

# **Ownership Structure, Control and Dividend Pay-outs: Evidence from PRC listed companies**

Ping Wang  
University of Birmingham

Peijie Wang  
University of Plymouth and Fudan University

**Abstract:** We study the effect of ownership and organization structures on dividend policy and dividend pay-out patterns, paying attention to the exclusive feature of industrial management and corporate control in organization of production in in the PRC. Specifically, our study focuses uniquely on the differences in dividend pay-out behavior among various state ultimate owners, investigating the impact of three types of state ownership on firms' dividend pay-out decisions for the first time. It has been found that the state enterprises supervised by lower level state agencies, as well as those affiliated to local governments are more likely to pay a dividend than the firms controlled by private ultimate owners. Central enterprises are no more likely to instigate a dividend pay-out as ultimate owners than the firms controlled by private ultimate owners.

**Key words:** ownership structure; state enterprise; central enterprise; non-negotiable share; ultimate owner

## 1. Introduction

We contrast and scrutinize different types of state ownership vis-à-vis private firms in the People's Republic of China (PRC) in this study, with regard to the effect of ownership and organization structures on dividend policy and dividend pay-out patterns. The study focuses on differentiating three types of state ownership uniquely, which is also a unique feature of industrial management and corporate control in organization of production in in the PRC, owing to both of its social and economic system and its size. Two major categories among the three types are state ownership and local state ownership. The former is associated with so called central enterprises, and the latter local state enterprises. As to be deliberated later, they bear rather different economic and financial interests, so as to pursue rather different firm objectives, which can be manifested by, among others, dividend policy. We pay specific attention to the omitted layers in state ownership structures, which have been commonly bundled together in the previous studies as though they were all the same. That is, only public entities on the one side and private entities on the other have the veered interests between them as two, and only two, types of ownership. In contrast, the present study cuts through the stratum in state ownership, exploiting the exceptional cases of the PRC.

Dividend policy is widely perceived as a means of mitigating the conflict between managers and shareholders, or between insiders and outsiders. Adoptions of different dividend policies are considered to be associated with pertinent shareholder structures. As such, various shareholder groups contest to influence policy formation and implementation to their benefit, by reining in managers' and controlling shareholders' excessive temptations. Dividend payments can be viewed as an effective means by shareholders to tackle the agency problem, when ownership is widely dispersed among small shareholders, and control is concentrated in the hands of managers, manifested by Jensen and Mackling (1976), Rozeff (1982) and Jensen (1986). This is the kind of Anglo-American corporate governance infrastructure. There is also an expanding collection of literature that

documents evidence for firms with concentrated shareholding where the majority of equity are held by one shareholder or a block of shareholders, such as in continental Europe and Asia. Cash dividends may be used under such circumstances, to some extent, by managers and controlling shareholders ‘to appease small, individual shareholders to commit their fund to the firm, and alleviates minority shareholders’ concern with wealth expropriation’, as La Porta *et al.* (2000) suggested and Faccio *et al.* (2001) deliberated on.

However dividend pay-out patterns in China may fit into neither of the above, due to its unique institutional setting. Higher dividends may not necessarily be used to tackle the agency problem; rather they can be a kind of wealth expropriation. During its transitional process from state owned enterprises to privatization, a key feature with this reform is its share segmentation system in which shares of listed firms were split into two categories, negotiable shares and non-negotiable shares.<sup>1</sup> While the former are held by individual and institutional investors, the latter are largely retained by the State through its various agencies. This unique share-split system, therefore, creates conflicts of interest between these two types of shareholders. Before the ownership reform started in 2005, the non-negotiable shares were not allowed to trade in the secondary market. Consequently, shareholders cannot realize capital gains in the market, and, therefore, they would prefer receiving cash dividends as their investment returns. With the objective of maximizing stock price, the negotiable shareholders, on the other hand, would prefer capital gains that are tax free under the current Chinese tax system (Chen *et al.*, 2009b; Wei and Xiao, 2009). As such, the share segmentation system complicates dividend decisions in that the existing theories in the literature may not have much explanatory power on dividend policy in China.

We therefore pay specific attention to the unique ownership and organization structures in organization of production and approaches to production in the PRC, which

---

<sup>1</sup> Legal person shares are among non-negotiable shares. There are corporate legal persons and associate (non-business organization) legal persons. Corporate legal persons can be the legal representative of a state firm with the corresponding assets being confined to the firm; corporate legal persons can as well be private firms. Associate legal persons are similarly divided. We gauge ultimate controlling shareholders as criteria.

become more complicated and perplexed following a series of reforms over the last three-four decades. Organization studies of ownership structure and their corporate policy implications are atypical despite the dissatisfaction of modern finance in tackling firm performance and behavioural issues. Gedajlovic et al. (2005) are among the first to investigate firm investment behavior and performance from an organization perspective, scrutinizing ownership structure in Japanese manufacturing industries. As we do in the present paper, their focus of study is dividend pay-out patterns under the influence of ownership structure. Erturk et al. (2010) have also examined corporate ownership matters in the context of organization studies, dealing with corporate control and ownership, among others.

Relatively scarce studies of dividend policy in China have dealt with the issues arising from the share segmentation of negotiables and non-negotiables. Omitted are the layers with non-negotiable shareholders, which further complicate dividend pay-out patterns in China. There are enterprises supervised by State-owned Assets Supervision and Administration Commission (SASAC) of the State Council, or central enterprises, amongst non-negotiables. There are also enterprises supervised by state-owned assets supervision and administration commissions of regional/local governments amongst non-negotiables. These two categories correspond to central state-run enterprises and regional/local state-run enterprises before the reform. Both are in the domain of state assets, with the latter being delegated to local authorities for supervision and administration. In addition to these, there are enterprises owned and run by regional/local governments or government departments. While managing public assets, the motivations and objectives of different non-negotiable shareholders may differ between them. Thus the revealed gap in the literature motivates the present study to investigate dividend pay-out decisions by various public enterprises in China, in contrast with private enterprises meanwhile. Remedying the limitations in prior research, our study contributes to filling the gap in the literature by

performing a comprehensive investigation of the relationships between dividend payments and ownership structure in China. Specifically, our work assesses the influence of different types of ultimate controlling shareholders on dividend pay-out decisions, following identifying and distinguishing the preferences, desires and incentives of various ultimate controlling shareholders.

The present study uniquely deals with the above stated three types of state ownership, which has been omitted in the literature. Ultimately, different types of state ownership represent different political and economic interests that may lead to different objectives when it comes to the listed firms they control. It is believed that firm objectives would have an effect on corporate behavior and decision making; while differences in firm objectives would lead to differences in corporate behavior and decision making, such as dividend pay-out decisions, on which the present paper focuses. In particular, we differentiate the roles of various types of state shares as ultimate controlling shareholders, in the formation and implementation of corporate dividend policy, in identifying patterns in dividend pay-outs in China's listed companies.

Our results can be summarized below. It has been found that the state enterprises supervised by lower level state agencies, as well as those affiliated to local governments are more likely to pay a dividend than the firms controlled by private ultimate owners. Central enterprises are no more likely to instigate a dividend pay-out as ultimate owners than the firms controlled by private ultimate owners. Similar patterns are found regarding the impact of ultimate owners' cash rights and voting rights on dividend pay-out decisions. To a certain extent, central enterprises behave more similarly to private firms than other types of government controlled firms. Our findings confirm our conception on state agents' behavior and, subsequently, the need to differentiate different types of state ownership. No expropriation is detected in all kinds of firms controlled by the state as ultimate controlling

shareholders via corporate pyramids, although weak evidence is found for firms owned by private investors.

All the control variables play their roles as expected, with most of the coefficients having the expected signs and being statistically significant. The estimated coefficients on size and profitability are positively associated with the decision to pay, while those on investment opportunities and leverage have negative association with the dividend decision. Free cash flow is found to exert a negative and significant effect on the decision to pay dividends, but it has no effect on the amount of dividend pay-outs. In addition, cash flow uncertainty has negative effect on the dividend decisions. Both lagged and leading seasoned equity offerings have no significant impact on the decision to pay a dividend and the amount of dividend payments. So, it is inferred that paying dividends is no longer a necessary condition to get permissions of rights issues.

The rest of paper proceeds as follows. Section 2 reviews relevant literature with a particular focus on the Chinese institutional settings. Section 3 describes the research design. The data and preliminary analysis are presented in Section 4. Section 5 reports the results and the concluding remarks are drawn in Section 6.

## **2. Dividends and corporate ownership structure in the PRC**

A range of theoretical explanations as to the cause of relevancy of corporate pay-out decisions have been developed and examined in the literature, especially following the publication of the dividend irrelevance hypothesis of Miller and Modigliani (1961). These theories cover tax clienteles, signalling, catering, life-cycle, agency costs or free cash flow hypothesis. Yet, none of these theories could fully answer the question that why firms pay dividends to their shareholders. Among them the agency theory appears to offer the most promising framework in that dividend payments are expected to mitigate the agency costs resulting from the separation of ownership and management of publicly listed firms. The

conflict between managers (agents) and shareholders (principals) arises when managers might conduct decisions that are costly to shareholders, such as consuming excessive perquisites or over-investing in managerially rewarding but unprofitable activities (Rozeff, 1982; Easterbrook, 1984; Jensen, 1986). Thus, dividend payments might serve to align the interests and mitigate the agency problems by reducing the discretionary funds available to managers.

However, in firms where there exist one or several large shareholders, the conflicts of interest between ownership and management may not be so significant. In recent years, more serious concerns lie in the controlling shareholders' expropriation through tunnelling the income and assets of the listed firm away from the minority shareholders (Shleifer and Vishny, 1997). There are a large number of empirical studies in the literature focusing on the interaction between ownership concentration and dividend policy in firms with publicly traded shares. A mixture of evidence has been documented in, for example, Gugler (2003) for Australia firms and Adjaoud and Ben-Amar (2010) for Canadian firms, among others. The issues are investigated in a European context by Gugler and Yurtoglu (2003), Goergen et al. (2005), Kinkki (2008), Von Eije, et al. (2008) and Stacescu (2006). La Porta et al. (2000) find that firms operating in countries with better legal protection pay high dividends; whereas in these countries, firms with high growth rates pay less dividend than their counterparts with lower growth rates. On the other hand, firms in countries where property is poorly protected tend to pay high levels of dividend regardless of investment opportunities. The results imply that minority shareholders exert pressure on firm management to "disgorge cash" in situations where they are likely to be exploited.

Large shareholders could exert pressure on a firm to adopt a dividend policy that reduces private consumption by firm management, yet they could also enforce a dividend policy that maximises their personal benefits at the expense of minority shareholders (Truong and Heaney, 2007). A substantial research in the literature has frequently reported

evidence of significant expropriation in emerging markets (Vladimir, 2005; Jiang et al., 2010; Faccio et al., 2010; Bae et al., 2002; Baek, 2006). On the other hand, the practice of controlling shareholders in East Asian markets has been acknowledged that swings between expropriating minority shareholders' wealth and propping up their listed firms (Cheung et al., 2006; Cheung et al., 2009; Friedman et al., 2003).

Although empirical studies suggest that dividends can be viewed by shareholders as a way of legal power to protect their interests of investments, cash dividends may not play an effect role in tackling the agency problems in China. With its legal protection of minority shareholders being among the weakest in the world, dividends might rather be used as a means of expropriation by controlling shareholders at the expense of minority shareholders, since stock ownership is highly concentrated by the government (Lee and Xiao, 2003; Chen et al., 2009a; Bradford, et al., 2013). During its transformation process from state owned enterprises to private firms, a significant feature with this reform is the share segmentation system in which the State retains a significant ownership stake in most of the listed firms. These shares were non-negotiable on the secondary market prior to the ownership reform started in 2005. This unique share-split system creates conflicts of interest between negotiable and non-negotiable shareholders. While the former are in favour of receiving capital gains that are tax free under the current Chinese tax system, the latter prefer cash dividends as their investment returns.

The literature on dividend pay-out behavior of the listed firms in China is limited. Lee and Xiao (2003) argue that firms may use cash dividends to expropriate profits out of companies for the benefit of controlling shareholders, although their data is based over a relatively short period from 1996 to 1999. Chen et al. (2009b) contend that ownership structure is one of the driving forces that influence dividend policies. They suggest that firms that are ultimately controlled by the government pay higher dividends than those that are controlled by non-government organisations. As such, they conclude that the dividends

in China are not purely used for signalling or distributing free cash flows. Rather, they might be used by controlling shareholders, who are usually the representatives of the government, as a means of transferring financial resources from the listed firm (Cheung et al., 2009). Yet, in a more recent study, Huang et al. (2011) document of no evidence of overpaid dividends in firms controlled by the government. They maintain that the conventional factors, such as profitability, remain the determinants of dividend policy. Although firms with powerful controlling shareholders tend to pay higher dividends, they argue that this can be viewed as a type of compensation to non-negotiable shareholders for bearing illiquidity risks.

Notably, within the context of listed firms in China, almost all studies use percentages of non-negotiable shares as a proxy for ownership concentration of the government, without exceptions in the above reviewed studies. This has some limitations. Firstly, following the “split-share structure” reform in 2005 that was stipulated by the China Securities Regulatory Commission (CSRC) with the aim of making listed firms fully floated in the secondary market, more than 99% of listed firms in China have completed this reform as at the end of 2012.<sup>2</sup> As a result of this reform, the separation between negotiable and non-negotiable shares has gradually phased out, and the strong preference for cash dividends by non-negotiable controlling shareholders as documented in the previous studies is expected to be disappearing eventually. Therefore, empirical findings suggesting that the State extracts disproportional benefits from corporate enterprises by paying higher dividends may not be held accordingly after the reform. Secondly, even among the State shares, there are various government agencies that ultimately control the firms. These agencies include the central government, local governments, SASAC of the State Council, and SASAC at regional/local level. They differ in terms of their preferences and desires, as

---

<sup>2</sup> With the completion of “split-share structure” reform, all common shares have the same right and obligations, and the corporate governance practice in Chinese market will follow civil law legal system adopted in developed markets.

well as their ability in influencing firms' financial decisions. In addition, these government agencies have different missions and, therefore, different incentives in controlling their firms (Chen et al., 2009a). Therefore using the proxy that is solely based on percentages of non-negotiable shares as ownership concentration of listed firms on Chinese stock market is inappropriate with the development of share reforms. It may disguise and obstruct our understanding of large shareholders' real influence on firms' financial decisions. We show how we address these issues in the next section.

### **3. Research design and hypotheses**

We have a number of considerations for research design in this study, given the unique state ownership structure in listed firms in China and its complexity. Firstly, instead of using percentage of non-negotiable shares as an aggregate proxy for ownership concentration held by the government, we trace the identities of ultimate controlling shareholders and distinguish their influence on dividends policy. In particular, state controlling shares are categorized into three groups, depending on the statuses of government entities and the ways in which government entities exert control. Different types and levels of government agencies may have different motivations with regards to their financial capacities and incentives. Their policies would influence or dictate firms' decision making mechanisms including dividend policy. Therefore it is vital to distinguish ultimate state owners in order to better reveal their influence on dividend pay-out decisions, which may also reflect their financial constraints that impact dividend policy.

Secondly, it is common in early studies to use the proportion of non-negotiable shares or shares held by controlling shareholders as the power of the State owners. However, as noted by La Porta et al. (2000), controlling shareholders typically have power over firms significantly in excess of their cash flow rights, primarily through the use of

pyramids and participation in management.<sup>3</sup> Under this circumstance, control rights might be more important than cash rights. In this study, we use both levels of control rights and ownership rights held by ultimate controlling shareholders as two additional proxies for corporate control to examine their relationships with dividend pay-outs. By including these two rights in the study, we can test and compare the significance of their roles to find out which one is the driving force behind dividend pay-out patterns in Chinese listed firms.

Thirdly, this study further explicitly explores whether there exists expropriation by investigating the relationship between dividend behavior and the structure of ownership and control. Using the discrepancy between the ownership rights and control rights, defined as ratio between these two rights, O/C ratio, as a measure of a firm's vulnerability to expropriation, Faccio et al. (2001) report significant expropriation of outside shareholders of corporations through extensive corporate pyramids.<sup>4</sup> In particular, they find that investors anticipate strongly the expropriation with lower O/C ratio of firms that are "tightly affiliated" to a business group via a chain of control that comprises at least 20 percent of the control rights. In the case of China where listed firms are highly concentrated on the State ownership, the average level of control rights is as high as 38 percent. Nevertheless, no studies in the literature so far have formally investigated whether the O/C ratio is a driver of dividend policy of listed firms in China.

---

<sup>3</sup> The share type only reflects the direct cash rights of the controller but ignore the indirect rights through the use of complicated pyramid structures, whereby firms are controlled through a chain of companies from the same owners. The divergence between control rights and cash flow rights of controlling shareholders is identified by La-Porta et al. (1999).

<sup>4</sup> Pyramidal ownership allows for a discrepancy between the ownership rights and control rights of the ultimate owner in firms at lower levels of the pyramidal. Ownership, or cash flow, rights of the ultimate owner are the product of the percentages of shares that the ultimate owner has along the control chain. On the other hand, control, or voting, rights are measured by the weakest link of control, representing the minimum of the percentages of shares that a specific party owners, directly or indirectly, in firms along the control chain. As noted by Faccio (2001), this O/C ratio can be used as a measure of the corporation's vulnerability to insider expropriation. The lower the O/C ratio, the long chain of corporate pyramids will be, which means more opportunities for expropriation since controlling shareholder will seek to keep control of corporate resources by paying low dividends. On the other hand, investors, perceiving the higher risk of expropriation within a firm with lower O/C ratio, would not be willing to supply capital unless higher dividends are paid.

With all these objectives in mind, in this study, we categorize Chinese listed firms into four types according to who their ultimate owners are. The first two categories consist of the enterprises supervised by SASAC, one is at the central level, or central enterprises, and another is at the local/regional level, designated by SASACSC and SASACRC, respectively. These two categories correspond to state-run central enterprises and state-run regional/local enterprises before the reform. The third category is made of the enterprises owned and run by governments and government departments other than supervised by state-owned assets supervision and administration commissions, including regional/local governments and ministries of the State Council; it is designated by Gov. The last type is private investors, including both private institutions and individuals, designated by Private. SASAC enterprises are located across the country and are large and nation-wide companies with substantial autonomy over their activities, including investing in listed firms. They are closely monitored by the State Council via SASAC and the Organization Department of the Central Committee of the Communist Party of China (CCCPC). On the other hand, Gov firms are directly controlled by regional/local governments and government departments. There are reasons for grouping the enterprises under the jurisdiction of the ministries of the State Council into the domain of the enterprises run by regional/local governments. Firstly, a minister of the central government possesses the same rank as a governor of a province, an autonomous region or a municipality. As one of the most bureaucratic countries in the world since ancient times, ranks are one of the most important determinants in society. Indeed, job swaps are not only common but also required between minister and governor. Many deputy ministers are promoted to become governors and vice versa. So, enterprises run by a ministry and by a province's government are expected to behave similarly. Secondly, although they are run by the ministries of the central government, they are much smaller. The size of SASAC enterprises can be reflected by the fact that each of SASAC enterprises was half a ministry before becoming a business enterprise. A typical SASAC

enterprise has dozens of subsidiaries, and each subsidiary has a comparable size of an enterprise run by a ministry or a province's government.

Most listed firms are usually spin-offs from state owned enterprises (SOEs) and they operate as profit-making entities. Dividends distributed by listed firms under their control flow through to SOE investors, and consequently, the motivations and abilities for SOEs to expropriate wealth lie between the State and private investors (Chen et al., 2009b). In addition, these SOEs affiliated to central or local governments may have complex objectives that reflect government references regarding socioeconomic considerations such as maintaining high employment levels (Cheung et al., 2009). The minority shareholders in these firms, in contrast, may also benefit from propping up of funds due to their financial capacity, although existing evidence suggests more tunnelling than propping up. Given the ambiguity, our three-category classification of state shares is expected to elucidate dividend pay-out patterns with regard to expropriation.

According to CSRC, starting from 2003, all listed firms are required to disclose their ultimate controlling shareholders and the percentage of voting rights under their control in the annual financial statements. In addition to this, firms are also required to report any changes in the ultimate controlling shareholders and the level of control rights immediately via stock exchanges. This unique dataset motivates the current study in that it allows us to identify the forces that shape the corporate dividends, and to shed new light on the behavior of ultimate control shareholders in corporate decisions. Note also that dividend policy involves two key decisions: a. to pay or not to pay dividends (propensity to pay); b. given the decision to pay, how much to pay (amount or magnitude of pay-outs). Based on the discussions above, we put forward the following testable hypotheses:

**H1a:** different types of ultimate owners have divergent influence on the propensity to cash dividends.

**H1b:** different types of ultimate owners have divergent influence on the amount of cash dividend pay-outs.

**H2a:** levels of control and cash rights held by ultimate owners have positive influence on the propensity to cash dividends.

**H2b:** levels of control and cash rights held by ultimate owners have positive influence on the amount of cash dividend pay-outs.

**H3a:** there exists expropriation via corporate pyramids by ultimate owners' influence on the decision to pay a dividend.

**H3b:** there exists expropriation via corporate pyramids by ultimate owners' influence on the amount of cash dividend pay-outs.

Heckman's two-step procedure is adopted in this study to test above hypotheses, which consists of a selection equation and an OLS equation shown as follows:

$$\Pr(Y_{it} > 0) = \alpha_0 + \alpha_1 M/A_{it} + \alpha_2 E/A_{it} + \alpha_3 size_{it} + a_4 L/A_{it} + \alpha_5 FCF/A_{it} + \alpha_6 SEO_{it-1} + a_7 SEO_{it+1} + a_8 shrhld_{it} + v_{it} \quad (1)$$

$$E(P_{it} | Z_{it} = 1) = \alpha_0 + \alpha_1 M/A_{it} + \alpha_2 E/A_{it} + \alpha_3 size_{it-1} + a_4 L/A_{it} + \alpha_5 FCF/A_{it} + \alpha_6 SEO_{it-1} + a_7 SEO_{it+1} + a_8 shrhld_{it} + a_9 \lambda_{it} + \mu_{it} \quad (2)$$

Equation (1) is a probit selection model that determines whether the variable of interest,  $Y_{it}$ , is observed, where  $Y_{it}$  is the amount of cash dividends paid in excess of the withholding tax by firm  $i$  in year  $t$ . Equation (2) is the OLS regression where  $P_{it}$  represents the cash pay-out ratio by firm  $i$  in year  $t$ , and  $Z_{it}$  is a binary variable with the value being equal to one if the cash dividend paid by firm  $i$  in year  $t$  is greater than the withholding tax, and zero otherwise. Both equations have the same explanatory variables, as it is reasonable to assume that factors influence the likelihood to pay would like affect amount of pay. Note that the additional variable  $\lambda_{it}$  in equation (2) is "Inverse Mills Ratio" generated in the

probit model in step one. It is then added to the OLS regression in step two to correct the possible bias due to omitted variables of censored data. Two error terms  $\mu_{it}$  and  $v_{it}$  are assumed to be jointly normally distributed with zero means and correlation  $\rho$ .

The ratio of cash dividends to earnings used as a proxy for measuring the magnitude of cash distribution by firms is consistent with the literature in dividend policy studies. The key dependent variable in both equations is  $shrhd_{it}$ , representing the shareholding concentration with which we have three alternative proxies. The first proxy used is identity dummies for each of ultimate owners. They are SASACSC, SASACRC, Gov and Private. The dummy equals one for the firm falls into that category and zero otherwise. The next two proxies are the levels of control rights (or voting rights) and ownership rights (or cash right) held by ultimate controlling shareholders. Previous studies, such as Huang et al. (2011), often use an aggregate variable as a proxy for state control, such as proportion of non-negotiable shares, or the shareholding of the largest shareholder for non-negotiable shares. However due to different motivations and incentives of dominant shareholders in shaping corporate decisions, it is expected that different ultimate shareholders may exercise their control rights differently over the firm in which they invest.

Our final proxy for the shareholding concentration is the O/C ratio between the ownership rights and control rights, which is used as a measure of the corporation's vulnerability to expropriation. The lower the O/C ratio is, the greater the incentive for ultimate owners to extract value from minority shareholders. This effect is especially manifest in the circumstance when the control links are above the 20 percent level, since this expropriation is less restrained by controlling shareholders' own cash flow stake (Faccio et al, 2001). Note that under such circumstance, higher dividends are expected to be paid to allay investors' concerns of expropriation as corporations compete capital in the market. Therefore, if ultimate controlling shareholders have incentive to expropriate

benefits from minority shareholders, we would expect a negative association between dividends and O/C ratio.

As far as other conventional explanatory variables are concerned, we take advice from Fama and French (2001), among other studies. Included in the estimation equation are size, profitability, growth opportunities, leverage, free cash flow, cash flow uncertainty, as well as seasoned equity offerings. Growth opportunities, as well as probability, are believed to be the primary determinant of dividend pay-outs according to the stylized facts. Leverage, free cash flow and cash flow uncertainty typically reflect firm characteristics that influence most corporate policies, dividend policy among others. Seasoned equity offerings, given their direction of fund flow being opposite to dividend pay-outs, are expected to impact dividend pay-outs.

Size represents for the size of the firm. We follow most of the studies in the literature to measure this variable as the logarithm of total assets. Size is expected to be positively associated with cash dividends since large firms are usually mature with easy access to financial markets and institutions and therefore are likely to pay more dividends than small ones. M/A is the ratio of market value of equity to book value of assets, which is used as a proxy for investment (growth) opportunities. Firms with higher market to book ratios are deemed to have more and greater investment opportunities. Thus they are more inclined to retain earnings in the firm and more reluctant to pay cash dividends. We use the ratio of earnings before interest to assets (E/A) as a measure for probability.<sup>5</sup> Previous studies have underpinned a positive connection between earnings and cash dividends. Thus the E/A variable is expected to have a positive impact on dividend pay-outs.

L/A stands for total liabilities scaled by total assets. This variable is used to control for leverage effect. It is noted that debt could be used as a substitute for dividends in mitigating agency problems, as both can reduce free cash flow. Debt can restrict the

---

<sup>5</sup> Following Huang et al. (2011), we have also used the ratio of common stock earnings to book equity (**EE/BE**) as an alternative measure for profitability. The result is quantitatively similar.

capacity for firms to pay dividends because higher debt burden undermines the probability and magnitude of cash dividends (Chen et al., 2005b; Eije and Megginson, 2008; Pattenden and Twite, 2008). Therefore it is expected that L/A is negatively associated with the likelihood to pay and the magnitude of pay-outs.

Following the agency theory, we include a measure for potential agency costs, **FCF**, which is defined as the ratio of free cash flow to total assets<sup>6</sup>. Free cash flow represents cash earnings net of capital expenditures and total dividends paid by the company, so it is the cash flow available to spend at managers' discretion. Following Huang, et al. (2011), this variable is expected to be negatively related to both likelihood to pay and magnitude of dividend pay-outs if dividends are used to reduce the agency problems between managers and shareholders.

SEO is a dummy variable that is equal to one if a firm has seasoned equity offerings (including rights issues) in year  $t$  and zero otherwise. We look at the effect of SEO the year before ( $t-1$ ) and after ( $t+1$ ). If  $SEO_{t-1}$  is positively significant, it supports what is claimed by Lee and Xiao (2007) that non-negotiable shareholders (controlling shareholders) give up rights subscriptions and receive cash dividends. If, on the other hand,  $SEO_{t+1}$  is positively significant, then it provides evidence that paying cash dividends is a necessary condition for future rights issues as required by CSRC in 2001.

We further include a cash flow uncertainty variable in this study to investigate its impact on dividend pay-outs. The importance of cash flow uncertainty for dividend policy has received little attention in the empirical literature, though there are a number of reasons suggesting that dividend pay-outs are negatively related to the degree of cash flow uncertainty.<sup>7</sup> We believe that this variable is important in determining the dividend pay-

---

<sup>6</sup> Alternatively, the free cash flow can be scaled by total equity. The variable is used in our robustness check.

<sup>7</sup> For example, firms with high cash-certainty may find that external financing is more costly than internal financing. They are, therefore, more reliant on internal financing and pay low dividends. In addition, dividends are known to be sticky and if firm's prospects are uncertain, managers tend to avoid paying high dividends unless they are confident in maintaining a high dividend level.

outs in listed firms in China where the market is highly volatile compared to Western markets in general. To control for the influence of cash flow uncertainty on dividend policy, following Chay and Suh (2009), we use the standard deviation of monthly stock returns, SRVOL, for each year as a proxy for cash flow uncertainty. Previous empirical evidence suggests that riskier firms are usually avoiding paying higher dividends to their shareholders (Holder et al., 1998; John, et al., 2011). It is expected that dividend pay-outs are negatively associated with stock volatility.

**{Table 1 about here}**

#### **4. Data and descriptive statistics**

The data on types of ultimate controlling shareholder, levels of ownership and control rights held by each type of owners, as well as seasoned equity offerings (including rights issues) were all extracted from the CSMAR Databases developed by GTA Information Technology Co. These data were then merged with all other financial and accounting data drawn from Worldscope database via Thomson One Banker Analytics. The initial sample includes all firms listed on Shanghai and Shenzhen Stock Exchanges (SSE and SZE), including both active and inactive firms, during the period 2003-2012. We have then discarded utilities (Standard Industrial Classification (SIC) code 4900-4949), and financial firms (SIC code 6000-6999). Our attention is focused on controlled firms, so firms with no controlling shareholders or with widely spread shareholding, and firms whose controlling shareholders are not traceable, are excluded. We additional drop those firms with missing ownership and voting data. An unbalanced panel of firm-level data is formed to avoid survivorship bias and to make full use of the firm-year observations. The final sample includes total of 13019 firm-year observations. All financial variables are winsorised at the top and bottom 2% of their respective distributions in order to reduce the potential impact

of outliers upon our empirical tests. Year dummies are included to capture possible year specific effects.

Table 1 shows the distributions of the sample firms owned by different ultimate owners. In 2003, 70 percent of the firms were affiliated to Gov, the local governments, while only 2 percent of the firms were directly under the control of central government and the firms held by private investors were low, comprising only around 15 percent of all listed firms. This pattern changed dramatically in the following year with firms held by local governments declined to around 31 percent. In 2005, the largest owner was SASACRC that controlled around 34% of listed firms. During this period firms controlled by both SASACSC and Private increased steadily. From 2007, the major owner was Private controlling more than a third of listed firms. The number shows that by the end of the sample period, there were still over half of listed firms affiliated to the State as a whole.

**{Table 2 about here}**

Table 2 shows the descriptive statistics on the pay-outs for the sample firms. We use the measure of cash dividend per share to divide our sample into payers and non-payers. Under the current Chinese tax system, all dividends, including stock dividends, are taxed at 20%, and listed firms need to withhold the dividend tax. In this study, we only focus on cash dividends. Following Huang et al. (2011), a firm is classified as dividend payer if its cash dividend per share is sufficient to cover the tax obligation by 0.01 yuan.

The characteristics of the firms affiliated to different ultimate controlling shareholder groups for payers and non-payers are shown in Table 3. The descriptive analysis is interesting as it reflects the distinctive features between firms in payer and non-payer groups that are mostly expected in literature. In all three State affiliated groups, non-payers have higher significant leverage than payers, and that in all ultimate owner groups

non-payers have significant higher growth perspectives than payers. The results suggest that debt could be a substitute for dividends, or debt restricts the capacity for firms to pay dividends, and the firms with higher growth opportunities are reluctant to pay dividends.

**{Table 3 about here}**

On the other hand, the average earnings are, in general, significantly lower for non-payers than payers, and the average firm size in the non-payer group are lower than that in the payer group, suggesting that non-payers are usually small and are less profitable. In addition, the firms in the payer group show, on average, significant higher free cash flow and lower uncertainty than non-payer, implying firms with higher free cash flow pay more dividends to reduce the agency costs of managers' discretion. Uncertainty measured by the stock return volatility is significantly higher in the non-payer group than the payer group, which is also reasonable as firms facing higher uncertainty would be hesitant to pay dividends. However there is no significant difference between payers and nonpayers in terms of the number of seasoned offerings issued (including rights issues) during the sample period, suggesting that the difference between payers and nonpayers in terms of the percentage of firms that raised capital via equity offerings is less considerable.

Both levels of ownership rights and control rights are higher in the payer group than in the non-payer group for all types of owners, so dividend policy is likely associated with concentrated shareholding. On the other hand, the mean value of O/C ratios, measured as the ratio of ownership over control that represents the separation between these two rights, is not significantly different between the two groups controlled by the central government and the private sector. Furthermore, if O/C ratios can be used as a measure of vulnerability of expropriation via corporate pyramids by ultimate controlling shareholders, then the statistics presented here imply that it is unlikely that firms are subject to

expropriate by state agencies, especially those under direct control of the central government.

## 5. Empirical results

Table 4 shows the results from the Heckman two-step estimation procedure, where Panel A presents the propensity to pay and Panel B the magnitude of pay-outs. There are four models that differ in the proxy used presenting the power of ultimate owners. In particular, included in model 1 are three dummy variables of SASACRC, SASACSC and Gov, indicating the identity for each of ultimate owners. The Private owner serves as the base category, thus the dummy for it is excluded, and the identity dummies included in the equations measure the effect of ultimate owners relative to this category. The interesting point shown in Panel A is that, while the coefficients on three State dummies have the positive sign, only those on SASACRC and Gov are statistically significant at 1 percent level, suggesting that the likelihood of paying dividends in these firms is influenced by their dominant controlling shareholders.<sup>8</sup> The finding presented here suggests that the State agencies at regional/local levels exercise their control over the firms they invest in to influence dividend pay-outs. On the contrary, no such evidence is found with the central enterprises supervised by the central agency of SASAC on behalf of the State Council. The findings reveal that different types of state ownership represent different political and economic interests that may lead to different objectives when it comes to the listed firms they control (Chen et al, 2009a). While Chen et al. (2009a) suggest so with regard to firm performance and efficiency, our findings further reinforce the importance to differentiate the roles of various state shares in the formation and implementation of dividend policy. Our results also suggest that previous studies lumping all types of State ownership together, i.e.

---

<sup>8</sup> When using SASACRC as the reference dummy and running the dividend equation, we find that coefficients on both State related dummies, SASACSC and Gov are negative, but not statistically significant at any significant level. However, the dummy on private is negatively significant about 1 percent level.

using non-negotiable shares as a dummy for government controlling, may obscure the real impact of the State represented by each of its agencies, and may lead to erroneous conclusions.<sup>9</sup>

The above results indicate that hypothesis H1a, different types of ultimate owners have divergent influence on the propensity to cash dividends, is accepted. In particular, private and state ultimate owners have divergent influence on the propensity to cash dividends, and the divergence even exists within state owned agencies. More specifically, the state enterprises supervised by regional/local SASACs and the state enterprises affiliated to regional/local governments are more likely to pay a dividend. However, the state enterprises supervised by the State Council's SASAC, or central enterprises, are less likely to pay a dividend. The most important finding, given our theoretical analysis of the current state ownership, is that central enterprises differ from the other two types of state enterprises in the likelihood of paying out dividends. It is worth to note that none of ultimate owners influence the magnitude of dividend pay-outs in Panel B. That is, the amount of pay-outs is not related to the types of ultimate owners when a firm decides to pay. Therefore, H1b is rejected. That is, different types of ultimate owners have no divergent influence on the amount of cash dividend pay-outs, be they state or private, or different state ownerships.

There are reasons behind the differences between state ultimate owners on the one hand, and the similarities between central enterprises and private enterprises on the other hand, in dividend pay-out decisions. Relative to the firms supervised and run by lower level state agencies and local governments, central enterprises maintain more stringent disciplines and pay more attention to their corporate social responsibility, due to the highly concentrated controlling in these enterprises by the State at the top level. To a given extent,

---

<sup>9</sup> After combining state affiliated firms together to form a single dummy as an identity for the state, as was usually done in the previous studies, and running the same model, we find that the estimated coefficient on the State dummy is highly significant and is positively associated with dividend pay-outs, consistent with previous empirical studies using percent of non-negotiable shares as a proxy for government controlled shares.

as the results reflect, certain stringent disciplines correspond to, or at least mimic, market forces in corporate policy and decision-making and corporate social responsibility. In this regard and with respect to the propensity to pay dividends, central enterprises behave more similarly to private firms than other types of government controlled firms. Moreover, growth and overseas expansions are major thrusts for central enterprises and private companies. Central enterprises possess larger capacity than the other two types of state enterprises, giving them an edge in international competition. Sinopec in the oil and petrochemical industry, and CSR Corporation and CNR Corporation in railway vehicle manufacturing are examples. Not only CSR and CNR compete with Siemens and General Electric, they also compete with each other domestically and overseas. Similarly, private companies, endowed with their entrepreneurial aptitudes, are among the most competitive in China. Names such as Huawei, Geely and Haier are well-known on the international stage. Even a non-core business, mobile phone sales of Huawei are numbered the third in the world. Geely is famous for its acquisitions of London Black Cabs; but more significantly, Geely purchased Volvo from Ford. Home appliances made by Haier are all visible everywhere. In contrast, the acquisition of Ssangyong by SAIC (Shanghai Automobile Industry Corporation), a state enterprise supervised by SASAC of Shanghai Municipal Government, was widely regarded as a failure. The mounting pressure on central enterprises to perform is another factor. Since the inception of SASAC in 2003, the number of central enterprises has been dropping from approximately 170 in early days to 113 in 2014. Without growth, a central enterprise can well be absorbed by another, instigated by market forces or more likely, SASAC. Gone with the enterprise are positions and perks enjoyed by top managers. Given these reasons, central enterprises, as well as private companies, are inclined to retain earnings for growth and expansion.

**{Table 4 about here}**

As far as the control variables are concerned, all estimated coefficients have expected signs and are highly significant at the 1 percent level, suggesting they are all decision variables that influence whether to pay or not to pay the dividends. In particular, the estimated coefficients on size and profitability are positively associated with the decision to pay, while those on investment opportunities and leverage have negative association with the dividend decision. These results are very much in line with the prediction and consistent with previous findings reported by Fama and French (2001), Adjaoud and Ben-Amar (2010), among others. In addition, these factors also influence the magnitude of dividend pay-outs in a similar way.

The estimated coefficient on free cash flow is negatively and significantly associated with the decision to pay dividends as shown in Panel A. This finding is consistent with the prediction and FCF explanation of dividends (Jensen 1986) that firms with a high level of free cash would incur high agency costs, and they therefore pay higher dividends to combat the agency problem to reduce agency costs. However, the FCF variable is insignificant in explaining the magnitude of dividend pay-outs, see Panel B. Our result is partially consistent with what is reported by Huang et al. (2011) who document that free cash flow does not explain the likelihood of paying dividends, nor the amount of dividend pay-outs. Nevertheless, they use an alternative variable named as perk and find it negatively influences both likelihood and magnitude of dividend pay-outs.<sup>10</sup>

Interestingly, we find that the estimated coefficient on uncertainty, measured by the volatility of stock returns, is negative and highly significant in explaining the likelihood of paying dividends, which is in line with the empirical findings of Chay and Suh (2006) and Adjaoud and Ben-Amar (2010). The negative association between uncertainty and dividends

---

<sup>10</sup> Following Huang, et al. (2011), we also included perk, which is defined as the other cash flow in association with sales and operations divided by total assets, in the dividend equation as a proxy for agency cost. However, this variable was statistically insignificant so we excluded it from further analysis.

suggest that riskier firms are less likely to offer higher dividends to their shareholders (Holder et al., 1998; John, et al., 2011). This factor appears to exert a notable effect on the pay-out policy in listed firms in China, which, however, seems to be overlooked in the previous studies. On the other hand, this variable is insignificant in explaining the magnitude of dividend pay-outs as shown in Panel B.

The estimated coefficients on both  $SEO_{t-1}$  and  $SEO_{t+1}$  are not statistically significant in supporting the likelihood of paying dividends, as well as the magnitude of dividend pay-outs, suggesting that dividend policy is not associated with whether firms have issued seasoned offerings (including rights issues), in the year before or after. Our results support neither the argument that controlling shareholders use SEO proceeds to pay dividends, nor the claim that firms pay dividends to facilitate future seasoned equity offerings in the market. The result is consistent with the study of Huang et al. (2011) in which they find that both coefficients on lagged and leading SEO are not significant in predicting the amount of dividend payments. The insignificant relation between dividend pay-outs and SEO implies that it is no longer a necessary condition to pay for dividends to get permissions of rights issues as previously suggested. Overall, our results are much in line with more recent studies, such as reported in Huang et al. (2011) in terms of conventional determinants of dividends.

In order to check whether ultimate owners exercise their control over the firms that they invest in, we replace the identity dummies used in model 1 with the level of ownership rights and the level of control rights held by ultimate owners as two alternative measures of the powers of ultimate controlling shareholders in deciding dividend payments. These two measures are with model 2 and model 3 respectively. In both models 2 and 3, the effects of all conventional determinants are, quantitatively, similar to what is reported in model 1 with the expected sign across two panels. The results in Panel A show that, while three coefficients related to all three State agencies show the positive sign, only those on

SASACRC and Gov are statistically significant at the 1% level, regardless of cash rights or voting rights. Therefore, hypothesis H2a, levels of control and cash rights held by ultimate owners have positive influence on the propensity to cash dividends, is accepted for two types of ultimate state owners below the central government level. That is, the State agencies at regional/local levels apply their cash rights and voting rights to influence dividend pay-out decisions in the firms they ultimately control. Once again, the SASAC supervised central enterprises, SASACSC, are not found to exercise their ultimate cash rights and voting rights to instigate dividend pay-outs in the firms they invest. This result reinforces what have been reported earlier in model 1. Moreover, the coefficient on Private is also insignificant in model 2 and model 3 for cash rights and voting rights. In other words, private owners, like central enterprises, do not apply their ultimate cash rights and voting rights to influence dividend pay-out decisions. The contrast between them reveals that central enterprises behave more similarly to private firms than other types of government controlled firms. With regard to the magnitude of dividend pay-outs, none of ultimate owners appear to exert their cash rights and voting rights, as reported in Panel B. So, H2b, levels of control and cash rights held by ultimate owners have positive influence on the amount of cash dividend pay-outs, is not accepted.

Finally, we explore whether higher propensities to pay dividends and higher levels of dividend pay-outs by firms, especially those linked to the State, amount to expropriation via corporate pyramids by ultimate controlling shareholders. Thus in model 4, we replace identity dummies in model 1 with O/C ratio variable that represents the discrepancy between ownership rights and control rights held by their respective controlling shareholders in the dividend decision equation. The result in Panel A indicates that there is no significant relationship between the propensity to pay dividends and the O/C ratio for firms ultimately controlled by any of the State agencies. In addition, the coefficient on the O/C ratio is negative for firms ultimately controlled by private investors, being marginally

significant at the 10 percent level. So, hypothesis H3a, there exists expropriation via corporate pyramids by ultimate owners' influence on the decision to pay a dividend, is rejected for firms controlled by the state, and is weakly accepted for firms affiliated to private investors. This suggests that dividends are paid by firms controlled by private investors to offset the concern of investors for greater exposure to expropriation with the wider discrepancy between ownership and control. This result may partially be attributed to the fact that cash rights and voting rights held by ultimate owners are not significantly separated in most of the firms. The O/C ratio is over 0.80 for firms under the state control and around 0.70 for firms affiliated to private investors, which means the motivation to expropriate minority shareholders is lessened. Prior research (e.g. Grossman and Hart, 1988; Harris and Raviv, 1988; Shleifer and Vishny, 1997; La Porta et al., 1999) also suggests that the conflicts of interest between large and small shareholders are more pronounced when control rights of ultimate owners exceed their cash rights. None of the coefficients on O/C ratio are statistically significant in Panel B. Therefore, H3b, there exists expropriation via corporate pyramids by ultimate owners' influence on the amount of cash dividend pay-outs, is completely rejected. In other words, there is no expropriation via corporate pyramids by all kinds of ultimate controlling shareholders in terms of the magnitude of dividend pay-outs.

Although narrow in scope in using O/C ratio as a measure of corporations' vulnerability to insider expropriation (Faccio et al., 2001), the results overwhelmingly indicate that investors, especially those who invest in firms affiliated to the state, are not concerned about the expropriation via corporate pyramids by government agencies with respect to dividend policy. Our results seem to be inconsistent with previous studies of Chen et al. (2009b) and Lv et al. (2012). Nevertheless, our results largely support what is reported by Berkman et al. (2009) who, using Chinese listed firms' loan guarantees to related parties as a proxy for expropriation, find that state non-corporate controlling block holders are less

likely to extract benefits. They conclude, however, private controllers may be more motivated to expropriate minority shareholders than the state because the monetary benefits from expropriation can be captured more easily and directly by private owners than by bureaucrats running a government entity. Similarly, Jiang et al. (2010) document that the tunnelling problem is more severe for small privately owned firms than for state-owned firms, although their evidence is based on inter-corporate loans.

In order to check whether our results are sensitive to the classic dividend ratio used so far in the study, we have also replaced it with alternative measures proposed in the literature. For example, several alternative variables to measure firms' cash dividend levels are experimented, including cash dividends / cash flows, where cash flows are defined as total cash from operations, net of noncash items from discontinued operation; cash dividends / earnings, where earnings are measured after taxes and interest but before extraordinary items; cash dividends / sales, where sales are net sales; cash dividends / market capitalisation, where market capitalization is the total market value of common and preferred stocks; cash dividends / stock price per share. The experiment of using diversified measures is meant to insulate the overall conclusions from the bias in individual measure that might arise from accounting practices and manipulations by ultimate owners (La Porta et al., 2000; Faccio et al., 2001). In addition, we have also used industrial adjusted pay-out levels as a measure of the dependent variable to control for the industry effect of paying dividends. The industry adjusted dividend is derived by subtracting the industry median of the pay-out ratio from each of firms' dividends within the same industry (Faccio et al., 2001). In almost all of cases, the significance and sign of the independent variables are all similar to what we have reported above.

## 6. Conclusions

In this paper, we have investigated the impact of shareholding structure on firms' dividend decisions. In particular, we contrast and scrutinize different types of state ownership vis-à-vis private firms in the PRC, leading to our focused study of differences in dividend pay-out behavior among various levels of ultimate state owners. Specific attention has been paid to the omitted layers in state ownership structures, which have been commonly bundled together in the previous studies. In contrast, the stratum in state ownership has been cut through in examining dividend pay-out patterns. Given a variety of state agencies that differ in terms of their preferences, desires, missions and objectives, a protocol division between state and private owners of firms in shareholding structure is misplaced. We therefore presume three kinds of state ownership. The central enterprises supervised by SASAC of the State Council maintain more stringent disciplines and pay more attention to corporate social responsibility, due to the highly concentrated controlling in these enterprises by the State at the top level. Certain stringent disciplines correspond to or mimic market forces in corporate policy and decision-making and corporate social responsibility. Central enterprises possess larger capacity than other state enterprises run by lower level state agencies and local governments, giving them an edge in international competition. Growth and overseas expansions are major thrusts for central enterprises, with the mounting pressure on central enterprises to perform. Without growth, a central enterprise can well be absorbed by another, instigated by market forces or SASAC.

It has been found that the state enterprises supervised by regional/local SASACs and the state enterprises affiliated to regional/local governments are more likely to pay a dividend than the firms controlled by private ultimate owners. However, central enterprises do not influence the dividend pay-out policy in the firms where they are ultimate owners. These firms are no more likely to pay a dividend than the firms controlled by private ultimate owners. Moreover, the State agencies at regional/local levels apply their cash

rights and voting rights to influence dividend pay-out decisions in the firms they ultimately control. But, the SASAC supervised central enterprises are not found to exercise their ultimate cash rights and voting rights to instigate dividend pay-outs in the firms they invest. In these regards and with respect to the likelihood of paying out dividends, central enterprises behave more similarly to private firms than other types of government controlled firms. As to the amount of dividend pay-outs, all types of ultimate owners, state or private, do not exert their influence as ultimate owners or through their cash rights and voting rights.

Further, no expropriation is detected in all kinds of State firms by ultimate controlling shareholders via corporate pyramids, in both terms of the decision to pay and the magnitude of dividend pay-outs. The results overwhelmingly indicate that investors, especially those who invest in firms affiliated to the state, are not concerned about the expropriation via corporate pyramids by government agencies. This is consistent with findings in the empirical literature that state non-corporate controlling block holders are less likely to extract benefits. On the contrary, private controllers may be more motivated to expropriate minority shareholders. It also backs the claim that the tunnelling problem is more severe for small privately owned firms than for state-owned firms.

All the control variables play their roles as expected, with most of the coefficients having the expected signs and being statistically significant. The estimated coefficients on size and profitability are positively associated with the decision to pay, while those on investment opportunities and leverage have negative association with the dividend decision. These results are very much in line with the prediction and consistent with the findings in the empirical literature. These factors also influence the magnitude of dividend pay-outs. Free cash flow is found to exert a negative and significant effect on the decision to pay dividends, but it has no effect on the amount of dividend pay-outs. Further, the uncertainty of cash flow is found to exert a notable effect on the dividend policy. On the other hand,

both lagged and leading seasoned equity offerings have no significant impact on the decision to pay a dividend and the amount of dividend payments. So, it is no longer a necessary condition to pay for dividends to get permissions of rights issues.

## References

- Adjaoud, F. and W. Ben-Amar, 2010, Corporate governance and dividend policy: shareholders' protection or expropriation? *Journal of Business Finance & Accounting* 37, 648-667
- Bae, K.-H., J.-K. Kang and J.-M. Kim, 2002, Tunneling or Value Added? Evidence from mergers by Korean business groups, *Journal of Finance* 57, 2695-2740.
- Baek, J.-S., J.-K. Kang and I. Lee, 2006, Business groups and tunneling: Evidence from private securities offerings by Korean Chaebols, *Journal of Finance* 61, 2415-2449.
- Berkman, H., R.A. Cole, and L.J. Fu, 2009, Expropriation through loan guarantees to related parties: Evidence from China, *Journal of Banking and Finance* 33, 1411-1456.
- Bradford, W.C., H. Chen and S. Zhu, 2013, Cash dividend policy, corporate pyramids, and ownership structure: Evidence from China, *International Review of Economics and Finance* 27, 445-467.
- Brav, A., J.R. Graham, C.R. Harvey and R. Michaely, 2005, Payout policy in the 21st century, *Journal of Financial Economics* 77, 483-527.
- Chay, J. B. and J. Suh, 2009, Payout policy and cash-flow uncertainty, *Journal of Financial Economics* 93, 88-107.
- Chen, G.M., M. Firth and L. Xu, 2009a, Does the type of ownership control matter? Evidence from China's listed companies, *Journal of Banking and Finance* 33, 171-181.
- Chen, D.H., M. Jian and M. Xu, 2009b, Dividends for tunneling in a regulated economy: The case of China, *Pacific-Basin Finance Journal* 17, 209-223.
- Cheung, Y.L., P.R. Rau, and A. Stouraitis, 2006, Tunneling, propping, and expropriation: evidence from connected party transactions in Hong Kong, *Journal of Financial Economics* 82, 343-386.
- Cheung, Y.-L., L. Jing, T. Lu, P.R. Rau, and A. Stouraitis, 2009, Tunneling and propping up: An analysis of related party transactions by Chinese listed companies, *Pacific-Basin Finance Journal* 17, 372-393.
- Denis, D.J. and I. Osobov, 2008, Why do firms pay dividends? International evidence on the determinants of dividend policy, *Journal of Financial Economics* 89, 62-82.
- Easterbrook, F. 1984, Two agency-cost explanations of dividends, *American Economic Review* 74, 650-59.
- Erturk, I., J. Froud, S. Johal, A. Leaver and K. Williams, 2010, Ownership matters: private equity and the political division of ownership, *Organization* 17, 543-561.

- Faccio, M., L.H.P. Lang, and L. Young, 2001, Dividends and expropriation, *American Economic Review* 91, 54-78.
- Fama, E.F., and K.R. French, 2001, Disappearing dividends: changing firm characteristics or lower propensity to pay? *Journal of Financial Economics* 60, 3-43.
- Friedman, E., S. Johnson and T. Mitton, 2003, Propping and tunnelling, *Journal of Comparative Economics* 31, 732-750.
- Gedajlovic, E., T. Yoshikawa and M. Hashimoto, 2005, Ownership structure, investment behaviour and firm performance in Japanese manufacturing industries, *Organization Studies* 26, 7-35.
- Goergen, M., L. Renneboog, D. Silva and L. Correia, 2005, When do German firms change their dividends? *Journal of Corporate Finance* 11, 375-399.
- Grossman, S.J. and O.D. Hart, 1988, One share-one vote and the market for corporate control, *Journal of Financial Economics* 20, 175-202.
- Gugler, K., 2003, Corporate governance, dividend payout policy and the interrelation between dividends, R&D, and capital investment, *Journal of Banking and Finance* 27, 1297-1321.
- Gugler, K., and B. Yurtoglu, 2003, Corporate governance and dividend payout policy in Germany, *European Economic Review* 47, 731-758.
- Harris, M. and A. Raviv, 1988, Corporate governance: Voting rights and majority rules, *Journal of Financial Economics* 20, 203-235
- Holder, M., F.W. Langrehr and J.L. Hexter, 1998, Dividend policy determinants: An investigation of the influences of stakeholder theory, *Financial Management* 27, 73-82.
- Huang, J., Y. Shen and Q. Sun, 2011, Nonnegotiable shares, controlling shareholders, and dividend payments in China, *Journal of Corporate Finance* 17, 122-133.
- Jensen, M.C., 1986, Agency cost of free cash flow, corporate finance and takeover, *American Economic Review* 76, 323-329.
- Jensen, M.C. and W. Meckling, 1976, Theory of the firm: Managerial behavior, agency costs and ownership structure, *Journal of Financial Economics* 3, 305-360.
- Jiang, G., C.M.C. Lee and H. Yue, 2010, Tunnelling through Intercorporate Loans: The China Experience, *Journal of Financial Economics* 98, 1-20.
- John, K., A. Knyazeva and D. Knyazeva, 2011, Does geography matter? Firm location and corporate payout policy, *Journal of Financial Economics* 101, 533-551
- Kinkki, S., 2008, Minority protection and dividend policy in Finland, *European Financial Management* 14, 470-502.

- La Porta, R., F. Lopez-de-Silanes and A. Shleifer, 1999, Corporate ownership around the world, *Journal of Finance* 54, 471–517.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny, 2000, Agency problems and dividend policies around the world, *Journal of Finance* 55, 1–33.
- Lee, C.J. and X. Xiao, 2003, Cash dividend and large shareholder expropriation in China, *European Financial Management Association Annual Meeting*, Finland.
- Lin, Y.H., J.R. Chiou and Y.R. Chen, 2010, Ownership structure and dividend preference: Evidence from China's privatized state-owned enterprises, *Emerging Markets Finance and Trade*, 46, 56–74.
- Liu, Q., G. Tian, 2012. Controlling shareholder, expropriations and firm's leverage decision: Evidence from Chinese non-tradable share reform, *Journal of Corporate Finance* 18, 782–803.
- Lv, Huaili, W. Li and S. Gao, 2012, Dividend tunneling and joint expropriation: empirical evidence from China's capital market, *European Journal of Finance* 18, 369–392.
- Modigliani, F. and M. Miller, 1961, Dividend policy, growth and the valuation of shares, *Journal of Business* 34, 411–33.
- Rozeff, M.S., 1982, Growth, beta and agency costs as determinants of dividend payout ratio. *Journal of Financial Research* 5, 249–259.
- Shleifer, A. and R.W. Vishny, 1997, A survey of corporate governance, *Journal of Finance* 52, 737–783.
- Stacescu, B., 2006, Dividend policy in Switzerland, *Financial Markets and Portfolio Management* 20, 153–183.
- Truong, T. and R. Heaney, 2007, Largest shareholder and dividend policy around the world, *Quarterly Review of Economics and Finance* 47, 667–687.
- Vladimir, A., 2005, How much value can blockholders tunnel? Evidence from the Bulgarian mass privatization auctions, *Journal of Financial Economics* 76, 191–234.
- Von Eije, H. and W. Megginson, 2008, Dividends and share repurchases in the European Union, *Journal of Financial Economics* 89, 347–374.
- Wang, J., 2010, A comparison of shareholder identity and governance mechanisms in the monitoring of listed companies in China, *China Economic Review* 21, 24–37.
- Wei, G., and J.Z. Xiao, 2009, Equity ownership segregation, shareholder preferences, and dividend policy in China, *British Accounting Review* 41, 169–183.

**Table 1.** Variable description

Variable	Measurement	Expected sign
	<b>Dependent variable</b>	
Dividend payout	cash dividends scaled by net income	
	<b>Dummy of ultimate controlling shareholders</b>	
SASACRC	Equal to 1 if ultimate controlling shareholders are the state asset management bureaus, 0 otherwise	+/-
SASACSC	Equal to 1 if ultimate controlling shareholders are SOEs affiliated to the central government, 0 otherwise	+/-
Gov	Equal to 1 if ultimate controlling shareholders are SOEs affiliated to the local government, 0 otherwise	+/-
Private	Equal to 1 if ultimate controlling shareholders are Individual investors and institutions, 0 otherwise	+/-
	<b>Power of ultimate controlling shareholders</b>	
Control rights	Voting percentage held by ultimate controlling shareholders	+/-
Ownership rights	Cash flow percentage held by ultimate controlling shareholders	+/-
O/C ratio	Ratio of ownership rights over control rights	-
	<b>Control variables</b>	
Size	Logarithm of total assets	+
M/A	Market value of equity scaled by total assets	-
E/A	Earnings before interest scaled by total assets	+
L/A	Total liabilities scaled by total assets	-
FCF	Free cash flow scaled by total assets	+
SEO	Equal to 1 if firm has seasoned equity offerings and rights issues during the year, and 0 otherwise.	+
SRVOL	Average standard deviation of monthly stock market returns	-

**Table 2.** Sample firms owned by different ultimate controlling shareholders (in percentage)

	SASACRC	SASACSC	Gov	Private
<b>2003</b>	11.84	2.43	70.24	15.49
<b>2004</b>	33.02	10.37	31.21	25.40
<b>2005</b>	34.74	11.24	27.06	26.97
<b>2006</b>	33.80	12.48	21.84	31.89
<b>2007</b>	32.19	12.64	19.08	36.09
<b>2008</b>	31.38	13.22	17.71	37.69
<b>2009</b>	21.82	9.50	9.50	59.18
<b>2010</b>	26.93	13.62	13.37	46.09
<b>2011</b>	26.37	13.50	12.99	47.13
<b>2012</b>	27.28	14.02	11.66	47.04

**Table 3.** Mean value of firm characteristics for firms affiliated to different ultimate owner groups between payers and nonpayers

Variable	Nonpayers	payers	Difference	t-statistics
<b>SASACRC</b>				
Payout		0.435		
L/A	0.542	0.487	0.055	4.478***
M/A	1.733	1.434	0.299	5.477***
E/A	0.032	0.066	-0.033	-9.951***
SIZE	7.864	8.265	-0.401	-5.686***
FCF	0.041	0.073	-0.032	-9.954***
SRVOL	0.134	0.107	0.027	9.533***
SEO	0.038	0.041	-0.003	-0.274
Cash rights	32.346	38.544	-6.198	-5.711***
Voting rights	36.779	42.657	-5.878	-5.912***
O/C ratio	0.875	0.899	-0.023	-1.734*
<b>SASACSC</b>				
Payout		0.374		
L/A	0.600	0.503	0.097	5.112***
M/A	1.705	1.497	0.208	2.584***
E/A	0.004	0.042	-0.038	-7.982***
SIZE	8.286	8.675	-0.389	-3.732***
FCF	0.039	0.067	-0.028	-6.023***
SRVOL	0.141	0.115	0.027	5.902***
SEO	0.039	0.057	-0.018	-0.911
Cash rights	39.828	43.449	-3.621	-2.098**
Voting rights	43.758	48.555	-4.797	-3.265***
O/C ratio	0.886	0.877	0.009	0.449
<b>Gov</b>				
Payout		0.424		
L/A	0.543	0.444	0.098	6.946***
M/A	1.839	1.396	0.062	7.153***
E/A	0.007	0.056	-0.049	-13.185***
SIZE	7.591	7.722	-0.131	-1.605
FCF	0.040	0.075	-0.035	-9.407***
SRVOL	0.125	0.095	0.030	9.274***
SEO	0.027	0.031	-0.004	-0.329
Cash rights	31.606	40.046	-8.441	-5.122***
Voting rights	37.852	44.234	-6.382	-4.330***
O/C ratio	0.835	0.881	-0.046	-2.365***
<b>Private</b>				
Payout		0.444		
L/A	0.400	0.420	-0.021	-1.588
M/A	2.369	1.754	0.615	9.208***
E/A	0.028	0.049	-0.021	-6.556***
SIZE	7.097	7.653	-0.556	-9.603***
FCF	0.059	0.068	-0.009	-2.981***
SRVOL	0.130	0.112	0.017	6.520***
SEO	0.031	0.052	-0.021	-1.621
Cash rights	24.291	28.191	-3.900	-3.870***

Voting rights	32.255	36.497	-4.242	-4.483***
O/C ratio	0.729	0.750	-0.021	-1.255
<b>Overall</b>				
Payout		0.429		
L/A	0.500	0.457	0.043	6.214***
M/A	1.954	1.528	0.425	12.990***
E/A	0.024	0.052	-0.028	-14.662***
SIZE	7.504	7.987	-0.483	-12.410***
FCF	0.052	0.072	-0.020	-11.119***
SRVOL	0.131	0.106	0.026	16.617***
SEO	0.029	0.043	-0.013	-2.052**
Cash rights	30.584	36.034	-5.450	-8.172***
Voting rights	36.511	41.718	-5.207	-8.766***
O/C ratio	0.819	0.841	-0.022	-2.483***

Note: \*\*\* Denotes 1% significant level. \*\* Denotes 5% significant level. \*Denotes 10% significant level.

Size is measured as the logarithm of total assets. The ratio of market value of equity to book value of assets (M/A) is defined as growth opportunities. The ratio of earnings before interest to total assets (E/A) is included as a measure for probability. L/A stands for total liabilities scaled by total assets. FCF is defined as the ratio of free cash flow scaled by total assets. SEO is a dummy variable that is equal to one if a firm has seasoned equity offerings (including rights issues) in year t and zero otherwise. The standard deviation of monthly stock returns, SRVOL, calculated from each year is used as a proxy for cash flow uncertainty. O/C represents the ratio between ownership rights and control rights.

**Table 4.** Impact of ultimate controlling shareholders on dividend policy

	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
<b>Panel A: Propensity to pay</b>				<b>Panel B: Magnitude to pay</b>				
SASACRC	0.8335*** (2.66)				-0.0462 (-0.57)			
SASACSC	0.5474 (1.48)				-0.0406 (-0.48)			
Gov	1.0003*** (2.76)				-0.1009 (-1.15)			
Cash rights		0.0187*** (2.80)				0.0005 (0.51)		
* SASACRC								
Cash rights		0.0056 (0.87)				0.0005 (0.52)		
* SASACSC								
Cash rights		0.0191*** (2.44)				-0.0004 (-0.38)		
*Gov								
Cash rights		0.0018 (0.14)				-0.0015 (-0.50)		
*Private								
Voting rights			0.0231*** (3.18)				0.0002 (0.21)	
* SASACRC								
Voting rights			0.0099 (1.48)				0.0004 (0.40)	
* SASACSC								
Voting rights			0.0218*** (2.92)				-0.0005 (-0.43)	
*Gov								
Voting rights			0.0096 (0.92)				-0.0010 (-0.48)	
*Private								
O/C ratio				0.1267 (0.31)				0.0101 (0.16)
* SASACRC								
O/C ratio				-0.1734 (-0.39)				0.0146 (0.21)
* SASACSC								
O/C ratio				0.2755 (0.57)				-0.0553 (-0.73)
*Gov								
O/C ratio				-1.1337* (-1.64)				0.0637 (0.37)
* Private								
L/A	-1.7999*** (-3.52)	-1.7866*** (-3.47)	-1.7722*** (-3.44)	-1.7291*** (-3.34)	-0.4296*** (-4.06)	-0.4460*** (-4.23)	-0.4382*** (-4.17)	-0.4212*** (-3.94)
M/A	-0.5477*** (-3.85)	-0.5620*** (-3.95)	-0.5703*** (-3.86)	-0.5902*** (-4.12)	-0.0957*** (-3.87)	-0.0974*** (-4.17)	-0.1020*** (-4.06)	-0.0981*** (-4.00)
E/A	19.7893*** (8.20)	19.8882*** (8.21)	19.6902*** (8.10)	19.8310*** (8.13)	2.1891*** (5.02)	2.0412*** (4.85)	2.1082*** (5.03)	2.1674*** (4.79)
Size	0.7119*** (7.76)	0.7279*** (7.62)	0.7259*** (7.70)	0.6996*** (7.56)	0.0428*** (1.97)	0.0439** (2.02)	0.0469** (2.16)	0.0424** (1.91)
FCF	-2.8972*** (-2.43)	-3.0401*** (-2.54)	-2.7442*** (-2.30)	-3.0220*** (-2.54)	0.0680 (0.32)	0.0424 (0.20)	0.0515 (0.25)	0.0740 (0.35)
SEO <sub>t-1</sub>	-0.3236 (-0.66)	-0.3810 (-0.78)	-0.3377 (-0.69)	-0.3269 (-0.66)	-0.0862 (-1.26)	-0.0810 (-1.20)	-0.0838 (-1.23)	-0.0863 (-1.26)
SEO <sub>t+1</sub>	0.9547 (1.59)	0.8974 (1.52)	0.8971 (1.53)	0.9381 (1.58)	0.0118 (0.18)	0.0074 (0.12)	0.0063 (0.10)	0.0119 (0.18)
SRVOL	-6.4243*** (-2.38)	-6.9925*** (-2.57)	-7.0683*** (-2.59)	-6.2671*** (-2.34)	-0.4150 (-0.92)	-0.4475 (-1.00)	-0.4138 (-0.92)	-0.4299 (-0.94)
λ					-0.1641*** (-3.26)	-0.1443*** (-2.91)	-0.1574*** (-3.22)	-0.1614*** (-3.01)
Constant	-6.6960*** (-7.06)	-6.5545*** (-6.58)	-6.7922*** (-6.85)	-5.8317*** (-5.61)	1.2154*** (4.80)	1.1458*** (4.84)	1.1787*** (4.95)	1.1455*** (4.84)

Note: numbers in brackets are t-ratios. The dependent variable is cash dividend divided by net income. \*\*\* Denotes 1% significant level. \*\* Denotes 5% significant level. \*Denotes 10% significant level. Size is measured as the logarithm of total assets. The ratio of market value of equity to book value of assets (M/A) is defined as

growth opportunities. The ratio of earnings before interest to total assets ( $E/A$ ) is included as a measure for probability.  $L/A$  stands for total liabilities scaled by total assets. FCF is defined as the ratio of free cash flow scaled by total assets. SEO is a dummy variable that is equal to one if a firm has seasoned equity offerings (including rights issues) in year  $t$  and zero otherwise. The standard deviation of monthly stock returns, SRVOL, calculated from each year is used as a proxy for cash flow uncertainty. O/C represents the ratio between ownership rights and control rights.