contains both firms that went through privatization before and after legal changes were implemented.

Second, our study also contributes to the political economy literature about law and finance. As Hoff and Stiglitz (2004) suggested, understanding the creation of the "rules of the game" is at least as important as merely understanding the behaviors of agents when rules are already set. Our study provides an example of how agents' behaviors change when "the rules of the game" are evolving. Our study also sheds light on the choice of privatization: "Big Bang" privatization vs. a slower process that also builds up legal institutions whilst the privatization process is ongoing.

The remainder of the paper is structured as follows. Section 2 provides the institutional background and develops hypotheses. Section 3 describes the sample and measurement of tunneling. Section 4 presents the effects of anti-tunneling legislation on post-privatization performance. Section 5 explores two key factors in the privatization process: the transfer process and the prior experience of acquirers. Section 6 presents robustness tests. Section 7 concludes.

2. Institutional background and hypothesis development

A. Two-step Privatization in China

As a transition economy, China has been active in privatization over recent decades. China's privatization process has undergone multiple waves and been more gradual than many other countries. The long process of privatization in China enables us to study a longer period of data and observe significant institutional changes over time.

One important feature of China's privatization of SOEs is that the process has gone through two major steps. The first step is share-issuing-privatization (SIP). During SIP, an SOE conducts an initial public offering (IPO) and issues a fraction of shares to public equity markets. After the IPO, an SOE becomes a publicly listed firm. There have been numerous studies about the performance of SOEs after SIP. Sun and Tong (2003) and Wei et al. (2003) found that earnings ability, sales, and productivity were improved after SIP but there was no improvement in profit or leverage. Chen et al. (2006) showed that profitability and asset utilization decline in the five years after SIP. One challenge in studying the effect of SIP is that SIP necessarily involves an IPO process, and as the effect of SIP on PPP may be confounded by the IPO effect on PPP. Another important caveat is that, in the Chinese context, SOEs are still state-controlled after SIP, as the state initially issues only a small fraction of shares for circulation and remains the largest shareholder.

The second step in China's privatization of SOEs is ownership transfer privatization (OTP). Some SOEs have gone through the second stage privatization after SIP in which the State sold its majority ownership stake to private acquirers. After OTP, SOEs changed from state-controlled corporations to private-controlled ones. As Rousseau and Xiao (2008) argue, it is a change of control from the State to a private owner, rather than simply having an IPO, that best characterizes "privatization". This study focuses on this second step: ownership transfer privatization.

OTP of China started from the mid-1990s. The State, as the controlling shareholder, sold shares of listed SOEs to private firms owned by individuals. We use the term private acquirers to describe these individuals. Dozens of listed companies were privatized by control transfer each year from mid 90s. After OTP, the State often retained only some minority stake and the power of corporate decision-making was handed over to private acquirers. OTP thus represents a fundamental change to ownership and management of the privatized firms.

The privatization an SOE is initiated by the parties that have the controlling block shares of the SOE, which can be either the government or another larger SOE. Depending on who is the controlling shareholder, the search for and selection of acquirers and subsequent negotiation of the price is conducted either by government officials or by top executives of the controlling SOE. All the deals need to be approved by the State-owned Assets Supervision and Administration Commission (SASAC).

The incentives of government officials or top executives of SOE: 1. Get a proper valuation for the SOE and obtain sufficient proceeds from the transfer to ease fiscal constraints on the government or SOE; 2. Find an acquirer to enhance/sustain the value of the target SOE without significant layoffs. If possible, increase the GDP of the local economy where the SOE located. 3. Rent seeking for personal gain, which can be an important factor in developing countries.

B. Tunneling Behavior and Legal Institution Evolution

Tunneling by private acquirers has been a significant issue following OTP. By tunneling we mean transferring of resources out of the acquired firm for the benefit of the private acquirer (Johnson et al., 2000). Despite the fact that the 1993 Corporate Law and the 1997 Criminal Law explicitly forbid embezzlement of corporate assets, the particular provisions were rarely enforced and tunneling behavior was seldom punished before 2003. As a result, no private acquirer was prosecuted for misappropriation prior to 2003. The legal system in

China offered few channels for minority shareholders to pursue legal remedies (such as class action law suits) against blockholders' misconduct (Allen et al., 2005; Jiang et al., 2010).¹

Motivated by the private benefits of tunneling, and in the absence of adequate enforcement, a lot of private acquirers engaged in tunneling after OTP. Jiang et al. (2010) documented the widespread use of corporate loans by controlling shareholders to extract funds from Chinese listed firms. This tunneling behavior is not unique to China. Similar problems have been observed in other parts of the world that went through similar transformations, such as Russia (Black et al., 2000) and Bulgaria (Atanasov, 2005; Atanasov et al., 2010).

Tunneling in China became a severe issue that drew public outcry as well as government attention. In 2002 the China Securities Regulatory Commission (CSRC) launched a general survey of all 1175 listed companies and found fund misappropriation by controlling shareholders in 676 companies. From 2003, the Chinese government initiated a series of regulatory and administrative measures to prevent misappropriation and tunneling. In 2003, the State Council issued "Opinions on Promoting Capital Market Reform and Development" to provide specific instructions on cleaning up the fund misappropriation of listed companies by blockholders. In the spring of 2005, the State Council instructed the CSRC to focus on the misappropriation of funds. As a result, in June 2005, the CSRC issued more regulations to deal with tunneling and set a target to resolve the issue within two years. Appendix B provides a summary of all the new regulations against tunneling issued around 2003. The Government also started to file criminal lawsuits against acquirers involved in tunneling. Working with the CSRC, criminal law enforcement successfully prosecuted 7 private

¹ Before 2003, China's courts usually would not accept minority shareholders' lawsuits against company's controlling shareholder. This situation last until September 2004 when minority shareholders of China CIFCO Futures Co., Ltd., filed a lawsuit, claiming repayment of CIFCO's loan of RMB 164 million and loss of interest from Qingdao Hongda and Hongda Group, who were the controlling shareholders. The court decided in favor of the plaintiff on Dec. 8, 2005, which set the precedent for minority shareholders' winning of lawsuits against controlling shareholders' misappropriation of company assets.

acquirers for misappropriation and tunneling, among whom two were sentenced to life imprisonment. Another six private acquirers had to flee the country to avoid arrest. Appendix C provides a detailed list of convicted cases of misappropriation. Most of those convicted received sentences ranging from over 10 years in jail up to life imprisonment.

In this study, one presumption we have is that private acquirers have stronger incentives than an SOE controlling shareholders to tunnel. Jiang et al. (2010) show that tunneling is more severe for non-state-owned firms than SOE. In China, the controlling shareholder of an SOE is the State. The executives who run an SOE in the position of government usually have weaker incentives to tunnel. Senior managers of state-controlled firms often have motivation to seek political advancement in political career rather than short-term monetary gain.

In addition, the managers in SOE are monitored more closely by government and face more severe punishment if they were caught tunneling. Chinese Criminal Law (1997) explicitly states that the punishment for embezzlement is more severe for employee from SOE. (Article 272). “Any person authorized by State organs, State-owned companies, enterprises, institutions or people's organizations to administer and manage State-owned property who, by taking advantage of his office, appropriates, steals, swindles the said property or by other means illegally take it into his own possession shall be regarded as being guilty of embezzlement.” (Article 383) “Persons who commit embezzlement over 100,000 yuan shall be sentenced to fixed-term imprisonment of over 10 years or life imprisonment. If the circumstances are especially serious, he shall *be sentenced to death*.” (Article 383)

For private acquirers, the target firm being tunneled is no longer SOE. In addition, the tunneling behavior usually is done by other firms owned by acquirers instead of acquirers themselves in person, which makes the legal consequence less severe for private acquirers.

C. Hypothesis Development

Hoff and Stiglitz (2004) suggest that individual acquirers who control assets make the economic choice to either build value or strip assets and the decision is influenced by the

state of law and agent's own ability. In a country where the legal system does not protect minority shareholders from blockholders' misconduct, the likelihood of legal enforcement is low. Acquirers have greater incentives to strip assets from target firms. In the case of China's privatization reforms, when the legislation and regulations to prevent tunneling were incomplete and rarely enforced prior to 2003, we expect acquirers are relatively more likely to choose to tunnel and hence for targeted firms to experience weaker PPP.

As the legal institutions evolve, laws and regulations are enacted and enforced to forbid misappropriation of funds. Acquirers who choose to misappropriate funds face significantly higher risk of being prosecuted. When the government shifted incentives by taking action to prevent tunneling from 2003, we expect private acquirers to be correspondingly more likely to choose to build value rather than to strip assets, and for PPP to improve.

We also want to explore the key factors that evolved in the privatization process. One factor is *premature control*, a common practice before 2003 whereby some acquirers were able to gain actual control of acquired firms before the deals received final approval by the regulators and before the payments were finalized. It was usually achieved through the transfer of voting rights by agreements between transferring shareholders and acquirers, or by appointing the acquirer as the chairman of the board of the privatized firm. We define this type of privatization practice as *premature control*. In some cases, acquirers gained the controlling rights before full payment, and then stripped assets to pay for the acquired shares. When *premature control* took place, the existing shareholders no longer had control of the firm, while the acquirers obtained actual control and cleared away any obstacles to the intended tunneling. Jiang et al. (2010) find that tunneling is most severe when the blockholder's controlling right is significantly larger than the ownership stake. Premature control represents another case of this type of imbalance.

In 2004, CSRC issued the *Notification on Supervising Controlling Rights Transfer of Listed Companies* pointing out that some acquirers prematurely gained controlling rights of

target firms before share transfers were approved and paid in full, which enables the acquirers to strip assets. The *Notification* banned premature transfer of controlling rights. We expect to find that premature transfer of controlling rights will result in severe tunneling behaviors and worse PPP, and that after 2003, as a result of the new regulation, the incidence of premature transfers will decrease, which in turn will lead to less tunneling behaviors and better PPP.

After the initial few years of severe tunneling by private acquirers, the Chinese government became aware of the relationship between the quality of acquirers and the potential for tunneling and has since been more selective when choosing private acquirers. It has tended to select acquirers with prior experience as corporate leaders prior to acquisition. With better managerial talent, stronger reputation and more resources, high quality private acquirers are more likely to improve acquired firm's performance. On the other hand, low quality private acquirers lack the ability and resources to enhance firm performance, which gives them stronger incentive to tunnel. From the perspective of long term reputation, high quality private acquirers possess reputational capital, while poor private acquirers do not. In addition, the self-selection of acquirers also played a role. After 2003, as legal enforcement against tunneling strengthened, low quality private acquirers that used to bid for ownership transfer with the sole intention to tunnel were less likely to bid. We expect to find that inexperienced acquirers tunneled more, resulting in worse PPP. We also expect that after 2003 fewer firms were transferred to inexperienced acquirers, leading to less tunneling and better PPP.

3. Sample Selection and Measurement of Performance and Tunneling

A. Sample Selection

In our study, privatization is defined as the change of controlling shareholder of a listed company from a state owner to a private owner. This is known as ownership transfer privatization (OTP). The change is usually made through share transfer transactions. This

definition is different from some previous studies of privatization in China, which defined privatization as the listing of a company on the stock market, known as share-issuing-privatization (SIP). Since many listed firms still have state owners as controlling shareholders after listing on the stock market, we believe the change of controlling shareholders will better capture the underlying ownership change in the process of privatization.

Our sample period starts from 1994 when the ownership transfer privatization (OTP) commenced in China, and ends at 2006. Our sample includes all Chinese listed companies that went through a controlling rights transfer from a state owner to a private enterprise. First, we obtained information on controlling rights transfers by first examining whether there were controlling shareholder changes. The name and ownership of each of the top ten shareholders are disclosed in the firm's annual reports, and can be found in the CSMAR Database. Second, we collected information on the ultimate individual controllers of controlling shareholders in the CSMAR Database. Third, we cross-checked our sample with *China M&A Review*², a collection of all controlling rights transfers from 1994 to 2005 in Chinese securities markets. Finally, we went through all share transfer notices and a variety of publication resources to verify controlling rights transfers.

Panel A of Table 1 presents the sample selection process. First, out of the initial 913 cases of ownership transfer, 215 were transfers between two government entities where no payment was made, 222 were between two government entities with payments, and 132 were between private shareholders. We exclude those cases that did not involve public to private ownership transfer. Second, we exclude 23 forced transfers through judicial rulings or court auctions when sellers involuntarily gave up ownership and were not able to choose acquirers. Third, we exclude a further 16 transfers in which acquirers bought shares from non-controlling shareholders and did not have controlling rights after the transfer. In addition, we exclude two

² China M&A Review was edited by Hollyhigh International Capital, the largest investment bank in mainland China specializing in Mergers & Acquisitions, and published by China Machine Press in September 2006.

firms in the finance industry and another three firms involved in excessive market price manipulation reported by CSRC. Our final sample consists of 300 firms.

Compared to other related studies on ownership transfer privatization in China, our study has a much larger sample size. Rousseau and Xiao (2008)'s sample contains 116 Chinese firms from 1994 to 2002 and they find that firms became more profitable and more productive after privatization. Huang and Wang (2011) obtained similar results, using a sample of 127 Chinese firms during the period of 1996-2005. Chen et al. (2008)'s sample includes just 62 privatized companies and they reach similar results. More importantly, the above studies did not include two types of firms in their samples: (1) firms that were eventually delisted after privatization due to poor performance; and (2) firms that were reacquired by state owners after privatization due to extreme poor performance. Excluding these two types of firms with inferior performance would bias PPP upwards, especially given the limited sample sizes in studies of privatization. In contrast, our sample contains all the delisted firms (19) and re-acquired firms (33) in the period, which account for 17% of total observations, and we collect equivalent performance information for those firms after delisting or reacquisition.

Panel B of Table 1 shows the industry distribution of the sample. Wholesale & retail, machinery, and pharmaceuticals are the three industries with the most cases of ownership transfer, with 31, 28, and 21 cases respectively. Similar to Chen et al. (2008), we then categorize those industries based on monopoly power: 30 firms (10%) are in monopoly industries, 98 firms (33%) are in quasi-monopoly industries, and 172 firms (57%) are in competitive industries. Some firms in the sample changed primary business after privatization. To capture the change of primary business, we construct a dummy variable, *Industry Change*, that equals 1 if the privatized firm changed its primary business after privatization and 0 otherwise. 17% of firms in the sample changed their primary business.

Panel C of Table 1 reports the ownership stakes held by controlling shareholders before

and after the transfers. Prior to privatization, the mean (median) percentage owned by state shareholders was 38% (33%), which decreased to 5% (0%) after privatization. The percentage of shares held by controlling private shareholders, in contrast, grew from less than 1% before privatization to about 30% after privatization.

B. Performance Measurement

We use three variables to measure performance change after privatization: the change in return on asset (ROA), the change in return on sales (ROS), and buy-and-hold abnormal return (BHAR).

Following prior privatization literature (for example, Megginson et al. 1994, D'Souza and Megginson 1999), we use the change in ROA before and after privatization as the main proxy for performance change. To capture long-term performance and mitigate the problem of short-term earnings management, we calculate the change in ROA as the average five-year ROA after privatization minus the average three-year ROA prior to privatization. To account for any macro-economic influence, we subtract the median industry ROA change from each sample firm's ROA change. We also calculate the change in ROS before and after privatization in a similar way.

The third variable we use is buy-and-hold abnormal return (BHAR) in the five years after privatization, which is calculated as the difference between the buy-and-hold return of a sample firm and that of a matched firm. We use firms with no controlling rights transfers during our sample period as benchmarks. We first match firms by market capitalization and then by the market-to-book ratio (MTBR), both of which are computed based on information from one month prior to the controlling rights transfers.

C. Tunneling Measurement

To capture potential tunneling behaviors, we use three different measures: *Other*

receivables (OREC), *Detected tunneling*, and *Connected asset sales*.

The first measure we use is *Other receivables* (OREC) scaled by total assets. Jiang et al. (2010) use it as the main proxy for misappropriation. Also, Jiang et al. (2012) show that a large fraction of OREC is inter-corporate loans made directly to controlling shareholders which do not accrue interest. The principal and interest of most of those loans were never repaid. To examine the change of tunneling behaviors after privatization, we define $\Delta OREC$ as the average five-year OREC after privatization minus the average three-year OREC prior to privatization. To account any macro-economic influence, we subtract the median industry OREC change from each sample firm's OREC change.

The second measure we use is *Detected tunneling*. In 2002, the CSRC launched a campaign to detect and resolve misappropriation problems. Subsequently, the CSRC and the Shanghai and Shenzhen Stock Exchanges have issued numerous public penalty notices for misappropriation. Therefore, we searched public news and reports to find whether key members of management teams had been prosecuted for misappropriation. *Detected tunneling* is 1 if an acquirer has been jailed, detained, or received a "Penalty Notice" from a regulator for tunneling behavior, and 0 otherwise. 17% of firms in our sample were publically detected tunneling behaviors by acquirers.

The third variable we use to measure tunneling is *connected asset sales*, which is defined as the sale of the acquirer's assets to the privatized firm after the acquirer gains control. Those asset sales are often characterized by distorted transaction prices, and in some cases the value of sales exceeded the price paid by the acquirers to obtain controlling ownership. For example, the private acquirer, who bought the controlling ownership of Tonghua Golden-Horse (000766) for 79.7 million CNY in 2000, sold two assets to the firm for 318 million CNY immediately after gaining control. Another acquirer, who bought the controlling shares of Century Zhongtian (000540) for 79.53 million CNY in 2000, immediately sold a subsidiary to the privatized firm for 191 million CNY.

Peng et al. (2011) showed that a significant proportion of tunneling in China was performed through connected transactions, in which controlling shareholders can set transfer prices to benefit themselves most. Cheung et al. (2006) and Cheung et al. (2009) also found that in the Hong Kong market considerable shareholder wealth has been expropriated through connected transactions. In our context, we consider firms involved in connected asset sales after privatization are more likely to be tunneled by controlling shareholders.

To collect the information of connected asset sales, we examined each privatized firm's annual reports manually. In China, regulations require that connected transactions amounting to a total value of greater than RMB 3 million (US\$363,000) or 5% of net assets be disclosed in the firm's annual report. We identified asset sales linked to acquirers and define the variable, *connected asset sales*, as 1 if an acquirer sold assets to the privatized firm within 3 years of privatization, and 0 otherwise. 21% of firms in our sample were involved in connected asset sales.

We obtained all the financial and accounting variables from CSMAR. Appendix A presents the details of all the variables' definitions. All the financial variables are winsorized at 1%.

D. Summary Statistics

Table 2 presents the summary statistics of the sample. Unlike previous studies that reported improved PPP in China, there is no clear evidence supporting the proposition that PPP was significantly improved over the sample period: The mean and median of ΔROA are both -1%, the mean and median of ΔROS are -4% and 1% respectively, and the mean and median of $BHAR$ are 5% and 0% respectively. In addition, we observe some evidence of tunneling behaviors after privatization. Other receivables (OREC) increased, as both the mean and median of $\Delta OREC$ are positive at 3% and 2% respectively. 17% of the sample firms were detected being tunneled by private acquirers, and 21% of acquirers sold their

assets to newly privatized firms. 52% of private acquirers gained controlling rights prematurely and 53% of private acquirers had less than 10 years of corporate leadership experience.

4. The Effect of Anti-tunneling Legislation, Regulation and Enforcement

Around 2003, the Chinese government issued regulations against tunneling and strengthened enforcement of existing laws to prevent tunneling. When the probability of getting caught tunneling and related punishment increased, private acquirers were more likely to choose to build value rather than to strip value from acquired firms. We postulate that post-privatization performance would improve and tunneling behaviors would decrease for privatizations taking place in or after 2003.

In our sample, 44% of firms were privatized in or after 2003 (Table 2). The correlation matrix in Table 3 shows that the dummy variable *From2003* is positively correlated with the performance variables, ΔROA , ΔROS , and *BHAR*, and negatively related to the tunneling variables, $\Delta OREC$, *detected tunneling*, and *connected asset sales*. Privatizations from 2003 onwards also presented fewer incidences of *premature control* and *inexperienced acquirer*. We further observe that *premature control* and *inexperienced acquirers* are positively related to tunneling variables. All of these correlations are statistically significant.

Panel A of Table 4 shows the effect of privatization over time by year. The privatizations began in 1994, and the number of cases increased gradually over time. The highest number of annual privatizations occurred in 2002, 52, accounting for over one-sixth of our sample. The pace of privatization has subsequently slowed. Panel A shows the detailed breakdown of performance and tunneling variables by year. Figure 1 and 2 present the same data in graphical form. We observe the following patterns that emerge from both the table and charts: post-privatization performances were negative prior to 2003, but have turned positive since 2003, while tunneling behaviors that were quite prevalent prior to 2003 have decreased since

2003.

Panel B of Table 4 provides summary statistics focused on comparing those variables prior to and since 2003. The difference between the pre- and post-2003 periods for all performance and tunneling variables are statistically significant. For the performance variables, the mean and median of ΔROA are significantly negative before 2003 (-4% and -2% respectively) and positive from 2003 (4% and 2% respectively). The mean and median of ΔROS bring out the same pattern: significantly negative before 2003 (-17% and -2% respectively) and positive from 2003 (13% and 3% respectively). The mean and median of five-year $BHAR$ are negative before 2003 (-7% and -8% respectively) and positive from 2003 (21% and 10% respectively).

For variables that measure tunneling, the mean and median of $\Delta OREC$ are 7% and 4% respectively before 2003 and -2% and 0% respectively since 2003. The percentages of *detected tunneling* and *connected asset sales* are both 28% before 2003 and 4% and 12% respectively since 2003. Those changes indicate that tunneling behaviors decreased from 2003.

We then test the effect of legal changes from 2003 using panel regressions. For continuous dependent variables, we use OLS regressions with fixed effect; for dummy dependent variables, we use Logit regressions. The dummy variable *From2003* equals to 1 if the privatization took place after the legal changes from 2003, and 0 otherwise. We control for prior performance, leverage, size, and industry fixed effects. We also add a dummy variable, *industry change*, to account for whether a firm changed its primary industry after privatization. Table 5 shows the regression results. The first three columns show post-privatization performance. The coefficients for *From2003* are significantly positive in those regressions with PPP as the dependent variables, indicating that compared to firms that were privatized before 2003, firms privatized since 2003 had significantly better PPP. The coefficients for *From2003* show that following regulatory and enforcement changes from

2003, $\Delta ROAs$ improved by 5%, $\Delta ROSs$ improved by 26% and five-year buy-and-hold abnormal returns improved by 30% on average.

The next three columns show the effect on tunneling behaviors. The coefficients for *From2003* are significantly negative in the regressions with tunneling as the dependent variables, indicating that compared to firms that were privatized before 2003, firms privatized in and after 2003 had significantly less tunneling.

Then we examine whether the change in tunneling behaviors contribute to the change of performance before and after 2003. We run regressions that use PPP variables as dependent variables and use *From2003* and tunneling variables as independent variables. The last three columns in table 5 show the results: the coefficients for tunneling variables are all negative and most of them are statistically significant, indicating that higher rates of tunneling behaviors are linked to poorer performance.

To examine the robustness of the results, we also run the above tests with a reduced sample that excludes firms that changed major business, firms privatized for the second time, and management buyout (MBO) firms. All the key results from the tests using the reduced sample (unreported) remain the same.

5. Key Factors in the Privatization Process:

The above tests establish the link between legal changes from 2003, PPP, and tunneling. In this section, we further explore a couple of key factors in the privatization process: premature control and the leadership experience of private acquirers. Both factors may affect an acquirer's decision to strip or create value in target firms and hence the outcome of privatization.

A. Premature Control

Before the regulatory and enforcement changes in 2003 private acquirers were generally able to gain the effective controlling rights of acquired firms before the deals received final

regulatory approval and before the payments were made in full. It was usually achieved through the transfer of voting rights by agreement, after which the acquirer assumed actual control of the privatized firm even before officially becoming a shareholder of the firm. For example, on December 6th, 2000, in the case of the privatization of Fujian Sannong (000732), the acquirer, Xi'an Feitian Co. Ltd , signed a Share Trusteeship Contract with original state owner, the Bureau of State Asset Management of Fujian Province, to transfer the controlling right even before the share transfer was approved by the Ministry of Finance. Similarly the acquirer could also gain effective controlling rights by becoming the chairman of the board of the privatized firm before ownership transfer was authorized and fully paid. For example, in the case of the privatization of Jinshan Thermoelectric (000732), the acquirer became the chairman of the board of Jinshan Thermoelectric (000732) on December 28th, 2002, about one year before the share transfer was approved by the State on January 7th, 2004.

To our knowledge, no prior research has systematically studied this behavior in the privatization process. In this study, we define *premature control* as a dummy variable equal to 1 if the acquirer gained the controlling rights or the chairmanship of the target firm before the ownership transfer transaction was authorized and fully paid, and 0 otherwise. When *premature control* took place, the existing shareholders no longer had control of the firm, while the acquirers had actual control and had a clear path if they intended to tunnel the firm. Jiang et al. (2010) find that tunneling is most severe when the blockholder's controlling right is significantly larger than the ownership stake. Premature control represents a case of this type of imbalance. There have been news reports describing severe tunneling when acquirers have gained premature control. In some cases, acquirers used cash and assets from acquired firms to cover the entire cost of share acquisitions avoiding any private outlay. In 2004, CSRC issued the Notification on Supervising Controlling Rights Transfer of Listed Companies, which banned transfers of controlling rights before the share transfers were approved by the government and full payment was made.

To find out whether firms experienced premature control in the transfer process, we manually collected information from the “Share Transfer Notice” to code each individual case. Before 1999, regulations did not require firms to make share transfer approval announcements, thus we cannot code any transfer before 1999. We have identified whether acquirers gained premature control from 1999 to 2006 in our sample. We excluded management buyout cases and five cases when acquirers were already blockholders and held over 10% of shares before privatization took place. Panel A of Table 6 shows the percentage of premature control over time. Before 2003, 71% acquirers gained controlling rights prematurely. After 2003, only 32% acquirers gained controlling rights prematurely, the drop was particularly steep from 2004, coinciding with the CRSC Notification banning premature control. In 2006, the most recent year in the sample period, no acquirer was able to gain premature control. The difference of premature control before and after 2003 (71% vs. 32%) is statistically significant.

We then run regression tests using tunneling variables and PPP variables as dependent variables and the dummy of *premature control* as the key independent variable. We expected to observe that premature transfers of controlling rights were linked to more tunneling behaviors and worse PPP, as acquirers that gained premature transfer had more incentive to tunnel given the greater gap between the ownership and control stakes. Panel B of Table 6 shows the regression results of the effect of premature control on tunneling behaviors and post-privatization performance. The first three columns show that the coefficients for *premature control* are significantly positive in the regressions with tunneling behaviors as the dependent variables, indicating that if acquirers prematurely gained control of privatized firms, they were significantly more likely to tunnel.

The next three columns show the results from the regression with PPP variables as dependent variables. The coefficients for *premature control* are significantly negative for Δ ROA and BHAR, suggesting that premature control of privatized firms is linked to poorer

PPP.

Being able to prevent premature control in the privatization provides a means to screen qualified acquirers. It requires the acquirers to have enough capital to cover the cost of acquiring the controlling shares, which will deter inferior acquirers. Like the experience, the ability to cover the payment is also linked with the quality of acquirers and their ability to build value after privatization.

B. The Experience of Acquirers

Whereas existing studies on privatization mainly focus on the target of privatization, we also study private acquirers who become controlling shareholders. We identify the individual who is the controlling shareholder of the acquiring firm. This person is referred to as the acquirer, and is often the entrepreneur who founded the acquiring firm and holds majority ownership.

We want to understand which acquirers are more likely to improve PPP. Ideally, the best way to evaluate the ability of an acquirer to conduct a successful OTP is to examine the acquirer's past record of privatization. However, given that ownership transfer privatization was a recent development in the Chinese market, acquirers usually did not have existing track records of acquiring SOEs. Given this constraint, we rely on another measure: the years of experience in a leadership role the individual acquirer had prior to acquiring the SOE. We view this leadership experience as a proxy for private acquirers' reputation as well as financial and managerial ability.

We manually collect private acquirers' biographic information from "Share Transfer Notices" and annual reports filed by the privatized firms. We also performed an exhaustive search through newswires and various newspapers and books. Most of the private acquirers are well-known in business community and have media coverage that outlines their backgrounds. We calculate an acquirer's business leadership experience by the number of

years from the acquirer's founding of a company (or becoming the CEO or President of the board) to the purchase of the target SOE. Among our sample of 300 acquirers, biographic information of 45 of them is unavailable. For those 45 acquirers, we instead assume the year when the acquiring firm was founded to be the year when the private acquirer became a business leader. We then define *inexperienced acquirer* as a dummy variable equal to 1 if the acquirer has less than 10 years of corporate leadership experience, and 0 otherwise. Table 2 shows that about 53% of our acquirers are classified as *inexperienced acquirer*.

Panel A of Table 7 shows that in the first part of the sample period, from 1994 to 2002, most private acquirers are inexperienced. From 2003, the percentage of *inexperienced acquirers* dropped below 50% for the first time to 36%. This percentage continued to fall to 23% in 2006. The difference in the percentage of *inexperienced acquirers* before and from 2003 is significant at 71% and 30% respectively.

There are two possible factors that can explain the decline in inexperienced acquirers from 2003. First, after suffering years of severe tunneling to privatized firms, the Chinese State was more inclined to select those acquirers with more experience and better reputations. Second, as legal enforcement tightened up against tunneling after 2003, low quality private acquirers that previously bid for ownership transfer with sole intension to tunnel were less willing to participate. Both the selection by the State and by acquirers could contribute to the decline of inexperienced acquirers in the privatization process.

We expect to find that firms acquired by inexperienced acquirers were tunneled more severely and had worse PPP. Panel B of Table 7 shows the effect of characteristics of acquirers on the tunneling behaviors and PPP. The coefficients for *inexperienced acquirer* are significantly positive in the regressions with $\Delta OREC$ and *Detected tunneling* as the dependent variables, which suggests that inexperienced acquirers were more likely to tunnel. The coefficients for *inexperienced acquirer* are significantly negative in the regressions with PPP as the dependent variables, which suggest that inexperienced acquirers were linked to poorer

PPP.

One possible explanation for the link between acquirers' experience and PPP is that the experienced acquirers may be more likely to choose the target that she is able to improve, and thus lead to better PPP. To address this alternative explanation, we compared the average three-year ROA of SOEs prior to privatization between experienced acquirers and inexperienced acquirers. For the entire sample period, experienced acquirers do not acquire firms with better ROA. There is no significant difference between the two groups before 2003 and from 2003. Experienced acquirers do not get firms with better prior performance. But it is still possible that experienced acquirers have the ability to pick firms with better potential, and endogeneity issue remains a concern. The results about the link between experience and PPP should be interpreted with caution.

For this study, the aspect that we are most interested in is at the aggregate level: inexperienced acquirers dropped from 71% in all the cases before 2003 to 30% from 2003. We consider this change is linked to the overall improved performance from 2003. If we consider the main focus in this study is about the change at aggregate level over time, the selection issue at individual firm level is less problematic.

The above tests reveal that the implementation of the transfer process and the prior experience of acquirers affect the outcome of privatization. The two factors help us to better understand the mechanisms that contribute to the difference in PPP before and from 2003.

6. Robustness

A. Share Structure Reform

In April 2005, China started the Share Structure Reform (SSR), which was finished around 2007. The reform converted non-tradable shares into tradable shares, which could affect the incentive of controlling shareholders, and also contribute to the improvement of PPP in our sample, as the private acquirers have more incentive to build value as they have

ways to sell the appreciated shares on the open market once the restriction period of sale ends.

In order to see whether our results are mainly driven by SSR, we identify the time of share structure reform for all the firms in our sample from annual reports. Firms went through SSR during the period from 2005 to 2007. We examine the subsample of firms where the privatization took place at least three years before SSR.

We sort the sample based on the number of years of post-privatization before SSR. For privatizations taking place from 2003, we have 6 firms privatized five years before SSR, 15 firms privatized 4 years before SSR, and 54 firms privatized 3 years before SSR. For privatizations taking place before 2003, we have 126 firms privatized 5 years before SSR; 165 firms privatized 4 years before SSR; and 169 firms privatized 3 years before SSR. We then conduct similar difference-in-difference analysis as in Table 3 Panel B and see whether we can still find any difference in PPP before and after 2003 in this subsample. Table 8 Panel A shows that we still observe a statistically significant difference for ΔROA and ΔROS and the economic magnitude is similar. The results are weaker for BHAR but still in the same direction. The test suggests that our results still hold for a subsample of privatizations that took place from 3 to 5 years before SSR.

B. Additional Control

For robustness, we also try to include additional control variables to account for various factors of the privatization process. We introduce the following variables: the percentages of ownership of government of the privatized firm before and after privatization; the percentage of ownership of acquirers after privatization; market to book ratio; whether a firm is controlled by local government; whether an acquirer is politically connected; whether an acquirer is from the same local province as target firm is located. Please see appendix A for the detailed description of additional control variables.

We redo our main tests in Table 5 with additional control variables to examine whether the legal changes since 2003 affects the PPP and tunneling behaviors. The results of the regressions are reported in Table 8 Panel B. Compared to the results in Table 5, we get very similar results both in economical magnitude and statistical significance. We are also able to replicate the results from Table 6 and 7 with additional controls (unreported).

7. Conclusion

In this study, we examine the performance of a sample of Chinese SOEs which went through ownership transfer to private acquirers. We find that post-privatization performance (PPP) depends on institutional factors. Before regulation and legal enforcement was augmented in 2003, tunneling behaviors by private acquirers in the privatization process were severe and PPP deteriorated. After the strengthening of the regulatory and enforcement by the State from 2003, tunneling behaviors dropped significantly and PPP improved.

We further investigate the underlying process of ownership transfer. We examine the incidence of premature transfer of controlling rights, and whether the private acquirers were experienced. We find that premature transfers of controlling rights and inexperienced acquirers were both linked to more tunneling behaviors and worse PPP. Incidences of premature control and inexperienced acquirers both dropped significantly from 2003, which we believe contributed to the decline of tunneling behaviors and improvement in PPP.

As explained in Hoff and Stiglitz (2004)'s model, the creation of "rules of the game" affect economic agents behavior in a transition economy. Our study shows that the incentive of agents to tunnel changed when the legal environment of investor protection improved. Instead of adopting a "Big Bang" style of privatization, China has instead pursued a slower process that built up legal institutions and improved the outcome of privatization gradually. Our findings shed light on the interaction between institution evolution and economic agents' behaviors.

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Appendix A: Variable Definitions

Variable	Definition
<i>From2003</i>	1 if a company was privatized in or after 2003, and 0 otherwise
ΔROA	Average five-year ROA (Return on Assets) after privatization minus average three-year ROA before privatization, adjusted for the change of industry median
ΔROS	Average five-year return on sales after privatization minus average three-year return on sales before privatization, adjusted for the change of industry median
<i>BHAR</i>	Buy-and-hold abnormal return in the five years after privatization. The benchmark firm is chosen by: firstly identifying 50 firms with a market capitalization closest to that of a sample firm, then within these 50 firms, identifying the one with the closest market-to-book ratio.
$\Delta OREC$	Average five-year other receivables after privatization minus average three-year other receivables before privatization, adjusted for the change of industry median and scaled by total assets
<i>Detected tunneling</i>	1 if an acquirer has been jailed, detained, or received “Penalty Notice” from regulator for tunneling behavior, and 0 otherwise
<i>Connected asset sale</i>	1 if an acquirer sold assets to the privatized firm after privatization, and 0 otherwise
<i>Premature control</i>	1 if an acquirer got controlling rights before a transaction was authorized and fully paid, and 0 otherwise
<i>Inexperienced acquirer</i>	1 if an acquirer has less than 10 years of corporate leadership experience, and 0 otherwise
<i>Industry change</i>	1 if a firm changed its primary business after privatization, and 0 otherwise
<i>ROA before privatization</i>	Average three-year ROA before privatization
<i>Leverage</i>	Total liabilities / total assets at the end of the year before privatization
<i>Size</i>	Natural logarithm of total assets at the end of the year before privatization
<i>Pre-privatization government ownership</i>	Percentage of government ownership of the privatized firm before privatization
<i>Post-privatization government ownership</i>	Percentage of government remaining ownership of the privatized firm after privatization
<i>Post-privatization acquirer ownership</i>	Percentage of acquirers’ ownership of the privatized firm after privatization
<i>MTBR</i>	the ratio of market price to book value of the privatized firm at the end of the year before privatization
<i>Local government controlled</i>	1 if a firm is controlled by local government prior to privatization, and 0 otherwise.
<i>Politically connected acquirer</i>	1 if an acquirer holds a key political position in the provincial or state government, and 0 otherwise.
<i>Local acquirer</i>	1 if an acquirer and the privatized firm locate in the same province, and 0 otherwise.

(All continuous financial variables are winsorized at 2% and 98%.

Appendix B: The Evolution of Regulations against Tunneling in China

1. Regulations on restricting fund misappropriation

In 2002, due to the concern about fund misappropriation by major shareholders, the China Securities Regulatory Commission (CSRC) launched a general survey on all the 1175 listed companies and found fund misappropriation by controlling shareholders in 676 companies.

In January 2004, China State Council issued *Several Opinions on Promoting the Capital Market Reform and Stable Development*, which gave specific instructions for resolving the problem of fund misappropriation by major shareholders of listed companies.

In June 2005, CSRC issued the *Notice of Resolving Fund Misappropriation and Illegal Guarantees*, which required that listed companies work out practical measures to address fund misappropriation and illegal guarantees.

CSRC stated that the problem of fund misappropriation was essentially resolved by the end of 2006 (*China Listed Company Corporate Governance Report, 2010*).

2. Regulations on restricting related-party transactions

In August 2001, CSRC issued *The Guidance on the Establishment of the Independent Director System by Listed Companies*. *The Guidance* stipulated that significant related-party transactions (a total value of more than CNY 3 million or more than 5% of the net asset value) should be approved by independent directors, and there should be at least two independent directors in the board before June 30th, 2002, and that independent directors should be at least 1/3 of board members no later than June 30th, 2003.

In January 2002, CSRC and the National Economic and Trade Commission issued the *Code of Corporate Governance of Listed Companies*, which reaffirmed the above regulations.

In December 2004, CSRC issued the *Provisions on Strengthening the Protection of the Rights and Interests of Public Shareholders*. *The Provisions* requires listed companies to provide an online voting platform for its shareholders for significant asset restructuring in which assets are acquired at a premium of more than 20% of audited value.

3. Regulations on restricting premature controlling rights transfer

In 2004, CSRC issued the *Notification on Supervising Controlling Rights Transfer of Listed Companies*. The regulation banned premature transfers of controlling rights before the shares transfers were approved by the government and before the full payment was made.

Appendix C: List of Convicted Cases of Tunneling in the Sample Period

Before 2003, although there were severe tunneling behaviors by controlling shareholders, none has been arrested or convicted. Started from 2004, there are multiple cases of people arrested and convicted for tunneling behaviors. Here is a list of convicted cases related privatized firms.

Misappropriated Companies	Ticker	Individual Names	Time of arrestment / conviction	Crime charged	Sentence
China Sichuan International	600852	CONG Gang	12/2004 6/2006	Contractual Fraud Embezzlement Fund Misappropriation	life imprisonment
Shanxi Jingmi	600092	ZHANG Hua	1/2005 10/2007	Contractual Fraud Embezzlement	10 years in prison
Kelon Electrical Holdings	000921	GU Chu-jun	7/2005 1/2008	Fund Misappropriation False Registered Capital Disclosure of False Information	10 years in prison
Mingxing Electric Power	600101	ZHOU Yi-ming	12/2005 11/2006	Contractual Fraud	life imprisonment
Xichang Electric Power Zarva Technology	600505 000688	ZHANG Liang-bin	3/2006 12/2007	Embezzlement False Capital Contribution	16 years in prison
Zhejiang Haina Fujian Sannong Longchang	000925 000732 600772	QIU Zong-bao	2/2006 12/2008	Contractual Fraud Fund Misappropriation	20 years in prison
Shanghai Broadband Technology	600608	ZHANG Jie	7/2006 9/2007	Injuring Listed Company	2 years in prison
Kaikai Industry Sanmao Industry	600272 000779	ZHANG Chen	12/2004	Embezzlement Fund Misappropriation	flee away

Figure 1
The Change of Post-privatization Performance Over Time

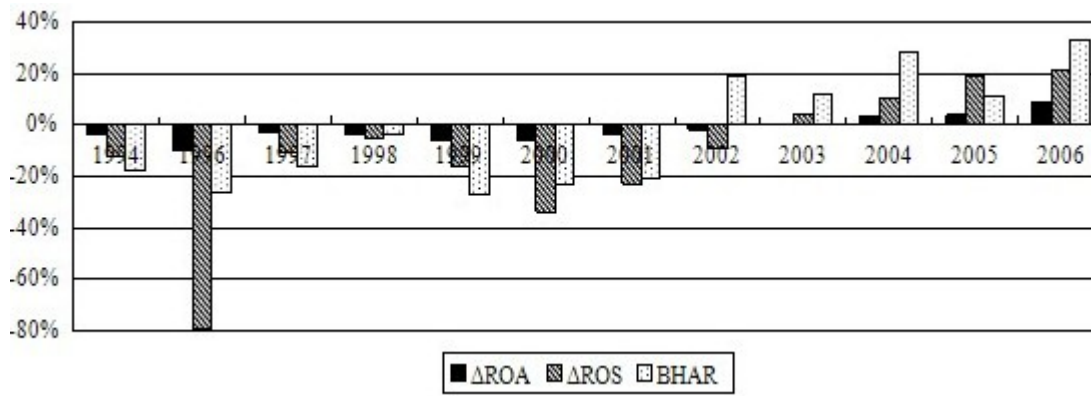


Figure 2
The Change of Tunneling Behaviors after Privatization Over Time

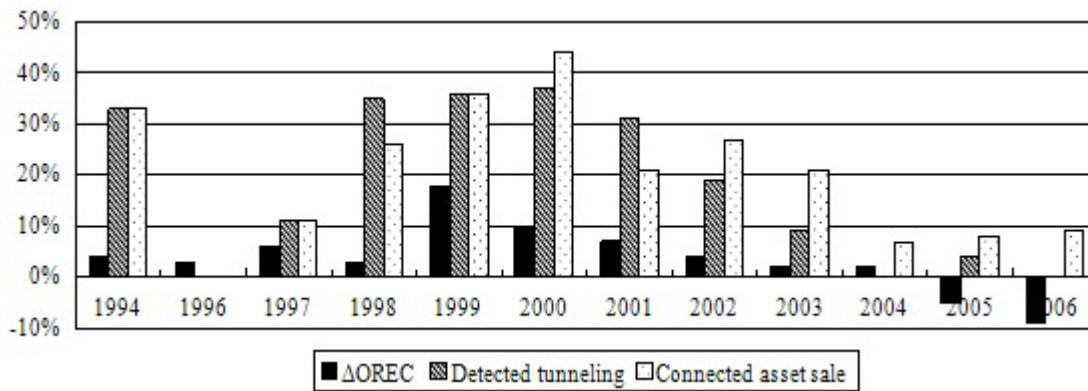


Table 1
Sample Description

Our sample includes all Chinese listed companies that went through a controlling rights transfer from a state owner to a private acquirer through an agreed sale between 1994 and 2006. The percentage of ownership held by a controlling shareholder is the number of shares it owns divided by the total shares outstanding.

<i>Panel A: Sample selection process</i>						
Total sample of controlling rights transfers						913
- free transfers						215
- transfers between two government entities						222
- controlling rights transfers from private shareholders to others						132
- judicial rulings or court auctions						23
- transfers by non-controlling shareholders						16
- manipulation of market prices						3
- financial industry						2
Final sample						300
<i>Panel B: Industry distribution</i>						
Monopoly						
Mining						1
Electricity						4
Petroleum						5
Metal						15
Transportation						5
Quasi-monopoly						
Real estate						12
Building						5
Non-metal material						18
Chemical engineering						14
Pharmaceuticals						21
Machinery						28
Competitive						
Appliances						16
Wholesale & Retail						31
Fiber & Plastics						5
Textile & Garment						16
Papermaking						12
IT						16
Electron						10
Food						17
Agriculture						8
Hotel						7
Conglomerate						34
Total						300
<i>Panel C: Percentage of ownership before and after controlling rights transfer</i>						
	Ownership	Mean	StD	1/4	Median	3/4
Before transfer	State	38%	16%	25%	33%	51%
	Private	1%	3%	0%	0%	0%
After transfer	State	5%	8%	0%	0%	6%
	Private	33%	14%	26%	29%	41%

Table 2
Descriptive Statistics

Our sample includes all Chinese listed companies that went through a controlling rights transfer from a state owner to a private acquirer through an agreed sale between 1994 and 2006. *From2003* equals 1 if a company was privatized in or after 2003, and 0 otherwise. *Detected tunneling* equals 1 if an acquirer has been jailed, detained, or received a “Penalty Notice” from a regulator for tunneling behavior, and 0 otherwise. *Connected asset sale* equals 1 if an acquirer sold assets to the privatized firm after privatization, and 0 otherwise. *Inexperienced acquirer* equals 1 if an acquirer has less than 10 years of corporate leadership experience, and 0 otherwise. *Premature control* equals 1 if an acquirer got controlling right before a transaction was authorized and fully paid, and 0 otherwise. Other variables definitions appear in Appendix A.

	N	Mean	StD	1/4	Median	3/4
<i>ΔROA</i>	300	-1%	13%	-7%	-1%	5%
<i>ΔROS</i>	300	-4%	50%	-12%	1%	14%
<i>BHAR</i>	300	5%	80%	-45%	0%	51%
<i>ΔOREC</i>	300	3%	14%	-3%	2%	9%
<i>Detected tunneling</i>	300	17%	38%			
<i>Connected asset sale</i>	300	21%	41%			
<i>Premature control</i>	154	52%	50%			
<i>Inexperienced acquirer</i>	300	53%	50%			
<i>Industry change</i>	300	17%	38%			
<i>From2003</i>	300	44%	50%			
<i>ROA before privatization</i>	300	4%	7%	0%	5%	9%
<i>Leverage</i>	300	53%	29%	35%	50%	63%
<i>Size</i>	300	20.39	0.78	19.88	20.39	20.89
<i>MTBR</i>	288	10.77	12.40	3.31	6.72	13.14

Table 3
Correlation Matrix

Our sample includes all Chinese listed companies that went through a controlling rights transfer from a state owner to a private acquirer through an agreed sale between 1994 and 2006. *From2003* equals 1 if a company was privatized in or after 2003, and 0 otherwise. *Detected tunneling* equals 1 if an acquirer has been jailed, detained, or received a “Penalty Notice” from a regulator for tunneling behavior, and 0 otherwise. *Connected asset sale* equals 1 if an acquirer sold assets to the privatized firm after privatization, and 0 otherwise. *Inexperienced acquirer* equals 1 if an acquirer has less than 10 years of corporate leadership experience, and 0 otherwise. *Premature control* equals 1 if an acquirer got controlling right before a transaction was authorized and fully paid, and 0 otherwise. Other variables definitions appear in Appendix A.

	<i>From2003</i>	ΔROA	ΔROS	<i>BHAR</i>	$\Delta OREC$	<i>Detected tunneling</i>	<i>Connected asset sale</i>	<i>Premature control</i>
<i>ΔROA</i>	0.30***							
<i>ΔROS</i>	0.30***	0.77***						
<i>BHAR</i>	0.18***	0.42***	0.38***					
<i>$\Delta OREC$</i>	-0.33***	-0.49***	-0.35***	-0.20***				
<i>Detected tunneling</i>	-0.31***	-0.33***	-0.23***	-0.25***	0.34***			
<i>Connected asset sale</i>	-0.20***	-0.15**	-0.15***	-0.17***	0.16***	0.23***		
<i>Premature control</i>	-0.34***	-0.26***	-0.15*	-0.18**	0.28***	0.19**	0.25***	
<i>Inexperienced acquirer</i>	-0.41***	-0.26***	-0.21***	-0.11*	0.23***	0.22***	0.08	0.13

***, **, * indicate significant at 1%, 5%, 10%, respectively, two-tailed.

Table 4

Post-privatization Performance and Tunneling Behaviors over Time

Our sample includes all Chinese listed companies that went through a controlling rights transfer from a state owner to a private acquirer through an agreed sale between 1994 and 2006. *Detected tunneling* equals 1 if an acquirer has been jailed, detained, or received a “Penalty Notice” from a regulator for tunneling behavior, and 0 otherwise. *Connected asset sale* equals 1 if an acquirer sold assets to the privatized firm after privatization, and 0 otherwise. *From2003* equals 1 if a company was privatized in or after 2003, and 0 otherwise. Other variables definitions appear in Appendix A. The difference in means (medians) is measured using t-statistics (nonparametric Wilcoxon signed-rank test).

Panel A: Post-privatization Performance and Tunneling Behaviors over Time											
Year	N	Post-privatization Performance						Tunneling Behaviors			
		ΔROA		ΔROS		$BHAR$		$\Delta OREC$		<i>Detected tunneling</i>	<i>Connected asset sale</i>
		Mean	Median	Mean	Median	Mean	Median	Mean	Median		
1994	3	-4%	0%	-12%	-14%	-18%	-34%	4%	5%	33%	33%
1995	0										
1996	4	-10%	-8%	-79%	-68%	-26%	-58%	3%	0%	0%	0%
1997	9	-3%	-3%	-11%	5%	-16%	-31%	6%	5%	11%	11%
1998	23	-4%	-4%	-5%	2%	-4%	-15%	3%	2%	35%	26%
1999	22	-6%	-2%	-16%	0%	-27%	-18%	18%	19%	36%	36%
2000	27	-6%	-2%	-34%	-9%	-23%	-17%	10%	6%	37%	44%
2001	29	-4%	-4%	-23%	-2%	-21%	-9%	7%	7%	31%	21%
2002	52	-2%	-2%	-9%	0%	19%	24%	4%	3%	19%	27%
2003	44	0%	-1%	4%	0%	12%	1%	2%	1%	9%	21%
2004	28	3%	1%	10%	3%	28%	31%	2%	2%	0%	7%
2005	24	4%	4%	19%	11%	11%	0%	-5%	-2%	4%	8%
2006	35	9%	4%	21%	9%	33%	29%	-9%	-2%	0%	9%

Panel B: The means and medians of Post-privatization Performance and Tunneling Behaviors before 2003 and from 2003											
	ΔROA		ΔROS		$BHAR$		$\Delta OREC$		<i>Detected tunneling</i>	<i>Connected asset sale</i>	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median			
Before 2003	-4%***	-2%***	-17%***	-2%	-7%	-8%	7%***	4%***	28%***	28%***	
From 2003	4%***	2%*	13%***	3%***	21%***	10%	-2%**	0	4%*	12%***	
Difference	-8%***	-4%***	-30%***	-5%**	-28%***	-18%**	9%***	4%***	24%***	16%***	

***, **, * indicate significant at 1%, 5%, 10%, respectively, two-tailed.

Table 5
The Effect of Anti-tunneling Legislations

Our sample includes all Chinese listed companies that went through a controlling rights transfer from a state owner to a private acquirer through an agreed sale between 1994 and 2006. *From2003* equals 1 if a company was privatized in or after 2003, and 0 otherwise. *Detected tunneling* equals 1 if an acquirer has been jailed, detained, or received a “Penalty Notice” from a regulator for tunneling behavior, and 0 otherwise. *Connected asset sale* equals 1 if an acquirer sold assets to the privatized firm after privatization, and 0 otherwise. Other variables definitions appear in Appendix A.

	Post-privatization Performance			Tunneling Behaviors			Post-privatization Performance		
	ΔROA	ΔROS	$BHAR$	$\Delta OREC$	<i>Detected tunneling</i>	<i>Connected asset sale</i>	ΔROA	ΔROS	$BHAR$
<i>From2003</i>	0.05*** (0.00)	0.26*** (0.00)	0.30*** (0.00)	-0.08*** (0.00)	-2.14*** (0.00)	-0.79** (0.03)	0.22* (0.08)	0.17*** (0.00)	0.15 (0.15)
$\Delta OREC$							-0.23*** (0.00)	-0.61*** (0.00)	-0.42 (0.24)
<i>Detected tunneling</i>							-0.05*** (0.00)	-0.09 (0.21)	-0.39*** (0.00)
<i>Connected asset sale</i>							-0.00 (0.77)	-0.08 (0.23)	-0.24** (0.04)
<i>ROA before privatization</i>	-0.69*** (0.00)	-1.63*** (0.00)	0.60 (0.49)	0.43*** (0.00)	9.36** (0.02)	5.34 (0.11)	-0.54*** (0.00)	-1.23** (0.02)	1.26 (0.15)
<i>Leverage</i>	0.08*** (0.00)	0.09 (0.44)	0.57*** (0.01)	-0.00 (0.99)	0.97 (0.30)	-0.63 (0.45)	0.08*** (0.00)	0.09 (0.43)	0.57*** (0.00)
<i>Size</i>	-0.01 (0.47)	-0.04 (0.26)	-0.07 (0.29)	0.02 (0.14)	0.17 (0.44)	0.04 (0.85)	-0.00 (0.87)	-0.03 (0.42)	-0.05 (0.41)
<i>Industry change</i>	0.03** (0.05)	0.11 (0.13)	0.17 (0.17)	-0.01 (0.51)	0.80* (0.06)	1.75*** (0.00)	0.03** (0.02)	0.14* (0.06)	0.28** (0.03)
<i>Industry dummies</i>	yes	yes	Yes	yes	yes	yes	yes	yes	yes
Cons.	0.06 (0.69)	0.68 (0.35)	0.86 (0.49)	-0.25 (0.23)	-5.64 (0.22)	-2.02 (0.64)	-0.00 (0.98)	0.51 (0.47)	0.70 (0.57)
Adj R ²	0.40	0.19	0.06	0.17	0.16	0.13	0.49	0.23	0.11
N	300	300	300	300	300	300	300	300	300
Test	OLS	OLS	OLS	OLS	LOGIT	LOGIT	OLS	OLS	OLS

***, **, * indicate significant at 1%, 5%, 10%, respectively, two-tailed.

Table 6
The Effect of Premature Control

Our sample includes all Chinese listed companies that went through a controlling rights transfer from a state owner to a private acquirer through an agreed sale between 1994 and 2006. *From2003* equals 1 if a company was privatized in or after 2003, and 0 otherwise. *Detected tunneling* equals 1 if an acquirer has been jailed, detained, or received a “Penalty Notice” from a regulator for tunneling behavior, and 0 otherwise. *Connected asset sale* equals 1 if an acquirer sold assets to the privatized firm after privatization, and 0 otherwise. *Premature control* equals 1 if an acquirer got controlling right before a transaction was authorized and fully paid, and 0 otherwise. Other variables definitions appear in Appendix A.

Panel A: Premature control over time

1999	2000	2001	2002	2003	2004	2005	2006	Before 2003	From 2003	Difference
67%	59%	74%	72%	70%	21%	28%	0%	71%	32%	39%***

Panel B: Regression

	Tunneling Behaviors			Post-privatization Performance		
	<i>ΔOREC</i>	<i>Detected tunneling</i>	<i>Connected asset sale</i>	<i>ΔROA</i>	<i>ΔROS</i>	<i>BHAR</i>
<i>Premature control</i>	0.07*** (0.00)	0.99** (0.05)	1.22*** (0.01)	-0.04*** (0.01)	-0.12 (0.15)	-0.24** (0.05)
<i>ROA before privatization</i>	0.49** (0.02)	17.5*** (0.00)	11.9*** (0.01)	-0.74*** (0.00)	-1.79*** (0.00)	0.03 (0.97)
<i>Leverage</i>	-0.03 (0.52)	2.04 (0.09)	0.70 (0.49)	0.04*** (0.01)	-0.01 (0.88)	0.13 (0.26)
<i>Size</i>	0.02 (0.16)	0.32 (0.40)	-0.24 (0.49)	0.01 (0.70)	0.00 (0.96)	-0.09 (0.34)
<i>Industry change</i>	0.02 (0.39)	0.93* (0.09)	2.03*** (0.00)	0.05** (0.03)	0.13 (0.15)	0.18 (0.20)
<i>Industry dummies</i>	yes	yes	yes	yes	yes	yes
Cons.	-0.49 (0.16)	-10.7 (0.17)	1.92 (0.79)	-0.10 (0.71)	-0.03 (0.98)	1.91 (0.32)
Adj R ²	0.17	0.17	0.23	0.38	0.09	0.04
N	154	154	154	154	154	154
Test	OLS	LOGIT	LOGIT	OLS	OLS	OLS
Margin (<i>Premature control</i> =1)		19.4%	31.4%			
Margin (<i>Premature control</i> =0)		9.5%	13.5%			

***, **, * indicate significant at 1%, 5%, 10%, respectively, two-tailed.

Table 7
The Effect of Inexperienced Acquirers

Our sample includes all Chinese listed companies that went through a controlling rights transfer from a state owner to a private acquirer through an agreed sale between 1994 and 2006. *From2003* equals 1 if a company was privatized in or after 2003, and 0 otherwise. *Detected tunneling* equals 1 if an acquirer has been jailed, detained, or received a “Penalty Notice” from a regulator for tunneling behavior, and 0 otherwise. *Connected asset sale* equals 1 if an acquirer sold assets to the privatized firm after privatization, and 0 otherwise. *Inexperienced acquirer* equals 1 if an acquirer has less than 10 years of corporate leadership experience, and 0 otherwise. Other variables definitions appear in Appendix A.

Panel A: Inexperienced acquirers over time

1994	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Before 2003	From 2003	Difference
100%	100%	100%	87%	73%	74%	69%	54%	36%	36%	25%	23%	71%	30%	41%***

Panel B: Regression

	Tunneling Behaviors			Post-privatization Performance		
	$\Delta OREC$	<i>Detected tunneling</i>	<i>Connected asset sale</i>	ΔROA	ΔROS	<i>BHAR</i>
<i>Inexperienced acquirer</i>	0.06*** (0.00)	1.23*** (0.00)	0.24 (0.45)	-0.06*** (0.00)	-0.18*** (0.00)	-0.17* (0.08)
<i>ROA before privatization</i>	0.59*** (0.00)	12.1*** (0.00)	7.38** (0.02)	-0.77*** (0.00)	-2.12*** (0.00)	-0.01 (0.99)
<i>Leverage</i>	0.01 (0.69)	0.99 (0.27)	-0.56 (0.49)	0.07*** (0.01)	0.05 (0.69)	0.51*** (0.01)
<i>Size</i>	0.01 (0.31)	0.06 (0.80)	-0.06 (0.78)	-0.01 (0.42)	-0.03 (0.47)	-0.04 (0.51)
<i>Industry change</i>	-0.00 (0.87)	1.06*** (0.01)	1.85*** (0.00)	0.02 (0.12)	0.08 (0.27)	0.13 (0.28)
<i>Industry dummies</i>	yes	yes	yes	yes	yes	yes
Cons.	-0.24 (0.27)	-4.78 (0.30)	-0.56 (0.90)	0.14 (0.40)	0.64 (0.39)	0.63 (0.62)
Adj R ²	0.13	0.11	0.12	0.41	0.17	0.04
N	300	300	300	300	300	300
Test	OLS	LOGIT	LOGIT	OLS	OLS	OLS
Margin (<i>Inexperienced acquirer</i> =1)		22.8%	21.5%			
Margin (<i>Inexperienced acquirer</i> =0)		8.7%	18.1%			

***, **, * indicate significant at 1%, 5%, 10%, respectively, two-tailed.

Table 8
Robustness

Our sample includes all Chinese listed companies that went through a controlling rights transfer from a state owner to a private acquirer through an agreed sale between 1994 and 2006. We exclude 12 firms that had negative book value of equity prior to privatization. *From2003* equals 1 if a company was privatized in or after 2003, and 0 otherwise. *Detected tunneling* equals 1 if an acquirer has been jailed, detained, or received a “Penalty Notice” from a regulator for tunneling behavior, and 0 otherwise. *Connected asset sale* equals 1 if an acquirer sold assets to the privatized firm after privatization, and 0 otherwise. Other variables definitions appear in Appendix A.

Panel A: Share Structure Reform

		Number of post-privatization years before Share Structure Reform			
		All Sample	5 years	4 years	3 years
From 2003	Sample	132	6	15	54
	ΔROA	4%	3%	4%	3%
	ΔROS	13%	15%	10%	9%
	BHAR	21%	-16%	2%	12%
Before 2003	Sample	168	126	165	169
	ΔROA	-4%	-6%	-4%	-4%
	ΔROS	-17%	-24%	-18%	-17%
	BHAR	-8%	-20%	-9%	-7%
Difference	ΔROA	8%***	9%*	8%**	7%***
	ΔROS	30%***	39%*	28%*	26%***
	BHAR	28%***	4%	11%	19%*

Panel B: Additional Control Variables

	Post-privatization Performance			Tunneling Behaviors			Post-privatization Performance		
	ΔROA	ΔROS	$BHAR$	$\Delta OREC$	<i>Detected tunneling</i>	<i>Connected asset sale</i>	ΔROA	ΔROS	$BHAR$
<i>From2003</i>	0.05*** (0.00)	0.24*** (0.00)	0.22** (0.04)	-0.07*** (0.00)	-1.98*** (0.00)	-1.00*** (0.01)	0.02* (0.09)	0.18*** (0.01)	0.10 (0.37)
$\Delta OREC$							-0.21*** (0.00)	-0.56*** (0.01)	-0.26 (0.49)
<i>Detected tunneling</i>							-0.06*** (0.00)	-0.07 (0.38)	-0.36*** (0.01)
<i>Connected asset sale</i>							-0.01 (0.47)	-0.10 (0.15)	-0.27** (0.02)
<i>ROA before privatization</i>	-0.64*** (0.00)	-1.45*** (0.01)	0.86 (0.36)	0.41*** (0.01)	7.16* (0.10)	3.94 (0.27)	-0.51*** (0.00)	-1.14** (0.03)	1.29 (0.17)
<i>Leverage</i>	-0.02 (0.69)	-0.06 (0.72)	0.60** (0.05)	0.03 (0.59)	0.79 (0.52)	-1.40 (0.17)	-0.01 (0.81)	-0.06 (0.71)	0.57** (0.05)
<i>Size</i>	-0.00 (0.58)	-0.02 (0.55)	-0.05 (0.48)	0.02 (0.15)	-0.05 (0.85)	0.09 (0.71)	-0.00 (0.86)	-0.01 (0.75)	-0.04 (0.54)
<i>Industry change</i>	0.05*** (0.00)	0.13* (0.07)	0.16 (0.22)	-0.02 (0.35)	0.61 (0.20)	1.68*** (0.00)	0.05*** (0.00)	0.16** (0.04)	0.27** (0.04)
<i>Pre-privatization government ownership</i>	-0.05 (0.43)	-0.33 (0.27)	-0.55 (0.31)	0.06 (0.49)	2.67 (0.16)	0.61 (0.73)	-0.02 (0.80)	-0.25 (0.39)	-0.34 (0.52)
<i>Post-privatization government ownership</i>	0.09 (0.31)	0.52 (0.20)	1.67** (0.02)	-0.08 (0.50)	-2.65 (0.31)	-1.41 (0.56)	0.06 (0.51)	0.43 (0.29)	1.46** (0.04)
<i>Post-privatization acquirer ownership</i>	0.05 (0.52)	0.45 (0.18)	0.90 (0.14)	-0.09 (0.37)	-4.93** (0.04)	1.40 (0.49)	-0.00 (0.96)	0.37 (0.27)	0.68 (0.25)
<i>MTBR</i>	0.00 (0.71)	0.00 (0.22)	-0.01 (0.15)	0.00 (0.13)	-0.01 (0.46)	0.00 (0.86)	-0.00 (0.88)	0.00 (0.15)	-0.01 (0.13)
<i>Local government controlled</i>	0.00 (0.92)	0.03 (0.71)	0.10 (0.46)	0.02 (0.41)	-0.18 (0.74)	0.02 (0.96)	0.00 (0.79)	0.03 (0.63)	0.09 (0.46)
<i>Politically connected acquirer</i>	-0.02 (0.17)	-0.09 (0.12)	-0.27*** (0.01)	0.04** (0.02)	1.19*** (0.00)	0.38 (0.27)	0.00 (0.94)	-0.05 (0.38)	-0.18* (0.09)
<i>Local acquirer</i>	0.04*** (0.00)	0.10* (0.06)	0.04 (0.69)	-0.02 (0.16)	0.06 (0.87)	0.06 (0.85)	0.04*** (0.00)	0.09* (0.09)	0.04 (0.71)
<i>Industry dummies</i>	yes	yes	yes	yes	yes	yes	yes	yes	yes
Adj R ²	0.28	0.16	0.04	0.18	0.21	0.14	0.39	0.19	0.09
N	288	288	288	288	288	288	288	288	288
Test	OLS	OLS	OLS	OLS	LOGIT	LOGIT	OLS	OLS	OLS
Margin From2003=1					9.8%	14.3%			
Margin From2003=0					27.8%	28.4%			

***, **, * indicate significant at 1%, 5%, 10%, respectively, two-tailed.