

## WHY DOES THE CONTROLLING SHAREHOLDER TRANSFER ITS PRIVATIZED SHARES AFTER FULL PRIVATIZATION? EVIDENCE FROM CHINA



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### ABSTRACT

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In China, many controlling shareholders of fully privatized firms decide to transfer their privatized shares to third parties in the subsequent years after full privatization, which is defined as fully privatized shares transfer. Using Chinese fully privatized firms during the 2001 to 2013 period, this paper investigates the reasons why fully privatized shares transfer occurs in China. The results indicate that tunneling and minority shareholder protections are important induction factors of fully privatized shares transfer. Specifically, fully privatized firms conducting more severe tunneling in the current year and in the previous three years have a higher occurrence of fully privatized shares transfer, whereas firms adopting cumulative voting or having higher attendance at the general meeting of the shareholders are less likely to have fully privatized shares transfer occur. However, this paper lends limited support to the induction roles of politically connected senior managers in fully privatized shares transfer. This study's findings highlight the importance of fully privatized shares transfer and thus offer fresh insight to policymakers that it is necessary to focus on the long and dynamic process of privatization, particularly the tunneling motives of introduced private owners.

## 1. INTRODUCTION

Privatization has long been considered as a general prescription for state-owned enterprises' reform and economic prosperity in recent decades. It is hoped that privatization is an efficient means of strengthening the state and injecting new energy into the market. In this scenario, ample documentation on privatization has been produced and is widespread (Sun and Tong, 2003; Boubakri *et al.*, 2005a; Huang and Wang, 2011). Although most prior literature has focused on the privatized firms' performance (Megginson and Netter, 2001; Djankov and Murrell, 2002; Marcellin and Mathur, 2015) little is known regarding the dynamics of privatization; that is, privatization is not the story's end because privatized shares may be transferred to third parties after privatization.

Using full privatization as an example, suppose a state-owned enterprise is named CCV. By relinquishing control rights, the ultimate control of CCV is transferred from the government to a private owner, PF. After this transfer, CCV becomes a private-owned enterprise. However, PF, as the ultimate controller of CCV, may choose to

transfer its shares to third parties<sup>1</sup> over the next few years, which is defined as fully privatized shares transfer in this paper. Specifically, fully privatized shares transfer (FPST for short) refers to fully privatized firms whose largest shareholder (also the private shareholder at the same time) transfers its privatized shares to third parties. Actually, fully privatized shares transfer is common in China<sup>2</sup>, although it is not widely acknowledged in the prior literature.

The empirical evidence pertaining to privatization tends to document that fully privatized firms with a shift in control from governments to private owners are more likely to have improved performance than partially privatized firms (Chhibber and Majumdar, 1999; Boubakri *et al.*, 2005b; Bai *et al.*, 2009). In this case, why do the ultimate controllers of fully privatized firms decide to transfer their shares to third parties in subsequent years? Is the improved performance not attractive to the controlling shareholders? What are the reasons behind fully privatized shares transfer? The underlying reasons are pivotal for explaining these conflict views.

In this study, the determinants of fully privatized shares transfer are examined to further understand the motives and decisions of private controlling shareholders during the dynamic process of privatization. Using Chinese fully privatized firms listed on the Shanghai and Shenzhen Stock Exchanges during the 2001 to 2013 period, this paper discusses the impacts of tunneling, minority shareholder protections, and political connections on fully privatized shares transfer. After using other receivables scaled by total assets as proxies for tunneling variables, the empirical results show that the current and previous tunneling behaviors of the largest shareholder after full privatization are major induction factors of fully privatized shares transfer. That is, fully privatized firms conducting more severe tunneling in the current year and the previous three years have a higher probability of fully privatized shares transfer occurring. When classifying other receivables according to the length of time an invoice has been outstanding, the empirical results further prove the positive relation between tunneling and fully privatized shares transfer, particularly when the largest shareholders use other receivables over three years as a tunneling means to extract private benefits in the current year and the previous three years. These results are robust after using alternative measures of tunneling.

The results also show that better minority shareholder protections play effective roles in preventing fully privatized shares transfer. To be specific, firms adopting cumulative voting or having higher attendance at the general meeting of the shareholders are less likely to have fully privatized shares transfer occur. However, the network voting has negative but insignificant influence on fully privatized shares transfer, indicating that the positive effects of online voting on protecting minority shareholders do not yet appear in the Chinese stock markets. In addition, this paper further investigates the impacts of political connections on fully privatized shares transfer. The results prove a weak relation between politically connected senior managers and fully privatized shares transfer. However, directors with political connections have no significant influence on the occurrence of fully privatized shares transfer.

This study contributes to the current literature by investigating the occurrence of fully privatized shares transfer. Most existing studies wrestling with the question of privatization document a higher post-privatization performance in fully privatized firms relative to partially privatized firms. Although having improved performance, many fully privatized firms in the Chinese stock markets occur fully privatized shares transfer. There is limited guidance from prior research regarding the shares transferred by the controlling shareholders of fully privatized firms after full privatization. This study is an empirical attempt to discuss why fully privatized shares transfer

<sup>1</sup>These third parties can be state-owned, private-owned, foreign-owned, or jointly owned firms, etc.

<sup>2</sup> Please refer to Table 1. During the 2001 to 2013 period, the number of fully privatized shares transfer firms in the Chinese stock market is 54, whereas the total number of fully privatized firms is 120. The percentage of fully privatized shares transfer firms is 45%, which is computed as 54 divided by 120. Although these data are solely limited to Chinese public companies, it is reasonable to assume that fully privatized shares transfer is common in China because of the important roles public companies play in the Chinese economy.

occurs in the Chinese stock market and thus highlights the role of tunneling, minority shareholder protections and political connections during the dynamic process of Chinese privatization.

The remainder of this paper is organized as follows. Section 2 describes the Chinese privatization program, reviews the literature and develops the hypotheses. Section 3 discusses data and methodology. Section 4 examines the determinants of fully privatized shares transfer and reports the empirical results. Section 5 presents the conclusions.

## **2. INSTITUTIONAL BACKGROUND AND HYPOTHESIS DEVELOPMENT**

### **2.1. The Chinese Privatization Program**

The reforms of Chinese state owned enterprises (SOEs for short) were initiated in 1978. These reforms were designed to promote the efficiency of SOEs and to stimulate economic development, including the decentralization of operating rights, the establishment of modern corporate systems, a loosening of the government's control rights after privatization, and the restructuring of large scale SOEs, mixed ownership reforms, and related events. The privatization of SOEs is one of the major processes that occurred throughout this reform. Generally speaking, the Chinese government has adopted a gradual approach to reforming its SOEs and has developed its own special path —“crossing the river by touching stones”. Furthermore, under the socialist ideology, the government is pivotal for the reforms of SOEs. [Sun and Tong \(2003\)](#) and [Huang and Wang \(2011\)](#) among others, have clearly introduced the stages of reform of Chinese SOEs. This paper only addresses the Chinese privatization processes that are relative to this study in this section.

In 1992, the 14th Party Congress announced the establishment of the modern corporate system. Under this system, Chinese government finally endorsed private property rights. Official slogans capturing the main features of this policy represent it as having four pillars: clarification of property rights; clarification of rights and responsibilities; separation of government administration and corporate business; and scientific management.

The policy of “grasping the large and letting go of the small” (*zhuadafangxiao*), one of the elements of modern corporations, was adopted in 1995. The 15th Congress of the Chinese Communist Party reaffirmed this policy in 1997. The gist of “*zhuadafangxiao*” is that the government maintains control over large and medium scale SOEs while relinquishing control rights over small-scale SOEs, especially for the failing and weak SOEs, through restructuring, selling and leasing.

In the 1990s, share issue privatization (SIP) became an important strategy for vitalizing large and medium-sized SOEs, many of which have been transformed into public companies listed on the Shanghai and Shenzhen Stock Exchanges. The government's original purposes in adopting SIP was to raise capital and improve the efficiency of SOEs via the discipline of the stock market. Under primary offerings, SIP in China in the 1990s usually represented partial privatization, with the government retaining considerable power over SOEs.

During this period, many small SOEs were privatized, resulting in the transfer of control rights from the government to private owners. Thus, political and social objectives are no longer the main consideration in the decision making of these firms. Unprofitable and weak large SOEs are now restructured or merged with strong large SOEs. Large SOEs, especially those representing central enterprises, have become industry giants, with substantial size and generous profits even in the global market. Many central enterprises have become members of the top 500 companies in the world. Under this shareholding reform, a large number of SOEs in China have diversified their ownership structures to include both state and non-state capital.

With the rapid economic and social development that has occurred in China, the primary offerings in China's stock market are no longer aimed at raising capital primarily for SOEs. Many privately-owned firms have become publicly listed companies in the Shanghai and Shenzhen Stock Exchanges. The Chinese government also initiated

Split Share Structure Reform with the purpose of kicking-off non-tradable shares in 2005<sup>3</sup>. This Split Share Structure Reform largely improved the stock market's development and expansion. In addition, quite a few listed SOEs successfully transferred ownership to private owners through privatization, thereby considerably enhancing their profit and efficiency.

In November 2013, the Third Plenary Session of the 18th Communist Party of China's Central Committee announced the adoption of mixed ownership reforms, a critical step toward deepening the reform of SOEs. The Chinese government acknowledges the important role of a diversified ownership economy, which means that state-owned, collectively-owned and privately-owned firms are allowed to develop into mixed ownership firms. The mixed ownership reforms introduce large amount of private capital to state capital with the purpose of improving corporate governance, increasing firm value, and promoting the competitiveness of SOEs.

## **2.2. Hypothesis Development**

Tunneling is pervasive and severe in Chinese listed companies, and private-owned firms are more likely to conduct tunneling at minimum costs than state-owned firms ([Li, 2010](#)). [Li \(2010\)](#) further documents that the lack of legal investor protections, ownership structures, political career concerns, and other factors are the reasons that cause Chinese public firms' tunneling behaviors. [Jiang et al. \(2010\)](#) argue that China's stock market is highly conducive to tunneling for the following reasons: concentrated ownership, limited ownership benefits for blockholders from price appreciation, and the absence of mechanisms to deter the abuse of blockholders. Both ([Li, 2010](#)) and [Jiang et al. \(2010\)](#) note that the ownership structure and legal investor protections are the reasons for tunneling in Chinese public companies.

The salient features of the ownership structure of Chinese listed companies are dominant shareholders and pyramidal structures. Nearly all Chinese public companies have highly concentrated ownership structures, which strengthens the controlling shareholders' authority over public companies. Firms in pyramids have higher a propensity for tunneling, as [La Porta et al. \(1999\)](#) and [Bertrand et al. \(2002\)](#) argue. At the expense of the minority shareholder, it is profitable and less costly for controlling shareholders in Chinese listed companies to transfer resources from firms in the pyramidal chain. In this setting, the conflicts between controlling and minority shareholders are the central agency problems; and thus, controlling shareholders prefer to engage in tunneling.

Investor protection is another important factor influencing tunneling behaviors. Entrepreneurs are more likely to tunnel resources belonging to minority shareholders in countries with weaker investor protections ([Glaeser et al., 2001](#)). [Atanasov \(2005\)](#) argues that when the expropriating activities of large blockholders are not legally restricted, majority owners expect to extract value and gain private benefits of control from minority shareholders. Although China has rapid economic growth and has improved the institutional environment in recent years, the level of investor protections in China remains lower than in developed countries. In addition, minority shareholders in China have few channels to protect their own interests and deter the misconduct of controlling shareholders because of the limitations in civil law and the current regulatory systems. No surprisingly, Chinese public companies are conducive to tunneling in this setting.

However, controlling shareholders can either tunnel or prop up under different conditions ([La Porta et al., 2000](#); [Peng et al., 2011](#)). As [Friedman et al. \(2003\)](#) document, the controlling shareholders' choices of tunneling or propping hinge on the magnitude of an adverse shock and the private benefits of control in equilibrium. Controlling shareholders may choose to prop up; however, the reason for such propping is the sustained private benefits from the long-term tunneling ([Jiang et al., 2010](#)). Once controlling shareholders decide to tunnel, the depression of a firm's performance and stock price can barely be avoided. [Aharony et al. \(2010\)](#) demonstrate that related party sales are used as tools for earnings management in the pre-IPO period, which is motivated by the prospect of tunneling

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<sup>3</sup> See [Li, Wang, Cheung and Jiang \(2011\)](#). For an overview of China's Split Share Structure Reform.

opportunities. [Wang and Xiao \(2011\)](#) support the notion that large quantities of tunneling transactions decrease the controlling shareholders' willingness to adopt performance-based incentive payment schemes. [Tu et al. \(2013\)](#) argue that the politically connected acquirers' tunneling behaviors are related to lower post-privatization performance.

The empirical literature has proven the existence of value losses and underperformance after tunneling. When firm performance and stock price cannot be worse, controlling shareholders may find it valueless to hold a large stake of shares; thus, shares transfer occurs. As [Du et al. \(2013\)](#) demonstrate, controlling shareholders' tunneling behaviors are detrimental to firm value and stock prices, and when public companies are no longer attractive, controlling shareholders choose privatization by paying a low premium to minority shareholders. Thus, a positive relation between tunneling and fully privatized shares transfer is expected in this paper.

**Hypothesis 1.** Fully privatized firms conducting more severe tunneling are more likely to have fully privatized shares transfer occur.

The scholarly research on the positive effects of country-level shareholder protections has produced a large body of theoretical and empirical literature. Legal protections of shareholder interests have positive influences on corporate governance ([La Porta et al., 2000](#); [Klapper and Love, 2004](#)) and the size and extent of a country's capital markets ([La Porta et al., 1997](#)). Shareholder protection largely improves the efficiency of capital allocation and promotes firms' productive R&D investments ([Xiao, 2013](#)). [Fidrmuc et al. \(2013\)](#) support the notion that the incorporation of information into stock prices is improved by better investor protection; thus, fundamental firm values are reflected better in stock prices. [Huang et al. \(2013\)](#) document that increased cash holdings are associated with the quality of investor protection because stronger shareholder protections guarantee reduced cash misappropriations by managers. [Leuz et al. \(2003\)](#) find that earnings management is negatively related to minority shareholder rights and legal enforcement across 31 countries, indicating that private control benefits acquired by insiders are smaller in firms with stronger investor protection.

The existing empirical research composed of within-country studies also supports the positive effects of shareholder protection. For example, [Fung et al. \(2013\)](#) suggest that earnings management of H-shares are higher than that of local Hong Kong firms, indicating a positive roles of investor legal protection on financial reporting quality. [Agrawal \(2013\)](#) supports the ideas that the investor protection law (U.S. state blue sky laws) largely improves accounting performance and market valuations.

In China, shareholder protection laws and regulations for public companies are usually promulgated by the China securities regulatory commission (CSRC for short), the Shanghai and Shenzhen Stock Exchanges. Among all these shareholder protection laws and regulations in China, requirements regarding cumulative voting, network voting and attendance at the general meeting of the shareholders directly embody the protection of the legitimate rights and interests of minority shareholders.

Code of corporate governance for listed companies in China issued by the CSRC in 2002 states that listed companies with the percentage of controlling shareholder holdings larger than 30% need to adopt a cumulative voting system. The company law of the People's Republic of China (revised in 2005 and 2013) documents that the cumulative voting is allowed to be implemented for the election of directors and supervisors in general meetings of shareholders. The adoption of cumulative voting plays a positive role in mitigating majority shareholders' authority over the appointment of directors and supervisors. [Bhagat and Brickley \(1984\)](#) suggest that cumulative voting can, at least in certain cases, improve firm value. [Zhao and Brehm \(2011\)](#) argue that cumulative voting plays a positive role in easing the conflicts between directors and minority shareholders. [Chen et al. \(2015\)](#) find that cumulative voting adopters have a higher quality of governance and more tightened control.

In December 2004, the CSRC issued "Regulations on safeguarding public investors' interests". This regulation requires listed companies to adopt online voting for resolutions regarding the major rights and interests of shareholders at general meetings. Thereafter, both the Shanghai and Shenzhen Stock Exchanges introduced "Rules on the implementation of online voting for listed companies' general shareholder meetings", providing detailed and

specific rules for online voting. The adoptions of network voting ease the free rider problem encountered by minority shareholders, increase minority shareholders' involvement in corporate affairs, mitigate the abuse of controlling rights and thus protect the rights and interests of minority shareholders.

In 2002, the Code of corporate governance for listed companies in China issued by the CSRC requires that listed companies shall exert active efforts to increase the number of shareholders attending the general meetings of shareholders. The company law of the People's Republic of China (revised in 2005 and 2013) states that the approval of resolutions at a general meeting in companies limited by shares occurs when the shareholders present at the general meeting who hold more than half of the total voting rights adopt these resolutions. However, resolutions of the general meeting regarding the amendment of the articles of association, registered capital changes, merger, division, dissolution or change of corporate form shall be approved by shareholders who are present at the general meeting and represent two thirds or more of the total voting rights. The larger the number of shareholders who attend a general meeting is, the more representative the resolutions are. Minimum attendance at the general meeting helps to prevent the resolutions from being monopolized by majority shareholders.

In sum, cumulative voting, network voting and minimum attendance at the general meeting of shareholders moderately safeguard the legitimate rights and interests of minority shareholders. A reasonable assumption is that firms with a higher level of minority shareholder protection are more likely to have effective corporate governance and thus a lower occurrence of fully privatized shares transfer.

**Hypothesis 2.** Fully privatized firms with better protection of minority shareholders have lower probability of fully privatized shares transfer.

The literature on political connection provides ample theoretical and empirical research. However, no general consensus has yet been achieved with respect to the effects of political connection. The potential reasons for this mixed evidence remain unsettled to date. [He et al. \(2014\)](#) argue that the value of political connections in China's stock markets is subject to ownership, successor origin, prior performance, industry and region. [Wu et al. \(2012\)](#) believe that the effects of political connections on firm performance are conditioned by ownership structure. [Su et al. \(2014\)](#) provide evidence that politically connected firms have the ability to gain government resources and thus have positive signaling effects on cash dividends. However, [Su et al. \(2014\)](#) also find that political connection may play a negative role in cash dividend payments through the interaction with related-party transactions.

Regarding to the relation between political connections and privatization, certain influences of political connections on fully privatized shares transfer are expected in this paper. One reason for this conjecture is the popularity of political connections in the privatization process. As [Boubakri et al. \(2008\)](#) document, the political connection of newly privatized firm is a popular phenomenon throughout the world, regardless of different sectors and privatization methods.

On the one hand, the value of political connections is shown in a broad array of corporate affairs. Politically connected firms are more likely to gain significant regulatory benefits [Li and Zhou \(2015\)](#) and receive more government contracts ([Tahoun, 2014](#)). [Correia \(2014\)](#) also finds evidence that firms with political connections are prone to have a reduced probability of enforcement and penalties imposed by an enforcement action. In a low level corruption country, political networking provides firms with a valuable business strategy ([Amore and Bennedsen, 2013](#)). [Claessens et al. \(2008\)](#) note that access to bank financing is an important means through which contributing firms can obtain benefits from political connections in Brazil. In addition, politically connected firms play significant and positive roles in the cross section of future returns ([Cooper et al., 2010](#)). Thus, this paper conjectures that fully privatized firms with political connections are less likely to have fully privatized shares transfer occur because of the general conferring of economic benefits of political connections.

On the other hand, political connections provide a channel for government intervention, which becomes an obstacle for privatized firms to separate from state ownership. Moreover, a bureaucratic leadership style, which determines firms' long-term performance, is one of the main features of politically connected directors and senior

managers. [Fan et al. \(2007\)](#) suggest that partially privatized firms with politically connected CEOs are more likely to have poorer stock returns and firm performance, which is in accordance with the “grabbing hand” reported in [Shleifer and Vishny \(1998\)](#). [Tu et al. \(2013\)](#) document that political connections play a significant role in the privatization process; that is, politically connected acquirers have an ability to gain control of higher quality firms during full privatization and aid them in the subsequent tunneling of target resources. [Boubakri et al. \(2008\)](#) find that firms with larger residual government ownership are more likely to have politically tied boards, and politically connected firms have lower performance than their non-connected counterparts because of higher wage bills and lower efficiency. That is, political connections are used as a means for the government to retain its control over privatized firms, even in fully privatized firms. In this situation, the positive effects of privatization are more likely to work slower. Based on the above analysis, a positive relation between political connections and fully privatized shares transfer is predicted in this paper because of the potential harm underlying political connections.

In a nutshell, political connections have the above two opposite influences on fully privatized shares transfer. The expected empirical results of the impacts of political connections on fully privatized shares transfer are unclear. The regression results between these two variables will verify the real influences of political connections. This paper formulates the following hypotheses.

**Hypothesis 3a.** Fully privatized firms with more politically connected directors and senior managers are less likely to have fully privatized shares transfer occur.

**Hypothesis 3b.** Fully privatized firms with more politically connected directors and senior managers are more likely to have fully privatized shares transfer occur.

### 3. DATA AND METHODOLOGY

#### 3.1. The Sample

This paper obtained share transfer data from the RESSET Financial Research Database. According to the database, there are 1090 firms whose state-owned shares were transferred to third parties, including SOEs, private entities, and other parties during the 2001 to 2013 period. Of these 1090 firms, 230 firms are privatized firms. This paper excluded 30 firms whose state-owned share transfer agreements were ultimately cancelled. Not all state-owned shares can be transferred to private owners because this type of share transfer must be approved by the state or local government authorities in China. In addition, this paper removed firms listed on the SME Board and ChiNext, B share and financial listed companies, which have special characteristics that differ from those of A share companies listed on the Main Board. After these filters, this paper obtained 61 partially privatized firms and 120 fully privatized firms. The final sample includes these 120 fully privatized firms. Of the 120 fully privatized firms, there are 54 fully privatized shares transfer firms (FPST firms for short) and 66 non-fully privatized shares transfer firms (NFPST firms for short). FPST firms denote fully privatized firms whose largest shareholders (also the private shareholders at the same time) transfer their privatized shares to third parties after full privatization (please refer to Appendix A for detailed information regarding FPST firms). NFPST firms denote fully privatized firms which do not have fully privatized shares transfer occur. Table 1 reports the sample collection procedure. After excluding firms with missing information required for this study, the final sample consists of 994 firm-year observations for 120 fully privatized firms listed on the Shanghai and Shenzhen Stock Exchanges during the 2001-2013 period. Data for financial statements and corporate governance variables are obtained from the China Stock Market and Accounting Research (CSMAR) Database and the RESSET Financial Research Database.

**Table-1.** Sample selection procedure

<b>Test Sample (2001-2013)</b>	<b>Number of firms</b>
Firms whose state-owned shares were transferred to the third parties, including SOEs, private entities, etc.	1090
Firms whose state-owned shares were transferred to private entities	230
Less: Firms whose state-owned share transfer agreement were ultimately cancelled	(30)
Less: SME board, ChiNext, and B share listed companies	(11)
Less: Financial listed companies	(8)
Privatized firms	181
Less: Partially privatized firms	(61)
Fully privatized firms	120
Non-fully privatized shares transfer firms (NFPST firms for short)	(66)
Fully privatized shares transfer firms (FPST firms for short)	54

Note: FPST firms denote fully privatized firms whose largest shareholders (also the private shareholders at the same time) transfer their privatized shares to third parties after full privatization. NFPST firms denote fully privatized firms which do not have fully privatized shares transfer occur.

### 3.2. Measurement of Variables

#### 3.2.1. Dependent Variable

This paper uses *TRAN* as the proxy variable for fully privatized shares transfer. *TRAN* is a dummy variable that takes the value of one for FPST firms at the end of fiscal year  $t$ , and zero otherwise.

#### 3.2.2. Independent Variables

This paper adopts three categories of independent variables: tunneling, protection of minority shareholder interests, and politically connected senior executives (including directors).

In accordance with the previous literature (Jiang *et al.*, 2010; Ma *et al.*, 2013) this paper uses *TAPA* (other receivables divided by total assets at the end of fiscal year  $t$ ) as the proxy variable for tunneling. However, one year tunneling is insufficient because the largest shareholders of fully privatized firms may transfer their privatized shares to third parties several years after the incidence of full privatization. Appendix A provides summary statistics of *TCYEAR*, which denotes the time interval between full privatization and fully privatized shares transfer. The median (mean) *TCYEAR* is 4.000 (3.709). Based on the description statistics of *TCYEAR*, this paper further measures tunneling using three lagged other receivables variables. Specifically, *TAPFA* is defined as other receivables scaled by total assets at the end of fiscal year  $t-1$ ; *TAPSA* is the ratio of other receivables in year  $t-2$  to total assets in year  $t-2$ ; and *TAPTA* is measured by other receivables scaled by total assets at the end of fiscal year  $t-3$ .

Country-level measures have generally been used as proxy variables for investor protection (La Porta *et al.*, 2000; Djankov *et al.*, 2008; Goyal and Muckley, 2013) and protection of minority shareholder interests (La Porta *et al.*, 1997; La Porta *et al.*, 1998; Reese and Weisbach, 2002). This paper investigates the privatization process using Chinese listed companies; thus, country-level measures are not suitable. After accommodating China's special institutional environment, three proxies for protection of minority shareholder interests are used in this study: cumulative voting (*CUMVOTE*), network voting (*NETVOTE*) and attendance at the general meetings of the shareholders (*PSHOLDERH*). To be specific, *CUMVOTE* is an indicator variable that takes the value of one if firms adopt the procedure of cumulative voting for electing directors in year  $t$ , and zero otherwise. *NETVOTE* is a dummy variable that equals one if a firm provides an online voting platform for its shareholders when the general meetings of the shareholders are held in year  $t$ , and zero otherwise. *PSHOLDERH* is computed as *PSHOLDER* multiplied by a hundred, where *PSHOLDER* is the average number of shareholders attending general meetings divided by the total number of shareholders in year  $t$ . It is difficult for minority shareholders to have a voice in general shareholders meetings; thus, the average attending ratio of the general meeting is rather low (outlined in Table 3). Consequently, this paper uses *PSHOLDERH* as the proxy variable for the attendance at general meetings.

This paper focuses on two measures (*BDFGO*, *MTFGO*) to capture politically connected directors and managers. *BDFGO* is an indicator variable that takes the value of one if directors have political connections in the central or local government at the end of fiscal year  $t$  (including prior or current work experience), and zero otherwise. *MTFGO* is a dummy variable that equals one if senior managers have prior or current positions in the central or local government at the end of fiscal year  $t$ , and zero otherwise. The measurements of *BDFGO* and *MTFGO* are similar to the political connection variables in [Fan et al. \(2007\)](#); [Ding et al. \(2014\)](#). The differences lie in the coverage of political connections. This paper identifies all directors and senior managers who have political connections. [Fan et al. \(2007\)](#) discuss politically connected CEO and directors, whereas [Ding et al. \(2014\)](#) solely investigate the political connections of the board chair and the CEO. In addition, both [Fan et al. \(2007\)](#) and [Ding et al. \(2014\)](#) consider military experience when measuring political connections. This article does not include the military service experience when defining political connections of directors and senior managers because the military is different from the central or local government in China's political system and structure.

### 3.2.3. Control Variables

Based on the determinants of fully privatized share transfer, this paper uses the following firm level control variables at the end of fiscal year  $t$ : firm size (*ASSET*), capital expenditure (*WCAPITAL*), sales growth (*GROWTHSP*), firm age (*ESTBDT*), leverage ratio (*LEV*), dividend payout ratio (*DIVPAT*), administration expense (*ADMINEXP*), share ownership of the largest private shareholder (*LSSHARE*).

To be specific, *ASSET* is the natural logarithm of total assets. Large firms not only mean more resources and social capital, but also a complicated operation; thus, the expected relation between firm size and fully privatized shares transfer is ambiguous. *WCAPITAL* is computed as cash paid for buying fixed assets, intangible assets and other long-term assets divided by the sum of depreciation and amortization. A high value of *WCAPITAL* means that the cash spent on buying long-term assets is relatively higher than the wear or loss of long-term assets, which indicates that firms' capital expenditure is increasing. Considering the large amount of cash paid for long-term assets and the largest shareholder's intention of obtaining private control benefits, firms with a higher value of *WCAPITAL* are expected to have fully privatized shares transfer occur. *GROWTHSP* is a dummy variable that equals one if a firm's sales growth rate is in the highest quintile relative to its industry level, and zero otherwise. A rapidly growing firm may provide the largest private shareholder more opportunity to occupy funds in the form of other receivables and thus transfer its shares to third parties. However, the largest shareholder needs to make a trade-off between the private benefits of corporate control and corporate earnings belonging to all investors because of rapid growth. *LEV* is measured by the ratio of debt to total assets. It is more difficult for the largest private shareholder to transfer its privatized shares if firms have a higher leverage ratio. However, the leverage ratio also reflects a firm's financial strength, which means that the largest private shareholder may be more likely to transfer privatized shares to third parties because a firm's liquidity worsens. *ESTBDT* is the number of years since a firm was founded. Older firms are more prone to have more resources, including a rich operational experience and excellent staff, which are important to the largest private shareholders. *DIVPAT* is computed as the fraction of net income paid to shareholders in dividends before tax. On the one hand, dividends are used as a means to indicate firms' future profitability ([Kato et al., 2002](#)) according to the signaling model. On the other hand, a higher dividend payout ratio also benefits the controlling shareholder from the tunneling perspective ([Chen et al., 2009](#)). Firms with higher dividend payment are related to bright profitability in the future and benefits to the controlling shareholder at the same time; thus, a positive relationship between dividend payout ratio and fully privatized shares transfer is expected. *ADMINEXP* is defined as administration expense divided by operating revenue. Firms with a higher value of *ADMINEXP* are likely to have a higher ability in organizing and managing business operations. However, a higher *ADMINEXP* also means lower efficiency because firms incur great expense in managing business affairs. *LSSHARE* is the percentage of share ownership held by the largest private shareholder after full privatization. A

higher value of *LSSHARE* means not only more control rights of the largest private shareholder, but also more difficulty in transferring its privatized shares to third party entities.

### 3.3. Methodology

To investigate the determinants of fully privatized shares transfer, this paper formulates the conjectures within the following equation (1):

$$\begin{aligned} TRANS = & \eta + \alpha \times \text{Tunneling variables} + \beta \times \text{Minority shareholder protection variables} + \chi \times \text{Political connections} \\ & \text{variables} + \gamma \times \text{Control variables} + \sum_{K=1}^{12} \delta_K \times INDU + \sum_{S=1}^{12} \phi_S \times YEAR + \varepsilon \end{aligned} \quad (1)$$

The dataset of the dependent variable, independent variables and firm-specific control variables used in the above equation (1) is outlined in Table 2. This paper regresses the dependent variable (*TRANS*) on three groups of independent variables: tunneling variables, minority shareholder protection variables and political connection variables. *INDU*, *YEAR* are dummy variables representing the industry and fiscal year indicators respectively.  $\varepsilon$  is error term. All continuous variables are winsorized at one percent tail in order to mitigate the potential impacts of outliers.

**Table-2.** Definition of Variables

Characteristic	Proxy	Definition
Dependent variable		
Fully privatized shares transfer	<i>TRANS</i>	Indicator variable that equals 1 for FPST firms <sup>a</sup> in year <i>t</i> , and 0 otherwise
Independent variables		
Tunneling variables	<i>TAPA</i>	Other receivables divided by total assets in year <i>t</i>
	<i>TAPFA</i>	Other receivables divided by total assets in year <i>t-1</i>
	<i>TAPSA</i>	Other receivables divided by total assets in year <i>t-2</i>
	<i>TAPTA</i>	Other receivables divided by total assets in year <i>t-3</i>
Minority shareholder protection variables	<i>CUMVOTE</i>	Indicator variable that equals 1 if firms adopt the procedure of cumulative voting for electing directors in year <i>t</i> , and 0 otherwise
	<i>NETVOTE</i>	Indicator variable that equals 1 if a firm provides an online voting platform when the general meetings are held in year <i>t</i> , and 0 otherwise
	<i>PSHHOLDERH</i>	Multiply <i>PSHHOLDER</i> by 100, where <i>PSHHOLDER</i> is the average number of shareholders attending at the general meetings divided by the total number of shareholders in year <i>t</i>
Political connection variables	<i>BDFGO</i>	Indicator variable that equals 1 if directors have prior or current positions in the central or local government in year <i>t</i> , and 0 otherwise
	<i>MTFGO</i>	Indicator variable that equals 1 if senior managers have prior or current positions in the central or local government in year <i>t</i> , and 0 otherwise
Control variables		
Firm size	<i>ASSET</i>	The natural logarithm of total assets in year <i>t</i>
Capital expenditure	<i>WCAPITAL</i>	Cash paid for buying fixed assets, intangible assets and other long-term assets divided by the sum of depreciation and amortization in year <i>t</i>
Sales growth	<i>GROWTHSP</i>	Indicator variable that takes the value of 1 if sales growth rate is in the highest quintile relative to its industry level in year <i>t</i> , and 0 otherwise
Firm age	<i>ESTBDT</i>	The number of years between the year a firm was founded and the year <i>t</i>
Leverage ratio	<i>LEV</i>	The ratio of debt to total assets in year <i>t</i>
Dividend payout ratio	<i>DAVPAY</i>	The proportion of net income paid to shareholders in dividends before tax in year <i>t</i>
Administration expense	<i>ADMINEXP</i>	Administration expense divided by total operating revenue in year <i>t</i>
Share ownership of the largest private shareholder	<i>LSSHARE</i>	The percentage of share ownership by the largest private shareholder after full privatization in year <i>t</i>

<sup>a</sup> FPST firms (fully privatized shares transfer firms) denote fully privatized firms whose largest shareholders (also the private shareholders at the same time) transfer their privatized shares to third parties.

## 4. EMPIRICAL RESULTS

### 4.1. Univariate Analysis

Table 3 presents summary statistics on the characteristics of FPST firms and NFPST firms. The median tunneling variable in year  $t$  ( $TAPA$ ) for NFPST firms is significantly lower than that of FPST firms at the 5% level. The median values of one year lagged and three year lagged tunneling variables ( $TAPFA$ ,  $TAPTA$ ) are significantly smaller for NFPST firms at the 10% level. The mean values of four tunneling variables for NFPST firms are lower than those of FPST firms, but with insignificant differences. The above univariate results indicate that the tunneling effects in FPST firms are more severe than those in NFPST firms to some extent.

The means of two minority shareholder protection variables, cumulative voting ( $CUMVOTE$ ), and attendance at the general meetings of the shareholders ( $PSHOLDER$ ), are all significantly higher for NFPST firms, providing preliminary support for the negative relation between minority shareholder protection and fully privatized shares transfer. The average number of senior managers with political connections in NFPST firms are significantly higher than that in FPST firms. For the mean (median)  $NETVOTE$  and  $BDFGO$ , the differences between NFPST and FPST firms are insignificant.

The mean (median) firm size ( $ASSET$ ) in NFPST firms are significantly lower than those in FPST firms. As predicted, the average values of  $WCAPITAL$  and  $DAVPAY$  in FPST firms are significantly higher than those in NFPST firms at the 1% level. The average and median firm age ( $ESTBDT$ ) have significantly difference values in FPST and NFPST firms, providing the first piece of evidence that firms with older age are not likely to have fully privatized shares transfer occur. This paper does not find significant changes in sales growth ( $GROWTHSP$ ) between FPST and NFPST firms. Consistent with conjectures, the average leverage ratio and administration expenditure in NFPST firms are significantly higher than those in FPST firms. This paper also compares changes in  $LSSHARE$ . FPST and NFPST firms have a significantly different median value of  $LSSHARE$ ; however, the average values do not exhibit significant change.

**Table-3. Descriptive statistics**

	<i>TRANS=0</i> (NFPST firms)					<i>TRANS=1</i> (FPST firms)					T-statistics for difference in means	Z-statistics for difference in medians
	Mean	Median	Std. Div	p25	p75	Mean	Median	Std. Div	p25	p75		
<i>TAPA</i>	0.044	0.022	0.066	0.008	0.050	0.050	0.026	0.067	0.009	0.057	-1.375	-2.049**
<i>TAPFA</i>	0.046	0.023	0.066	0.008	0.057	0.053	0.027	0.068	0.010	0.064	-1.404	-1.907*
<i>TAPSA</i>	0.051	0.024	0.074	0.008	0.059	0.056	0.029	0.073	0.011	0.066	-0.896	-1.526
<i>TAPTA</i>	0.053	0.027	0.077	0.008	0.062	0.060	0.031	0.079	0.011	0.070	-1.227	-1.726*
<i>CUMVOTE</i>	0.072	0.000	0.259	0.000	0.000	0.041	0.000	0.200	0.000	0.000	2.152**	2.104**
<i>NETVOTE</i>	0.070	0.000	0.256	0.000	0.000	0.062	0.000	0.242	0.000	0.000	0.517	0.514
<i>PSHOLDERH</i>	0.060	0.023	0.109	0.011	0.058	0.046	0.021	0.085	0.009	0.044	2.285**	2.109**
<i>BDFGO</i>	0.309	0.000	0.462	0.000	1.000	0.355	0.000	0.479	0.000	1.000	-1.577	-1.580
<i>MTFGO</i>	0.098	0.000	0.298	0.000	0.000	0.135	0.000	0.342	0.000	0.000	-1.835*	-1.853*
<i>ASSET</i>	20.850	20.860	1.384	19.970	21.920	21.150	20.990	1.141	20.390	21.950	-3.822***	-3.222***
<i>WCAPITAL</i>	1.892	0.807	3.001	0.263	2.218	2.780	1.303	4.034	0.406	3.345	-3.956***	-4.595***
<i>GROWTHSP</i>	0.263	0.000	0.441	0.000	1.000	0.264	0.000	0.441	0.000	1.000	-0.032	-0.032
<i>ESTBDT</i>	15.070	15.000	4.470	12.000	18.000	14.350	14.000	4.396	11.000	18.000	2.619***	2.314**
<i>LEV</i>	0.756	0.581	0.920	0.447	0.704	0.624	0.565	0.448	0.490	0.699	3.028***	1.235
<i>DAVPAY</i>	0.073	0.000	0.170	0.000	0.000	0.116	0.000	0.212	0.000	0.164	-3.571***	-4.019***
<i>ADMINEXP</i>	0.292	0.078	0.791	0.046	0.153	0.137	0.079	0.315	0.047	0.123	4.275***	1.039
<i>LSSHARE</i>	0.216	0.183	0.179	0.068	0.290	0.221	0.236	0.161	0.089	0.295	-0.539	-2.125**

**Notes:** NFPST firms (non-fully privatized shares transfer firms) denote fully privatized firms which do not have fully privatized shares transfer occur. FPST firms (fully privatized shares transfer firms) denote fully privatized firms whose largest shareholders (also the private shareholders at the same time) transfer privatized shares to third parties. \*\*\*, \*\*, and \* denote significance at the 1%, 5% and 10% levels, respectively. Variable definition is reported in Table 2.

### 4.2. Multivariate Analysis

Based on Equation (1), this paper runs a set of multivariate regressions in Tables 4a, 4b and 4c to investigate the determinants of fully privatized shares transfer. Table 4a presents the impacts of tunneling on fully privatized shares transfer, and Table 4b reports the multivariate regression of fully privatized shares transfer on minority

shareholder protection and politically connected senior managers (including directors). Table 4c presents the determinants of fully privatized shares transfer in three groups of independent variables.

The first column of the results in Table 4a is the baseline regression, in which the independent variables are not included. Note that firms with increasing capital expenditure, lower firm age, higher dividend payout ratio, and lower administration expenditures are more likely to have fully privatized shares transfer occur. Columns (2) to (5) of the results in Table 4a report the regression results of the impacts of tunneling on fully privatized shares transfer. Based on the fact that the average time interval between full privatization and fully privatized shares transfer of sample firms from 2001 to 2013 is 3.709 years (please refer to Appendix A for detailed information), this paper investigates tunneling effects not only in the current year, but also during the three lagged years. Referring to columns (2) to (5) in Table 4a, all four tunneling variables are in the predicted direction; that is, *TAPA*, *TAPFA*, *TAPSA* and *TAPTA* are all positively and statistically significant with fully privatized shares transfer (*TRANS*) at the 1% level. These positive relations between tunneling and fully privatized shares transfer are associated with underperformance because of tunneling behaviors. The existing literature provides ample evidence of value losses and underperformance after tunneling (Jiang *et al.*, 2010). Considering the poor operating conditions, it is reasonable for controlling shareholders to find it valueless to hold a large stake of shares and thus transfer its shares to third parties. The profitability, total sales and time interest earned ratio is indeed lower in fully privatized firms which transfer more fully privatized shares to third parties (outlined in Appendix B).

**Table 4a.** The impacts of tunneling on fully privatized shares transfer

	(1)	(2)	(3)	(4)	(5)
	<i>TRANS</i>	<i>TRANS</i>	<i>TRANS</i>	<i>TRANS</i>	<i>TRANS</i>
<i>CONSTANT</i>	15.864	14.257	14.874	14.686	14.263
	(0.035)	(0.028)	(0.020)	(0.018)	(0.021)
<i>TAPA</i>		3.387***			
		(2.938)			
<i>TAPFA</i>			3.951***		
			(3.101)		
<i>TAPSA</i>				4.052***	
				(3.081)	
<i>TAPTA</i>					4.493***
					(3.233)
<i>ASSET</i>	-0.009	0.019	0.028	0.038	0.035
	(-0.131)	(0.264)	(0.369)	(0.480)	(0.417)
<i>WCAPITAL</i>	0.074***	0.074***	0.064***	0.062**	0.068**
	(3.531)	(3.259)	(2.755)	(2.534)	(2.516)
<i>GROWTHSP</i>	-0.127	-0.100	-0.0830	-0.112	-0.273
	(-0.835)	(-0.630)	(-0.479)	(-0.610)	(-1.364)
<i>ESTBDT</i>	-0.043*	-0.041*	-0.040*	-0.037	-0.030
	(-1.910)	(-1.778)	(-1.654)	(-1.423)	(-1.051)
<i>LEV</i>	-0.081	-0.105	-0.176	-0.286*	-0.279
	(-0.602)	(-0.747)	(-1.171)	(-1.809)	(-1.609)
<i>DAVPAY</i>	0.906**	0.969**	1.009**	0.880**	1.092**
	(2.436)	(2.509)	(2.446)	(2.089)	(2.468)
<i>ADMINEXP</i>	-0.529***	-0.565***	-0.537***	-0.406**	-0.298
	(-2.817)	(-2.808)	(-2.627)	(-2.051)	(-1.310)
<i>LSSHARE</i>	-0.541	-0.579	-0.705	-0.741	-0.804
	(-1.299)	(-1.351)	(-1.554)	(-1.534)	(-1.539)
<i>INDU</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>
<i>YEAR</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>
<i>Likelihood ratio <math>\chi^2</math></i>	79.490	79.230	77.120	65.830	59.970
<i>p-value</i>	0.000	0.000	0.000	0.000	0.000
<i>Pseudo R-square (%)</i>	5.780	6.240	6.810	6.640	7.070
<i>No. of observation</i>	994	916	817	716	612

**Notes:** The definitions of variables contained in Table 4a are outlined in Table 2. T statistics, reported beneath each estimate, are in parentheses. \*\*\*, \*\*, and \* denote significance at the 1%, 5% and 10% levels, respectively.

Columns (1) to (3) of the results in Table 4b present the influence of minority shareholder protection on fully privatized shares transfer. The three minority shareholder protection variables are all negatively related to fully privatized shares transfer; however, the network voting (*NETVOTE*) has insignificant influence on fully privatized shares transfer. The coefficients for cumulative voting (*CUMVOTE*) and attendance at the general meeting of the shareholders (*PSHOLDERH*) are significantly negative at the 5% and 1% levels, respectively. Cumulative voting plays a positive role in fair election of directors. The results indicate that firms that adopt cumulative voting have more effective governance mechanisms and thus have lower probability to transfer fully privatized shares. The negative relation between *PSHOLDERH* and *TRANS* documents that firms with lower attendance at the general meetings of the shareholders are largely controlled by the large shareholders and thus are more prone to have fully privatized shares transfer occur.

Columns (4) and (5) of the results in Table 4b report the impacts of politically connected directors and senior managers on fully privatized shares transfer. The potential coefficient on *BDFGO* is positive but insignificant, indicating that politically connected directors have no influence on fully privatized shares transfer. In column (5) of the results in Table 4b, senior managers having political connections (*MTFGO*) is positively and significantly associated with fully privatized shares transfer (*TRANS*) at the 10% level, indicating that politically connected senior managers have impacts on fully privatized shares transfer. On the one hand, firm performance will be improved because of politicians' rent extraction in listed companies (Shleifer and Vishny, 1994). Firms with politically connected senior executives are more likely to be bailed out by governments (Faccio, 2006) and have a lower cost of equity capital (Boubakri *et al.*, 2012). The potential benefits of political connections may be an obstacle to the largest shareholder transferring its fully privatized shares. On the other hand, political connections are usually associated with government intervention and bureaucratic leadership style, which are induction factors of fully privatized shares transfer. Because of these two opposite effects of political connections, the relation between political connection variables (*BDFGO*, *MTFGO*) and *TRANS* are moderately weaker in column (5) of the results in Table 4b.

Table 4c presents all three groups of determinants of fully privatized shares transfer: tunneling, minority shareholder protection, and political connections. When more than one independent variable is included in the equation, the regression results of Table 4c have a lower significance level because of high collinearity between independent variables. For example, in the first and last columns of the results in Table 4c, the current year tunneling variable (*TAPA*) solely remains positively and significantly related to fully privatized shares transfer. In sum, the regression results of Table 4c are broadly consistent with the results of Tables 4a and 4b, except for different significance levels. The overall evidence of Tables 4a, 4b and 4c indicates that firms with higher tunneling incentives (including the current year and the three previous years), weaker minority shareholder protection and more politically connected senior managers are more likely to have fully privatized shares transfer occur.

#### **4.3. Robustness Tests**

##### **4.3.1. The Impacts of Other Receivable Aging on Fully Privatized Shares Transfer**

In the above analysis, this paper uses other receivables scaled by assets as proxies for tunneling and documents that the largest shareholders of fully privatized firms are more likely to transfer their privatized shares to third parties for firms having more severe tunneling behaviors. To further investigate the influence of tunneling through other receivables, this paper classifies other receivables according to the length of time an invoice has been outstanding. Table 5 reports the regression results of the impacts of other receivable aging on fully privatized shares transfer in the current year.

**Table-4b.** The impacts of minority shareholder protection and political connections on fully privatized shares transfer

	(1)	(2)	(3)	(4)	(5)
	<b>TRANS</b>	<b>TRANS</b>	<b>TRANS</b>	<b>TRANS</b>	<b>TRANS</b>
<b>CONSTANT</b>	15.765	15.512	15.621	16.259	16.164
	(0.035)	(0.034)	(0.035)	(0.032)	(0.032)
<b>CUMVOTE</b>	-0.649** (-2.177)				
<b>NETVOTE</b>		-0.354 (-1.263)			
<b>PSHOLDERH</b>			-1.910*** (-2.623)		
<b>BDFGO</b>				0.174 (0.936)	
<b>MTFGO</b>					0.372* (1.646)
<b>ASSET</b>	-0.007 (-0.096)	0.007 (0.094)	0.003 (0.038)	-0.016 (-0.232)	-0.013 (-0.190)
<b>WCAPITAL</b>	0.076*** (3.590)	0.075*** (3.576)	0.076*** (3.587)	0.074*** (3.503)	0.073*** (3.449)
<b>GROWTHSP</b>	-0.152 (-0.989)	-0.127 (-0.832)	-0.137 (-0.894)	-0.125 (-0.822)	-0.136 (-0.893)
<b>ESTBDT</b>	-0.041* (-1.839)	-0.041* (-1.853)	-0.037* (-1.668)	-0.043* (-1.921)	-0.047** (-2.094)
<b>LEV</b>	-0.087 (-0.650)	-0.080 (-0.592)	-0.069 (-0.516)	-0.080 (-0.599)	-0.067 (-0.500)
<b>DAVPAY</b>	0.875** (2.346)	0.876** (2.347)	0.938** (2.487)	0.915** (2.456)	0.903** (2.419)
<b>ADMINEXP</b>	-0.538*** (-2.851)	-0.528*** (-2.808)	-0.545*** (-2.877)	-0.523*** (-2.797)	-0.540*** (-2.851)
<b>LSSHARE</b>	-0.469 (-1.117)	-0.567 (-1.358)	-0.498 (-1.188)	-0.554 (-1.328)	-0.572 (-1.368)
<b>INDU</b>	<i>Included</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>
<b>YEAR</b>	<i>Included</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>
<i>Likelihood ratio <math>\chi^2</math></i>	84.420	81.100	87.140	80.360	82.210
<i>p-value</i>	0.000	0.000	0.000	0.000	0.000
<i>Pseudo R-square (%)</i>	6.140	5.890	6.340	5.840	5.970
<i>No. of observation</i>	994	994	993	994	994

**Notes:** The definitions of variables contained in Table 4b are outlined in Table 2. T statistics, reported beneath each estimate, are in parentheses. \*\*\*, \*\*, and \* denote significance at the 1%, 5% and 10% levels, respectively.

The independent variables in Table 5 are six other receivable aging variables (*TAP01AH*, *TAP12AH*, *TAP23AH*, *TAP34AH*, *TAP45AH*, *TAP5AH*). Specifically, *TAP01AH* is calculated as other receivables with accounts aging within 1 year scaled by total assets and then multiplied by 100. *TAP12AH* is computed as other receivables with accounts aging between 1 to 2 years divided by total assets and then multiplied by 100. Similar to *TAP01AH* and *TAP12AH*, the measurements of *TAP23AH*, *TAP34AH*, *TAP45AH* and *TAP5AH* are calculated as other receivables with accounts aging in 2–3 years, in 3–4 years, in 4–5 years, and over 5 years scaled by total assets, respectively, and then multiplied by 100. The values of other receivables with accounts aging over 3 years (*TAP34AH*, *TAP45AH*, *TAP5AH*) are relatively smaller than the values of the other independent and control variables in Equation (1). All six other receivable aging variables above are multiplied by 100 to remain consistent. The smaller values of other receivables with accounts aging over 3 years indicate that the majority of the other receivables are the accounts aging within 3 years, which is also verified by the decreasing number of observations in the last four columns of the results in Table 5.

Table-4c. Determinants of fully privatized shares transfer

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<i>TRANS</i>							
<i>CONSTANT</i>	12.634	15.524	16.227	13.951	14.481	14.238	13.886	12.558
	(0.015)	(0.034)	(0.032)	(0.027)	(0.019)	(0.018)	(0.021)	(0.011)
<i>TAPA</i>	3.767*			3.261***				4.261**
	(1.849)			(2.804)				(2.066)
<i>TAPFA</i>	2.462				3.772***			2.190
	(1.143)				(2.930)			(1.002)
<i>TAPS4</i>	2.073					3.782***		2.051
	(1.064)					(2.842)		(1.039)
<i>TAPTA</i>	2.644						4.241***	2.520
	(1.564)						(2.999)	(1.470)
<i>CUMVOTE</i>		-0.670**		-0.663**	-0.658**	-0.616*	-0.477	-0.428
		(-2.239)		(-2.147)	(-2.032)	(-1.751)	(-1.291)	(-1.077)
<i>NETVOTE</i>		0.014		-0.129	-0.175	-0.291	-0.280	-0.313
		(0.043)		(-0.399)	(-0.533)	(-0.836)	(-0.778)	(-0.859)
<i>PSHHOLDERH</i>		-1.965**		-1.447*	-0.910	-0.971	-1.124	-1.630
		(-2.436)		(-1.709)	(-0.998)	(-0.959)	(-1.023)	(-1.428)
<i>BDFGO</i>			0.080	0.074	0.124	0.086	0.130	0.187
			(0.401)	(0.362)	(0.600)	(0.411)	(0.599)	(0.819)
<i>MTFGO</i>			0.340	0.377	0.415*	0.372	0.170	0.094
			(1.415)	(1.517)	(1.648)	(1.454)	(0.632)	(0.330)
<i>ASSET</i>	0.113	0.005	-0.016	0.0250	0.037	0.054	0.049	0.133
	(1.234)	(0.069)	(-0.231)	(0.337)	(0.477)	(0.648)	(0.552)	(1.403)
<i>WCAPITAL</i>	0.065**	0.077***	0.073***	0.075***	0.064***	0.062**	0.068**	0.067**
	(2.176)	(3.647)	(3.444)	(3.272)	(2.749)	(2.524)	(2.485)	(2.216)
<i>GROWTHSP</i>	-0.123	-0.162	-0.135	-0.147	-0.137	-0.145	-0.295	-0.133
	(-0.580)	(-1.050)	(-0.881)	(-0.914)	(-0.782)	(-0.781)	(-1.458)	(-0.617)
<i>ESTBDT</i>	-0.017	-0.036	-0.047**	-0.039*	-0.040	-0.036	-0.027	-0.011
	(-0.587)	(-1.590)	(-2.082)	(-1.691)	(-1.635)	(-1.355)	(-0.930)	(-0.362)
<i>LEV</i>	-0.338*	-0.076	-0.068	-0.088	-0.150	-0.263*	-0.263	-0.316*
	(-1.789)	(-0.563)	(-0.508)	(-0.624)	(-0.997)	(-1.656)	(-1.509)	(-1.659)
<i>DAVPAY</i>	1.040**	0.910**	0.908**	0.939**	0.942**	0.770*	0.989**	0.966**
	(2.297)	(2.391)	(2.429)	(2.376)	(2.233)	(1.790)	(2.192)	(2.084)
<i>ADMINEXP</i>	-0.297	-0.555***	-0.536***	-0.595***	-0.557***	-0.415**	-0.301	-0.301
	(-1.191)	(-2.912)	(-2.835)	(-2.900)	(-2.692)	(-2.074)	(-1.306)	(-1.191)
<i>LSSHARE</i>	-0.939*	-0.420	-0.575	-0.516	-0.662	-0.721	-0.789	-0.920*
	(-1.722)	(-0.994)	(-1.376)	(-1.186)	(-1.433)	(-1.469)	(-1.489)	(-1.660)
<i>INDU</i>	<i>Included</i>							
<i>YEAR</i>	<i>Included</i>							
<i>Likelihood ratio</i>	73.330	92.370	82.370	90.930	86.700	74.070	65.280	79.870
<i><math>\chi^2</math></i>								
<i>p-value</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Pseudo R-square (%)</i>	9.250	6.720	5.990	7.170	7.670	7.480	7.710	10.090
<i>No. of observation</i>	572	993	994	915	816	715	611	571

**Notes:** The definitions of variables contained in Table 4c are outlined in Table 2. T statistics, reported beneath each estimate, are in parentheses. \*\*\*, \*\*, and \* denote significance at the 1%, 5% and 10% levels, respectively.

In columns (1) to (3) of the results in Table 5, other receivables with accounts aging within 3 years (*TAP01AH*, *TAP12AH*, *TAP23AH*) are positively and insignificantly related to fully privatized shares transfer (*TRANS*). However, other receivables with accounts aging over 3 years have significant influences on fully privatized shares transfer. The estimated coefficients pertaining to *TAP34AH* and *TAP45AH* are positive and significant at the 1% level, whereas *TAP5AH* positively and significantly affects *TRANS* at the 5% level. When containing all tunneling variables of Equation (1) in column (7) of the results in Table 5, variables *TAP01AH* and *TAP5AH* influence fully privatized shares transfer (*TRANS*) positively and significantly at the levels of 10% and 5%, respectively. The

empirical results in Table 5 are consistent with the fact that tunneling behaviors of the largest shareholders of fully privatized firms are important induction factors of fully privatized shares transfer, particularly when large shareholders use other receivables with accounts aging within 1 year and over 3 years as a tunneling means to extract private benefits.

**Table-5.** The impacts of other receivable aging on fully privatized shares transfer in the current year

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	<i>TRANS</i>						
<i>CONSTANT</i>	14.914	15.578	14.204	20.480	16.660**	16.837	25.542
	(0.029)	(0.021)	(0.028)	(0.027)	(2.013)	(0.691)	(0.042)
<i>TAP01AH</i>	0.023						0.097*
	(1.151)						(1.700)
<i>TAP12AH</i>		0.034					-0.160
		(0.658)					(-0.844)
<i>TAP23AH</i>			0.089				0.137
			(1.117)				(0.703)
<i>TAP34AH</i>				0.559***			0.130
				(2.750)			(0.523)
<i>TAP45AH</i>					1.467***		0.850
					(2.779)		(1.297)
<i>TAP5AH</i>						0.948**	1.395**
						(2.494)	(2.386)
<i>ASSET</i>	-0.010	0.008	0.041	-0.272**	-0.356**	-0.340***	-0.408**
	(-0.135)	(0.106)	(0.528)	(-2.017)	(-2.504)	(-2.727)	(-2.318)
<i>WCAPITAL</i>	0.069***	0.064***	0.059**	0.090**	0.132***	0.074**	0.195***
	(2.890)	(2.722)	(2.384)	(2.556)	(3.324)	(2.014)	(3.785)
<i>GROWTHSP</i>	-0.107	-0.142	-0.095	-0.580**	-0.687**	-0.611**	-0.601*
	(-0.648)	(-0.850)	(-0.557)	(-2.032)	(-2.284)	(-2.360)	(-1.666)
<i>ESTBDT</i>	-0.038	-0.049**	-0.058**	-0.147***	-0.116***	-0.057	-0.110**
	(-1.569)	(-2.020)	(-2.335)	(-3.647)	(-2.689)	(-1.636)	(-2.053)
<i>LEV</i>	-0.121	-0.154	-0.130	0.872**	0.441	0.548	0.842
	(-0.843)	(-1.048)	(-0.825)	(2.473)	(1.202)	(1.598)	(1.061)
<i>DAVPAY</i>	0.923**	0.904**	0.901**	1.410**	1.883**	1.670***	1.528*
	(2.290)	(2.239)	(2.201)	(2.049)	(2.476)	(2.623)	(1.671)
<i>ADMINEXP</i>	-0.458**	-0.450**	-0.617**	-3.827***	-2.477***	-3.296***	-5.916***
	(-2.326)	(-2.150)	(-2.532)	(-3.511)	(-2.601)	(-3.330)	(-2.863)
<i>LSSHARE</i>	-0.189	-0.651	-0.652	-0.476	-0.762	-1.021	1.210
	(-0.408)	(-1.423)	(-1.387)	(-0.682)	(-1.008)	(-1.559)	(1.226)
<i>INDU</i>	<i>Included</i>						
<i>YEAR</i>	<i>Included</i>						
<i>Likelihood ratio <math>\chi^2</math></i>	65.270	70.940	77.820	73.400	67.370	72.510	90.390
<i>p-value</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<i>Pseudo R-square (%)</i>	5.660	6.120	6.900	14.270	14.310	11.970	24.660
<i>No. of observation</i>	832	836	814	382	353	438	278

**Notes:** The independent variables of Table 5 are other receivable aging variables (*TAP01AH*, *TAP12AH*, *TAP23AH*, *TAP34AH*, *TAP45AH*, *TAP5AH*) in the current year, which is discussed in the second paragraph of section 4.3.1. The definitions of other variables contained in Table 5 are outlined in Table 2. T statistics, reported beneath each estimate, are in parentheses. \*\*, \*, and \* denote significance at the 1%, 5% and 10% levels, respectively.

Table 5 presents the relation between other receivable aging and fully privatized shares transfer in the current year. Based on the average time interval between full privatization and fully privatized shares transfer of the sample firms (outlined in Appendix A and discussed in Section 4.2), this paper also investigates the impacts of other receivable aging variables during the previous three years on fully privatized shares transfer in untabulated tests. Except for a slight difference in significance level, the regression results of other receivable aging variables during the lagged three years are in accordance with the results of the current year reported in Table 5. Specifically, the estimated coefficients on the lagged other receivable aging variables with accounts aging in 3 – 4 years are

significantly positive at the 5% (lagged one year), 10% (lagged two years) and 10% (lagged three years) levels. The lagged other receivable aging variables with accounts aging in 4–5 years are positively related to fully privatized shares transfer, with the significance levels of 1% (lagged one year), 10% (lagged two years) and 5% (lagged three years). The lagged other receivable aging variables with accounts aging over 5 years are positively and significantly related to fully privatized shares transfer at the level of 5%, the same as in Table 5.

#### **4.3.2. Alternative Proxies for the Tunneling and Political Connection Variables**

This paper verifies the robustness of the regression results by using alternative proxies for the tunneling and political connection variables to mitigate the potential errors in the measurement of independent variables, as shown in Table 6.

On the one hand, this paper employs the wedge between cash flow and voting rights as an alternative measure of tunneling. The discrepancy between ownership and control can influence the incentives of the largest controlling shareholder to expropriate (Jensen and Meckling, 1976) and lead to a decline in firm values (Claessens *et al.*, 2002). In accordance with La Porta *et al.* (1999); Claessens *et al.* (2000); Faccio and Lang (2002) this paper calculates the cash flow rights and control rights of sample firms and then measures *SEPERRATIO* using the ratio of control to cash flow rights in the current year  $t$ . A higher value of *SEPERRATIO* means a higher separation of ownership and control and thus a higher probability of tunneling. According to the average time interval between full privatization and fully privatized shares transfer of the sample firms (outlined in Appendix A and discussed in Section 4.2), this paper employs *SEPERATIOF*, *SEPERATIOS*, and *SEPERATIOT* as proxies for lagged tunneling incentives variables, which are calculated by the ratio of control to cash flow rights in years  $t-1$ ,  $t-2$  and  $t-3$ , respectively. In columns (1) to (4) of the results in Table 6, the estimated coefficients on the four tunneling incentives variables (*SEPERRATIO*, *SEPERATIOF*, *SEPERATIOS*, and *SEPERATIOT*) are positively and significantly related to fully privatized shares transfer at the 1% level. In column (7) of the results in Table 6, *SEPERRATIO* is positively associated with fully privatized shares transfer at the 5% significance level, whereas the three lagged tunneling incentives variables (*SEPERATIOF*, *SEPERATIOS*, and *SEPERATIOT*) have insignificant and positive influence on fully privatized shares transfer. The evidence documented above indicates that firms with a higher ratio of control to cash flow rights have a higher probability of fully privatized shares transfer occurring, particularly in the current year.

On the other hand, this study conducts extensive checks by using alternative measures of political connections (*PBDFGO* and *PMTFGO*). *PBDFGO* is computed as the number of directors having an official background in the central or local government (including prior or current work experience) divided by the total number of directors in year  $t$ . *PMTFGO* is defined as the senior managers having prior or current positions in the central or local government scaled by the total number of senior managers in year  $t$ . In columns (5) to (7) of the results in Table 6, *PBDFGO* and *PMTFGO* have insignificant effects on fully privatized shares transfer, indicating the weak and complicated influences of politically connected directors and senior managers on fully privatized shares transfer.

**Table-6.** The determinants of fully privatized shares transfer: Alternative measures of the tunneling and political connection variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	<i>TRANS</i>						
<i>CONSTANT</i>	15.044	16.352	15.621	15.378	15.856	16.148	16.375
	(0.026)	(0.017)	(0.025)	(0.023)	(0.035)	(0.032)	(0.029)
<i>SEPERATIO</i>	0.291 ***						0.396 **
	(3.562)						(2.248)
<i>SEPERATIOF</i>		0.277 ***					0.146
		(3.178)					(0.676)
<i>SEPERATIOS</i>			0.255 ***				0.001
			(2.757)				(0.004)
<i>SEPERATIOT</i>				0.258 ***			0.009
				(2.591)			(0.055)
<i>CUMVOTE</i>							-0.453
							(-1.102)
<i>NETVOTE</i>							-0.884 **
							(-2.162)
<i>PSHHOLDERH</i>							0.603
							(0.439)
<i>PBDFGO</i>					-0.160		0.574
					(-0.292)		(0.788)
<i>PMTFGO</i>						1.114	1.008
						(1.260)	(0.856)
<i>ASSET</i>	-0.036	-0.045	-0.059	-0.053	-0.008	-0.010	-0.143
	(-0.492)	(-0.594)	(-0.737)	(-0.620)	(-0.115)	(-0.149)	(-1.509)
<i>WCAPITAL</i>	0.084 ***	0.077 ***	0.069 ***	0.069 ***	0.075 ***	0.073 ***	0.078 ***
	(3.777)	(3.319)	(2.847)	(2.581)	(3.539)	(3.474)	(2.764)
<i>GROWTHSP</i>	-0.069	-0.022	-0.076	-0.107	-0.126	-0.132	-0.130
	(-0.433)	(-0.130)	(-0.413)	(-0.534)	(-0.824)	(-0.864)	(-0.595)
<i>ESTBDT</i>	-0.047 **	-0.047 *	-0.046 *	-0.042	-0.042 *	-0.046 **	-0.059 *
	(-2.032)	(-1.925)	(-1.787)	(-1.487)	(-1.890)	(-2.038)	(-1.900)
<i>LEV</i>	-0.078	-0.100	-0.142	-0.115	-0.082	-0.069	-0.196
	(-0.537)	(-0.643)	(-0.859)	(-0.685)	(-0.607)	(-0.511)	(-0.987)
<i>DAVPAY</i>	0.721 *	0.658	0.686	0.916 **	0.910 **	0.912 **	0.740
	(1.800)	(1.541)	(1.565)	(2.034)	(2.445)	(2.444)	(1.513)
<i>ADMINEXP</i>	-0.282	-0.261	-0.210	-0.285	-0.530 ***	-0.538 ***	-0.150
	(-1.444)	(-1.320)	(-1.014)	(-0.938)	(-2.817)	(-2.845)	(-0.443)
<i>LSSHARE</i>	-0.191	-0.284	-0.255	-0.254	-0.536	-0.558	0.101
	(-0.442)	(-0.625)	(-0.526)	(-0.488)	(-1.284)	(-1.336)	(0.181)
<i>INDU</i>	<i>Included</i>						
<i>YEAR</i>	<i>Included</i>						
<i>Likelihood ratio <math>\chi^2</math></i>	71.550	63.060	54.110	46.770	79.570	81.080	66.630
<i>p-value</i>	0.000	0.000	0.000	0.002	0.000	0.000	0.000
<i>Pseudo R-square (%)</i>	5.780	5.670	5.560	5.610	5.780	5.890	8.840
<i>No. of observation</i>	895	804	704	603	994	994	545

Notes: *SEPERATIO*, *SEPERATIOF*, *SEPERATIOS*, and *SEPERATIOT* are calculated by the ratio of control to cash flow rights in years *t*, *t-1*, *t-2* and *t-3*, respectively. *PBDFGO* (*PMTFGO*) is computed as the number of directors (senior managers) having prior or current positions in the central or local government divided by the total number of directors (senior managers) in year *t*. The definitions of other variables contained in Table 6 are outlined in Table 2. T statistics, reported beneath each estimate, are in parentheses. \*\*\*, \*\*, and \* denote significance at the 1%, 5% and 10% levels, respectively.

## 5. CONCLUSION

Using Chinese fully privatized firms listed on the Shanghai and Shenzhen Stock Exchanges during the 2001 to 2013 period, this study investigates the determinants of fully privatized shares transfer from the perspectives of tunneling, minority shareholder protections, and political connections.

The regression results indicate positive relation between tunneling (measured by other receivables scaled by total assets) and fully privatized shares transfer. Specifically, fully privatized firms conducting more severe tunneling in the current year and in the previous three years are more likely to have fully privatized shares transfer

occur. Considering the length of time an invoice has been outstanding, this paper also seeks to further provide insights regarding the impacts of other receivable aging on fully privatized shares transfer. The empirical results confirm the conjectured relation between tunneling and fully privatized shares transfer. When the largest shareholders use other receivables over 3 years as a tunneling means to extract private benefits in the current and previous three years, there is a higher occurrence of fully privatized shares transfer. The results of the influence of tunneling on fully privatized shares transfer are robust after using the ratio of control to cash flow rights as an alternative measure of tunneling.

The results also suggest negative relation between minority shareholder protections and fully privatized shares transfer. Using cumulative voting, network voting and the attendance at the general meeting of shareholders as proxies for minority shareholder protections, this paper finds significant impacts of cumulative voting and the attendance at the general meeting on fully privatized shares transfer, whereas network voting does not show a significant influence. That is, firms adopting cumulative voting or having higher attendance at the general meeting of the shareholders are less likely to have fully privatized shares transfer occur. The findings lend support to the view that the positive effects of online voting on protecting minority shareholders are not yet evident in the Chinese stock markets.

Regarding political connections, politically connected directors and senior managers do not show uniformly strong and positive effects on fully privatized shares transfer. Firms with more politically connected senior managers have higher occurrences of fully privatized shares transfer. Directors with political connections do not show significant impacts on fully privatized shares transfer. However, the relation between politically connected senior managers and fully privatized shares transfer is no longer significant after using alternative measures of political connections. These ambiguous relation can be explained by the complicated influences of political connections on fully privatized shares transfer. On the one hand, it is more difficult for the largest shareholder of fully privatized firm to transfer its shares to third parties considering the potential benefits of political connections. On the other hand, the government intervention and bureaucratic leadership style associated with politically connected senior managers are induction factors of fully privatized shares transfer.

Overall, this study highlights an important aspect during the process of Chinese privatization: fully privatized shares transfer. The findings of this paper support the discussion on the important roles tunneling and minority shareholder protections play in fully privatized shares transfer. Specifically, firms with more severe tunneling behaviors and worse protections for minority shareholders are more likely to have fully privatized shares transfer occur.

Broad consensus has long been achieved regarding the inefficiency of state-owned enterprises. It is hoped that privatization is a general prescription for economic prosperity. However, the completion of privatization is not where the story ends because previously privatized shares may be transferred to third parties even after full privatization. Such types of privatized shares transfer may be associated with poor performance. Note that this paper does not deny fully privatized firms' improved performance. This study provides univariate evidence that fully privatized firms that transfer more fully privatized shares to third parties have worse performance, indicating that not all fully privatized firms can achieve better performance. By investigating the determinants of fully privatized shares transfer, this paper tends to emphasize the dynamics process of privatization and the importance of fully privatized shares transfer. A major implication of this paper is that more focus should be placed on the long and dynamic process of privatization, particularly the tunneling motives of introduced private owners.

There are two limitations to this paper. First, this paper discusses the reasons why the controlling shareholders of fully privatized firms decide to transfer their shares to third parties. However, this paper does not further investigate whether different third parties influence fully privatized shares transfer. The reason is that the majority of data regarding the backgrounds of third parties are missing in the current database. Second, this paper is an empirical attempt to investigate the determinants of fully privatized shares transfer; thus it provides little evidence

on the consequences of fully privatized shares transfer. Future studies may wish to consider the potential impacts of such transfer.

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## APPENDIX

### Appendix A

Fully privatized shares transfer is an important terminology in this paper; thus, additional information regarding fully privatized shares transfer firms (FPST firms for short) is provided in Table A.1. FPST firms denotes fully privatized firms whose largest shareholder (also the private shareholder at the same time) transfer its privatized shares to third parties. Table A.1 documents two variables regarding FPST firms: *TCYEAR* and *PTOTSHRT*. *TCYEAR* denotes the time interval between full privatization and the largest shareholders of fully privatized firms transfer their privatized shares to third parties. *PTOTSHRT* is defined as the total fraction of privatized shared transferred by the largest shareholders in fully privatized firms; that is, the number of shares transferred by the largest shareholders divided by the total number of shares in fully privatized firms.

In Panel A of Table A.1, the mean (median) *TCYEAR* is 3.709 (4.000), indicating that the average time interval between full privatization and fully privatized shares transfer is approximately four years. The average fraction of privatized shares transferred by the largest shareholders in fully privatized firms during the 2001 to 2013 period is 16.1%. In Panel B of Table A.1, 66.667% of FPST firms have a largest shareholder who transfers all the shares to third parties. Of FPST firms, 18.519% do not change controlling shareholders although fully privatized shares transfer occurs, whereas 14.814% of FPST firms change controlling owners after the shares transfer. The proportion of ownership change after fully privatized shares transfer shows that the majority of FPST firms have prior largest shareholders who no longer hold any shares in the firms. The extent of fully privatized shares transfer is not low.

**Table-A.1. Descriptive statistics for FPST firms**

<b>Panel A: Summary statistics</b>					
	<b>Mean</b>	<b>Median</b>	<b>Std. Div</b>	<b>p25</b>	<b>p75</b>
<i>TCYEAR</i>	3.709	4.000	2.255	2.000	5.000
<i>PTOTSHRT</i>	0.161	0.088	0.257	0.027	0.188
<b>Panel B: Ownership change after fully privatized shares transfer</b>					
Extent of fully privatized shares transfer			Number of firms	Proportion	
The largest shareholders of FPST firms transfer part of their shares to third parties, but control rights don't change after shares transfer			10	18.519%	
The largest shareholders of FPST firms transfer part of their shares to third parties, but lose control rights after shares transfer			8	14.814%	
The largest shareholders of FPST firms transfer all the shares to third parties			36	66.667%	

**Notes:** FPST firms (fully privatized shares transfer firms) denotes fully privatized firms whose largest shareholder (also the private shareholder at the same time) transfer its privatized shares to third parties.

### Appendix B

Table B.1 presents the univariate results for the sample of FPST firms. For each firm between 2001 and 2013, this paper sorts all firms based on *PTOTSHRT* and divides the sample into two groups: firms with a lower level of fully privatized shares transfer (firms with values of *PTOTSHRT* below the median *PTOTSHRT*) and firms with a higher level of fully privatized shares transfer (firms with values of *PTOTSHRT* greater than the median *PTOTSHRT*). *PTOTSHRT* is defined as the total fraction of privatized shares transferred by the largest shareholders in fully privatized firms. Table B.1 compares the profitability (*ROE*, *ROECUT*, *ROAEBIT*, *ROA*, *EBITTOR*, *EBIT*, *NETPRFCUT*), total sales (*TSALES*) and time interest earned ratio (*INTCVR*) for these two groups. *ROE* and *ROECUT* are proxies for return on equity. *ROE* is the ratio of net profit to shareholder's equity. *ROECUT* is computed as net profit after deducting non-recurring profit and loss (*NETPRFCUT*) divided by shareholder's equity. *ROAEBIT* and *ROA* are measures for return on assets. *ROAEBIT* is the ratio of earnings

before interest and taxes (*EBIT*) to average total assets. *ROA* is defined as net profit scaled by average total assets. *EBITTOR* is computed as *EBIT* divided by total sales (*TSALES*). *INTCVR* is time interest earned ratio.

In Table B.1, the median performance results are all significant lower in firms with a higher level of fully privatized shares transfer. The average return on assets (*ROA*), earnings before interest and taxes (*EBIT*), net profit after deducting non-recurring profit and loss (*NETPRFCUT*), total sales (*TSALES*) and time interest earned ratio (*INTCVR*) have significantly different values in these two firm groups, providing the first piece of evidence that these performance variables are significantly lower in firms with a higher level of fully privatized shares transfer. The two groups of firms have different average values of return on equity (*ROE* and *ROECUT*), *ROAEBIT* and *EBITTOR*, however, the average values do not have significant changes. In total, Table B.1 shows that the return on assets (*ROA*), earnings before interest and taxes (*EBIT*), net profit after deducting non-recurring profit and loss (*NETPRFCUT*), total sales (*TSALES*) and time interest earned ratio (*INTCVR*) are significantly lower in fully privatized firms that transfer more fully privatized shares to third parties.

**Table-B.1. Summary of performance results for FPST firms**

Variables	Firms with a lower level of fully privatized shares transfer		Firms with a higher level of fully privatized shares transfer		T-statistics for difference in means	Z-statistics for difference in medians
	Mean	Median	Mean	Median		
<i>ROE</i>	0.152	0.086	0.079	0.054	0.677	1.892*
<i>ROECUT</i>	-0.002	0.072	-0.019	0.042	0.131	1.901*
<i>ROAEBIT</i>	0.052	0.054	-0.013	0.036	1.547	2.134**
<i>ROA</i>	0.031	0.032	-0.025	0.024	1.761*	2.013**
<i>EBITTOR</i>	0.13	0.13	0.03	0.07	0.761	2.083**
<i>EBIT</i>	307.000	154.000	52.000	37.600	2.689***	4.216***
<i>NETPRFCUT</i>	172.00	96.00	8.666	6.782	2.361**	4.026***
<i>TSALES</i>	4370.00	1100.00	713.00	381.00	2.809***	3.965***
<i>INTCVR</i>	6.425	2.818	-4.087	1.742	2.413**	2.626***

Note: FPST firms (fully privatized shares transfer firms) denote fully privatized firms whose largest shareholders (also the private shareholders at the same time) transfer their privatized shares to third parties. *EBIT*, *NETPRFCUT* and *TSALES* are in million Yuan. \*\*\*, \*\*, and \* denote significance at the 1%, 5% and 10% levels, respectively.

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