

## Why Do Poorly Performing Firms Pay Cash Dividends in Mainland China?

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### Abstract

We use financial data on poorly performing firms in Mainland China from 1993 through 2003 to examine the motives behind paying out cash dividends. The results indicate that cash dividend payout behaviors of Mainland Chinese firms are closely related to the preferences of the controlling shareholders of nontradable shares, and are subject to the firms' earnings capacity and cash constraints. The findings support our cash-channeling hypothesis in Mainland China and are consistent with the theories of Stulz (2005) and Pinkowitz, Stulz, and Williamson (2006) on the agency problems of corporate insider and state-ruler discretion in a liberalized emerging financial market.

JEL: D82; G14; M41

Keywords: corporate governance; cash channeling; maturity; poor earnings; cash dividends

## **Why Do Poorly Performing Firms Pay Cash Dividends in Mainland China?**

### **1. Introduction**

Why do firms pay cash dividends when they have a decline in earnings? We argue that the cash dividend payout may depend on the ownership structure and the degree of transparency in the corporate governance of listed firms. Mainland Chinese firms with poor earnings are ideal candidates to use to make such an investigation because of the presence of different types of ownership structure.

Mainland China has a relatively young and less-developed financial market. Owing to its rapid economic expansion, China's legal system has to be adjusted constantly to meet the changing needs of the economy. In addition to the shortage of both local, managerial talent, and good legal processes that meet Western standards, Mainland Chinese firms in general have inferior corporate governance practices. Furthermore, the existence of various cash-strapped state agencies that are controlling shareholders of non-tradable shares makes it more challenging to maintain good governance. Cheng, Fung, and Leung (2007) examine the signaling effect of cash and stock dividends of Mainland Chinese firms and show that the market favors stock dividends to cash dividends. They conclude that the controlling non-tradable-share holders (mostly state agencies) prefer and channel more cash dividends to their own institutions.

This study uses over six hundred Chinese firms to examine the motives behind poorly performing firms paying cash dividends. Prior studies such as DeAngelo, DeAngelo, and Skinner (1992); Benartzi, Michaely, and Thaler (1997); John and Williams (1985); and Miller and Rock (1985) suggest that an increase in cash dividends send a positive signal to the market about the future profitability of the firms. When firms suffer from a decline in earnings, cash dividend payouts no longer carries a positive signal for earnings growth. The advantage of using poorly performing firms in our analysis can avoid the potentially confounding signaling effect of cash dividends for a future earnings increase, and thus enables us to focus on the preference of tradable-share holders on paying more cash dividends. Thus, we restrict our sample to firms that have earnings declines.

The rationale behind the cash dividend behavior of the Chinese firms is likely linked to the ownership structure as follows. Since 1979, the Chinese government has implemented many financial reforms to make its economy more market oriented. Interestingly, the Chinese economy has been growing at an average annual rate of 9% for the past two decades and the momentum does not appear to show signs of slowing down. One interesting characteristic of Mainland Chinese firms is the existence of different types of ownership. That is, the Mainland Chinese companies issue two types of shares: tradable and non-tradable shares. Tradable shares, which account for about one-third of all shares, are shares offered in the public marketplace and traded on the stock exchange. The remaining two-thirds of shares are called non-tradable shares, which mainly include state shares (since the shares are owned by the state government) and legal-person shares (since the shares are sometimes owned by financial institutions). The holders of both tradable and non-tradable shares have equal voting rights and cash flow claims on firms. However, the shareholders of non-tradable shares own the majority of shares and are the controlling stockholders of Mainland Chinese firms.

In general, there are different state-owned enterprises (SOEs) and state agencies holding the non-tradable shares, and they may not have a consensus on corporate decisions. They all face a common problem, which can bring them towards a united decision in demanding cash dividends from the firms. Like many developing countries, the Mainland Chinese SOEs and state agencies have been substantially under-funded and cash-strapped for years. The privatization of government-owned assets and the creation of non-tradable shares allow these government-related institutions that need much-needed cash flows to gain access to funds from the public investors.

Despite the fact that non-tradable shares are not listed on the exchange for trading, the transaction prices of these shares range from about 70% to 130% of book values—and are substantially different from the market price [Huang and Fung (2004)]. It is difficult to translate the price appreciation into financial gain for the controlling stockholders whose shares cannot be traded on the stock exchanges.

Although the non-tradable shares can be sold with government permission, these rights are seldom granted, and the decisions are based mainly on political factors and governmental policies. Thus, the holders of nontradable shares cannot count on capital

gains to fix the problems of cash shortages. Consequently, the controlling shareholders of nontradable shares prefer cash dividends over the capital gains from the market.

In April 2005, The Mainland Chinese government launched an economic reform on split share structure by converting non-tradable shares into tradable shares. Li, Wang, Cheung, and Jiang (2007) report that, by the end of 2006, 1,139 listed firms (representing 84% of the market capitalization at that time) have successfully completed the required legal process for the conversion mechanism and the related financial arrangements. The conversion, however, does not imply that all the non-tradable shares have flooded into the market. In fact, a limited number of converted shares have been sold from the original holders to the public for several reasons.

First, the China Security Regulation Commission (CSRC) requires that no shares can be converted within the first year. Also, the amount of non-tradable shares that can be converted must be less than 5% after one year and less than 10% after two years. Then three years after the reform, all non-tradable shares are allowed to be tradable. Second, in addition to these conversion rules, the most important determinant for the trading of these converted shares is the central government policy of maintaining a viable and healthy equity market. Thus, the government does not want to see a huge amount of converted shares flooding the market and pushing down market prices.

As the state and its extensions (e.g., SOEs, state-controlled asset management firms, and state-controlled financial institutions) control most of these non-tradable shares, they cannot sell these shares to the market or to anyone else *freely* without the consent from the respective state agencies. Provided that the control government maintains the policy of an orderly market, most of these converted shares would be locked up without impacting the market. Thus, we argue that the agency problems created by non-tradable shares persist and would not disappear because of the 2005 reform. While there may be little or no non-tradable shares that existed legally by 2007, the trade limitation of the converted shares (de-facto non-tradable shares) would exist for the next several years. Consequently, the empirical issue we investigate is still be important and relevant.

We argue that our cash-channeling argument for shareholders of nontradable shares is consistent with Stulz's (2005) hypothesis for "the agency problems of corporate-

insider and state-ruler discretion.” Stulz suggests that corporate insiders (managers or controlling shareholders) attempt to appropriate private benefits from firms to maximize their own gains at the expense of outside investors. This behavior is called “the agency problem of corporate insider discretion.” In developing countries, the governments would also improve their own welfare at the expense of outside (minority) shareholders. This problem is labeled as “the agency problem of state ruler discretion.” In our framework of ownership for non-tradable shares in large firms that are listed and former SOEs, both types of agency problems of corporate-insider discretion and state-ruler discretion exist. Agency problems focus on the power of shareholders of nontradable shares as the majority shareholders (insiders) and representatives of various state agencies.

Pinkowitz, Stulz, and Williamson (2006) further argue that the value of cash within firms is lower for minority investors in countries with poor investor protection due to a more serious expropriation of private benefits. Thus, they conclude that investors in less-developed countries should value dividends more than investors in more-developed countries where private benefits are less problematic. We agree to this assertion in a situation with no trading restrictions. In less-developed countries with trading restrictions, such as Mainland China, the pursuance of self-interest by shareholders of nontradable shares complicates the expected outcome of the market valuation effect of cash dividends as predicted by Pinkowitz, Stulz, and Williamson (2006).<sup>9</sup>

In Mainland China, the state also controls enough nontradable shares to become the “corporate insiders” defined by Stulz (2005). Such dual identities of being the state and controlling shareholders of nontradable shares in Mainland China actually reduce some of the agency conflicts between the state and corporate insiders that may exist when they are separate entities. This dual role along with China’s financial market liberalization also leads to two potentially interesting patterns. First, in cases where some owners of the non-tradable shares cannot expropriate private benefits through related-party transactions, we expect a consensus from these shareholders in channeling cash flows from the listed firms to SOEs and state agencies through cash dividend distribution.

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<sup>9</sup> Chen, Firth, and Gao (2002) show that the Chinese public shareholders appear to favor stock dividends over cash dividends.

That is, our cash-channeling hypothesis suggests that the Chinese firms pay cash dividends to satisfy the self-interest of the shareholders.

Second, their self-interest behavior would not be too extreme and is based also on the earning ability of the firms to pay cash dividends. This is because globalization and China's financial market liberalization provide incentives for the state to protect some basic rights of the public minority investors who expect to derive benefits from investing domestically. Our results support that the cash dividend payout behaviors of Mainland Chinese firms are linked to the preferences of the controlling shareholders of nontradable shares while balancing the earnings capacity and cash constraints of the firms.

The rest of the paper is as follows. Section 2 provides a literature review. Section 3 presents different testable hypotheses for this study on cash distribution in Mainland Chinese firms. We discuss the data and methodology in Section 4 and present empirical results and their implications in Section 5. Section 6 concludes the study.

## **2. Literature Review**

Dividend policies indeed can convey valuable information to the market participants as shown in the accounting and finance literature. Miller and Modigliani (1961), Bhattacharya (1979, 1980), John and Williams (1985), and Miller and Rock (1985) put forward a dividend information hypothesis that cash dividends have information content and convey a credible signal for the prediction of future earnings and the permanent increase in future cash flows of a firm. Since then, an enormous number of empirical studies examine the information signaling of cash dividends. Mixed results are found.

Some find a strong and direct correlation between dividend changes and a firm's ability to generate future earnings and cash [Kalay and Loewenstein (1985); Nissim and Ziv (2001)]. However, DeAngelo, DeAngelo, and Skinner (1992) and Benartzi, Michaely, and Thaler (1997) provide findings of an insignificant relation between dividend distribution and future earnings. Conroy, Eades, and Harris (2000) and Mikhail, Walther, and Willis (2003) suggest that the cash dividend signal may provide less information in explaining a firm's future performance when earnings and earnings-related

variables (such as earnings forecasts) are also announced simultaneously. While many studies focus on the signaling impact of cash dividends, Faccio, Lang, and Young (2001) propose a new view, the tunneling perspective, whereby cash dividends are used to benefit large shareholders and top management at the expense of minority shareholders.

Grullon, Michaely, and Swaminathan (2002) find that dividend-increasing firms do not increase their capital expenditure and experience a decline in profitability in the years after a dividend change, implying that the maturity hypothesis better explains the dividend-increasing behavior. Jensen (1986) argues that the reason for the increase in firms' agency costs is because the managers do not always maximize shareholders' value due to the separation of ownership and control. Under the free cash flow hypothesis, firms choose to increase dividends and distribute the excess free cash in order to reduce agency costs. Therefore, the markets react positively to this type of dividend-increase announcement although these firms do not have sufficient positive net-present value projects.

### **3. Hypotheses**

We focus on under-performing firms in Mainland China to examine two alternative explanations for cash dividend payments. They are the cash-channeling hypothesis and the maturity hypothesis.

#### *3.1 Cash-channeling hypothesis*

China is an emerging financial market that is gradually opening up to the global economy. The controlling shareholders of non-tradable shares may appropriate private benefits, such as cash dividends, to maximize their own welfare since a capital gain is not realizable for them. However, these shareholders also face the challenge of balancing their self interest against the forces of the financial market liberalization in China that disciplines them to link their actions to fundamentals. Otherwise, the minority

stockholders may seek alternative investments, mitigating the potential benefits of privatization of China's financial market.

In Mainland China, the state controls a sufficient number of non-tradable shares to become the "corporate insiders" defined by Stulz (2005). The dual identities of being the state and corporate insiders in Mainland China actually leads to a commonly agreed expropriation strategy by the shareholders of non-tradable shares in channeling cash flow from the listed firms to SOEs and state agencies through the distribution of cash dividends. In short, we propose a cash-channeling hypothesis for dividend distributions for Mainland Chinese firms.

H1: Under relatively poor earnings conditions, Mainland Chinese firms with a higher proportion of non-tradable shares held by the controlling shareholders pay out more cash dividends than firms with a smaller proportion of non-tradable shares.

Under this cash-channeling hypothesis, we expect that firms, with a higher proportion of nontradable shares, will pay more cash dividends in light of self-interest motives. However, we also argue that these controlling shareholders of non-tradable shares would not blindly squeeze cash out of the firms. There is a balance between cash needs and the financial market liberalization — that is within the national interest. The controlling stockholders put forth a conscientious effort in maintaining and monitoring a healthy level of earnings to make sure that they do not extract too much cash and damage the financial health of the listed firms.

We construct (1) an interactive variable between the earnings per share (EPS) and the cash balance to examine this proposed monitoring action of earnings strength to test the hypothesis of a balancing act between the self interest of the controlling shareholders and earnings of the firm and (2) a percentage of non-tradable shares to total shares variable to examine the cash-channeling effect.

### *3.2 Maturity and Free Cash Flow hypotheses*

Within a more mature financial market, dividend policy does not matter to the investors who can create homemade dividends from the market [Modigliani and Miller

(1958)]. Besides the dividend clientele hypothesis, the maturity hypothesis [Grullon, Michaely, and Swaminathan (2002)] and the free cash flow hypothesis [Jensen (1986)] provide a reasonable and convincing logic to explain why firms pay cash dividends in the real world. Based on Grullon, Michaely and Swaminathan (2002), as firms reach maturity in their cycle, they pay out cash dividends to stockholders when the investment opportunities of the firms decline. By doing so, the firm's managers tacitly act in the best interest of the stockholders, who can then invest the cash dividends on their own.

The argument for cash dividend payout is similar to the well-known free cash flow hypothesis, which focuses on reducing the agency cost problem [Jensen (1986)]. For convenience, in this study, we combine the predictions from Jensen's agency theory and the maturity hypothesis because the effect of free cash flow on cash dividends is similar to that of the maturity effect.

H2: Under poor earnings conditions, Mainland firms with a high level of maturity (i.e., high cash balance, low debt ratio and high free cash flow) pay out more cash dividends than firms with a low level of maturity.

#### **4. Data and Methodology**

The source of our data on cash dividend distribution, ownership structure, profit and loss statements, and balance sheets of the listed Chinese firms comes from the China Stock Market and Accounting Research (CSMAR) Database and the Taiwan Economic Journal (TEJ) Database. We collected earnings and dividend data for all firms, except firms in the finance industry. Firms are listed on the Shanghai Stock Exchange and Shenzhen Stock Exchange. The data covers 1993 through 2003.

During the sample period, we collected 8,034 simultaneous earnings and dividend announcements in China. This study examines firms with poor earnings. Therefore, we only include firms with an earnings decrease. We have two conditions to classify a firm having a decline in earnings. An under-performing firm in our sample should have lower earnings than the previous industry-adjusted earnings and the average of the industry-

adjusted earnings over the previous three years. These two conditions reduce our Chinese sample to 633.

We examine the determinants of cash dividends in Mainland Chinese firms through regression model (1) with different explanatory variables:

$$\begin{aligned} \text{Cash Div-to-Assets} = & \alpha_0 + \beta_1 \text{Non-tradable} + \beta_2 \text{Debt-to-Assets} + \beta_3 \text{MJAccrual} \\ & + \beta_4 \text{LnAsset} + \beta_5 \text{Cash Equivalent-to-Assets} \end{aligned} \quad (1a)$$

$$\begin{aligned} \text{Cash Div-to-Assets} = & \alpha_0 + \beta_1 \text{Non-tradable} + \beta_2 \text{Debt-to-Assets} + \beta_3 \text{MJAccrual} \\ & + \beta_4 \text{LnAsset} + \beta_5 \text{Free Cash Flow Per Share} \end{aligned} \quad (1b)$$

$$\begin{aligned} \text{Cash Div-to-Assets} = & \alpha_0 + \beta_1 \text{Non-tradable} + \beta_2 \text{Debt-to-Assets} + \beta_3 \text{MJAccrual} + \beta_4 \\ \text{LnAsset} & \\ & + \beta_5 \text{Cash Equivalent-to-Assets} + \beta_6 \text{Free Cash Flow Per Share} \end{aligned} \quad (1c)$$

$$\begin{aligned} \text{Cash Div-to-Assets} = & \alpha_0 + \beta_1 \text{Non-tradable} + \beta_2 \text{Debt-to-Assets} + \beta_3 \text{MJAccrual} \\ & + \beta_4 \text{LnAsset} + \beta_5 \text{Cash Equivalent-to-Assets} + \beta_6 \text{EPS} \end{aligned} \quad (1d)$$

$$\begin{aligned} \text{Cash Div-to-Assets} = & \alpha_0 + \beta_1 \text{Non-tradable} + \beta_2 \text{Debt-to-Assets} + \beta_3 \text{MJAccrual} + \beta_4 \\ \text{LnAsset} & \\ & + \beta_5 \text{Cash Equivalent-to-Assets} + \beta_6 \text{EPS} * \text{Cash Equivalent} \end{aligned} \quad (1e)$$

The dependent variable, Cash Div-to-Assets, is the ratio of total cash dividends to total assets. In the regression models above (1a-1e), we have four key independent variables to examine the two hypotheses proposed in the study: Non-tradable, Debt-to-Assets, Cash Equivalent-to-Assets, and Free Cash Flow Per Share.

To test the cash-channeling hypothesis which argues that firms with a higher proportion of non-tradable shares pay more cash dividends in light of self-interest motives, we include an ownership structure variable, Non-tradable, in model (1) for the Chinese firms. Non-tradable is the percentage of non-tradable shares to total shares. We expect a positive relation between Cash Div-to-Assets and Non-tradable.

We use three other variables (Debt-to-Assets, Cash Equivalent-to-Assets and Free Cash Flow Per Share) to examine the maturity hypothesis. Grullon, Michaely, and Swaminathan (2002) suggest that dividend payout is related to the risk level. We use

financial leverage (Debt-to-Assets ratio) as a measure of risk and expect a negative relation between dividend payout and risk (Debt-to-Assets). Debt-to-Assets is the ratio of total liabilities to total assets. The maturity hypothesis also suggests that cash dividend distributions can be used to reduce excess cash.

We use Cash Equivalent-to-Assets and Free Cash Flow Per Share as a measure of excess cash. We expect Cash Equivalent-to-Assets and Free Cash Flow Per Share to be positively related to Cash Div-to-Assets. Cash Equivalent-to-Assets is the ratio of cash equivalent assets (cash and investment holding) to total assets. Free Cash Flow is operating cash flow minus dividend payouts and capital expenditure. Free Cash Flow Per Share is the ratio of free cash flow to the number of shares outstanding.

Although we hypothesize that the controlling shareholders of non-tradable shares would attempt to channel cash flows from the firms through cash dividend distribution, we also examine the hypothesis whether the controlling owners of non-tradable shares would maintain a balance between cash needs and the national interest of financial market liberalization. We have two additional variations of the regression models. To test if the controlling shareholders of nontradable shares would watch the earnings strength of the firm as a monitoring device and would not take too much cash out, we include two additional key variables: the earnings variable (EPS) in Equation (1d) and an interactive variable between earnings and cash balance (EPS\*Cash Equivalent) in Equations (1e).<sup>10</sup> EPS denotes earnings per share.

In addition to the key variables related to the hypotheses, we also include some control variables in the regression models. The major reason for adding the control variables is to avoid model mis-specification. Judging from our key variables that include ownership, financial leverage, liquidity, and earnings strength, the only areas that need to be controlled for as documented in the literature are the potential impacts of earnings management [Dechow, Sloan and Sweeney (1995)] and the size effect [Banz (1981)]. We use MJAccrual and LnAsset to control the effects of earnings management

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<sup>10</sup>While there are different choices of profitability measures, we choose earnings per share (EPS) for two reasons. First, it is possible that different profitability measures may be correlated. The two commonly used measures are EPS and return on assets (ROA). We compute the correlation coefficients and find they are highly correlated. Second, profitability measures such as ROA, which are standardized by equity- or asset-based variables can be inflated to satisfy the financial requirement for seasoned new issue and rights offering. Thus, we choose EPS as a measure of earnings strength in our regression model.

and size in the regression models. MJAccrual is the value of abnormal accrual to account for the potential impact of earnings management that is found to be related to earnings quality and dividend distribution smoothing [Kothari, Leone and Wasley (2005); Kasanen, Kinnunen, and Niskanen (1996)]. MJAccrual is estimated using a modified version of the Jones (1991) model [DeFond and Park (1997)]. LnAsset is the log value of the total assets.

## **5. Empirical Results**

Table 1 reports the descriptive statistics of our variables for Mainland Chinese firms. Several points should be noted. First, Mainland Chinese firms pay an average cash dividend-to-assets of 0.0283. Second, the cash equivalent-to-asset ratio is 0.1767. Third, about two-thirds of shares for the Mainland Chinese firms are not tradable. Finally, we report the change in earnings per share (EPSchg). Model 1 uses a one-year benchmark to measure the decline in EPS, and Model 2 uses three years as the benchmark.

[Insert Table 1 here]

### *5.1 Event Study Results*

Before we formally test our two hypotheses on dividend distribution, we first need to confirm that investors react negatively when the under-performing firms make their simultaneous announcements of annual earnings decline and cash dividend decision. It is expected that stock price would indicate a negative reaction to these joint announcements of poor earnings and cash dividend payout.

When the poorly performing Mainland Chinese firms pay cash dividends, the main driving force is the cash preference of the controlling shareholders of non-tradable shares. Owing to the current rapid economic expansion in China, the poor performance of these firms may be transitory. Although tradable-share investors would prefer the firms to retain the cash for future investment opportunities, the reality is that the controlling stockholders of nontradable shares dictate the dividend policy. Thus, the public investors may react negatively to such a cash dividend policy.

To examine our hypothesis of investors' reaction to cash dividend payment, we implement an event study methodology to evaluate share price performance upon earnings and dividend announcements. The event date,  $t = 0$ , is the announcement date recorded in the Financial PRC General of TEJ Database for Mainland Chinese firms. We use the market model to estimate the abnormal market reaction. We use 150 days from  $t = -200$  to  $t = -51$  as the estimation period. The abnormal return ( $AR_{it}$ ) on day  $t$  is the difference between the actual return and the expected return of firm  $i$  on day  $t$ . We accumulate the abnormal returns for four time intervals ( $-10 \leq t \leq -2$ ;  $-1 \leq t \leq +1$ ;  $-3 \leq t \leq +3$ ; and  $-10 \leq t \leq +10$ ). The significance of the cumulative abnormal returns (CAR) is tested using the method outlined in Brown and Warner (1985).

Table 2 reports the results of CAR. In this analysis, we divide the firms into three subsamples: (1) large and small non-tradable-share firms; (2) large and small cash equivalent firms, and (3) large and small free cash flow firms. The results of the overall sample indicate a negative and statistically significant CAR for the three intervals, confirming our expectations of negative reactions by public investors. The less negatively significant market reaction for the small non-tradable group of Mainland Chinese firms indicates a smaller agency cost problem. Nevertheless, we caution that the smaller number of firms in the small non-tradable group may yield less dependable findings in the analysis.

[Insert Table 2 here]

The group with a large cash equivalent-to-asset ratio shows a large negative CAR as compared to the small cash equivalent-to-asset group, while the large-free-cash-flow-per-share group experiences a relatively less negative CAR as compared to the small-free-cash-flow-per-share group. These results from the two groups suggest that the cash variable may have a non-linear effect on the CAR.

### *5.2 Two-sample Comparison*

We use both parametric tests (two-sample t-test) and non-parametric tests (Mann-Whitney test) for measuring sample differences of cash dividend payouts for Mainland Chinese firms. Table 3 reports three types of analysis for the Mainland

Chinese firms: (1) large non-tradable firms (the proportion of non-tradable shares to total shares is more than 50%) and small non-tradable firms (the proportion of non-tradable shares to total shares is less than 50%);<sup>11</sup> (2) large cash-equivalent firms (the percentage of cash equivalent-to-asset is greater than the median value of cash equivalent-to-assets of all firms) and small cash equivalent firms (the percentage of cash equivalent-to-asset is smaller than the median value of cash equivalent-to-assets of all firms); and (3) large cash flow per share firms (the percentage of free cash flow per share is greater than the median value of free cash flow per share of all firms) and small cash flow per share firms (the percentage of free cash flow per share is smaller than the median value of free cash flow per share of all firms).

[Insert Table 3 here]

Several results are worth noting. First, the mean difference between the large non-tradable and small non-tradable firms in terms of Cash Dividend-to-Assets is significant, implying that large non-tradable ownership firms pay more dividends than their counterparts. This result supports the first hypothesis of cash channeling. Second, the large cash equivalent firms appear to pay more cash dividends than the small cash equivalent firms. This result makes sense because firms with more cash available pay more cash dividends. Surprisingly, there is no significant difference in cash dividend distribution behavior between firms with large free cash flow and small free cash flow, a result not supporting the agency cost issue.

### *5.3 Determinants of Cash Dividends*

Table 4 reports the regression results of Equations (1a)-(1e). The variables have been checked for multicollinearity using values of the variance inflation factor (VIF). All VIF values are less than 2.5, indicating that the proposed models are likely free from

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<sup>11</sup> Among the 633 observations in the Chinese Firms Sample, none of the firms has a percentage of non-tradable shares to total shares to be exactly 50%. Therefore, we can classify all our Chinese Firms into large non-tradable firms and small non-tradable firms using 50% as the cutoff point.

multicollinearity problems [Belsley, Kuh, and Welsch (1980)]. The reported p-values of the regression results in parenthesis are adjusted for heteroskedasticity using White's procedure (1980).

The coefficients on Non-tradable are positive and highly significant at the 1% level in Equations (1a)-(1e), a result implying that firms with a larger percentage of non-tradable shares pay more cash dividends. These findings support the argument that the owners of non-tradable shares prefer cash dividends, supporting the cash-channeling hypothesis. The coefficient on debt-to-assets is negative and statistically significant in Equations (1a)-(1e), suggesting that increased debts may deter the firms from paying more cash dividends. This is likely due to the monitoring efforts of the debt holders. This negative relation of debt on the cash dividends is consistent with the maturity hypothesis. However, as the Cash Equivalent-to-Assets is not significant, the support to the maturity hypothesis is weak.

[Insert Table 4 here]

For our two measures of excess cash, Cash Equivalent-to-Assets and Free Cash Flow Per Share, their coefficients are not significant in Equations (1a)-(1c). The negative signs do not support the agency cost argument and/or the maturity hypothesis. In Equation (1d), we include earnings per share (EPS) to examine if cash payouts are based on earning fundamentals. The coefficient on EPS is positive and highly significant at the conventional level while the coefficients on Non-tradable and Debt-to-Assets remain the same as in Equation (1a), thus their results are robust. The results of the earnings variable imply that (1) the Chinese firms with higher EPS pay more cash dividends, and (2) the controlling shareholders of non-tradable shares prefer cash dividends and do consider earnings capability of the firms.

We include an interactive term,  $EPS * \text{Cash-Equivalent}$ , in our regression (Equation (1e)) to examine if there is an interaction of EPS and the ability of the firm to pay cash dividends. The coefficient on  $EPS * \text{Cash-Equivalent}$  term is positive and statistically significant at 1% level, which confirms strong interactions. The coefficient of Cash Equivalent-to-Asset is also negatively significant at the 1% level. These combined results imply that the Mainland Chinese firms squeeze more cash dividends

despite their low cash balance, but they limit themselves to the extent that there are sufficient earnings in support of the cash dividend payout. The overall results from the Mainland Chinese firms sample support our cash-channeling hypothesis.

We provide stronger evidences for our cash-channeling hypothesis that the dividend policy in Mainland China is related to ownership structure and that the owners of non-tradable shares prefer cash dividends in order to expropriate private benefits from the privatized SOEs by using a subsample of firms with earnings declines and dividend increases.<sup>12</sup> In this group, the economic rationales for having increased cash dividend payouts are relatively weak. There are 300 observations in this subsample. Table 5 reports the regression results based on Equation (1a)-(1e).

[Insert Table 5 here]

Table 5 shows that the coefficients on Non-tradable and EPS\*Cash-Equivalent are positively significant in Equation (1e), a result which is similar with that in Table 4. Our findings provide support to our cash-channeling hypothesis that the dividend policy in Mainland China is related to ownership structure rather than level of cash holdings or free cash flow. As long as there are sufficient earnings to support dividend payouts (positive dividends or even increased dividends), the owners of non-tradable shares prefer cash dividends for a self-interest purpose despite decreased earnings and low cash levels. The coefficient on Debt-to-Assets is negatively related to the cash dividend, a result similar to earlier results.

The insignificant results for the excess cash variable and the significant result for earnings in both Tables 4 and 5 imply that the maturity effect hypothesis is not supported. That is, the cash dividend behavior of the Chinese firms is basically driven by their ownership structure while balancing the earnings fundamentals of the firm.

## 6. Conclusions

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<sup>12</sup> We use the same criteria used earlier to classify a firm as having an increase in dividends. A dividend-increase paying firm should have a higher dividend payout than last year's dividend payout with an industry-adjustment and the average of the last three year dividend payouts with an industry-adjustment.

We use the financial data on the poorly performing Chinese firms from 1993 through 2003 to examine the motives for paying out cash dividends. We suggest that cash dividend payouts for under-performing firms may depend on the ownership structure (in terms of trading restrictions) and the corporate governance of these listed firms. We primarily examine two hypotheses: Cash channeling and a Maturity effect hypothesis.

A cash-channeling hypothesis predicts that poorly performing Chinese firms with a higher proportion of non-tradable shares pay out more cash dividends than firms with a lower proportion of non-tradable shares. The cash dividend distribution behavior in the Mainland Chinese firms follows the self-interest motives of shareholders of nontradable shares.

The regression analysis indicates that cash dividend payout behaviors of the Mainland Chinese firms are positively related to the proportion of non-tradable shares to total shares. That is, firms with larger ownership of non-tradable shares give out more cash dividends, confirming the self-interest motives of these stockholders and supporting our cash-channeling hypothesis. This may occur since they cannot benefit from price appreciation of shares that are not tradable on the stock exchanges. However, the cash dividend payout decision of these Mainland Chinese firms is balanced with the earnings capacity and cash constraint of the firm. The results support Stulz's (2005) theory on the agency problem of corporate insider and state ruler discretion in a liberalized emerging market. The controlling shareholders of non-tradable shares of the Mainland Chinese firms have to balance their gains from cash dividend distribution with the welfare of market liberalization in China. In other words, a clever farmer would not kill the magical goose for the golden eggs when he understands that the long-term benefit of keeping the magical goose alive outweighs the short-term gain produced by the golden eggs today.

The insignificant results of excess cash variables on cash dividends imply that the maturity effect hypothesis is not supported. This result makes sense because Chinese firms are still growing as the Chinese economy is in the process of continued growth and development. For past years, the Chinese economy has been growing at about 9% per year, and firms were listed on the exchanges in the early 1990s. Thus, these listed firms are relatively young and they are not expected to be at the end of the product life cycle.

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Table 1

## Descriptive Statistics

Cash Div-to-Assets is the ratio of total cash dividends to total assets. Non-tradable is the percentage of non-tradable shares to total shares. Debt-to-Assets is the ratio of total liabilities to total assets. Cash Equivalent-to-Assets is the ratio of cash equivalent assets (cash and investment holding) to total assets. MJAccrual is the abnormal accrual estimated using a modified version of the Jones (1991) model. LnAsset is the log value of the total assets. EPS is earnings per share. The EPSChg (Model 1) is the percentage change in the earnings per share between year y and year y-1 with industry adjustment factor. The EPSChg (Model 2) is the percentage change in the earnings per share between year y and the average of previous three years, y-1, y-2 and y-3 with an industry adjustment factor. Free Cash Flow is operating cash flow minus capital expenditure and dividend payment. Free Cash Flow Per Share is the ratio of free cash flow to the number of shares outstanding. Free Cash Flow-to-Assets is the ratio of free cash flow to total assets.

	<u>Mean</u>	<u>Median</u>	<u>Maximum</u>	<u>Minimum</u>	<u>Standard Deviation</u>
Cash Div-to-Assets	0.0283	0.0224	0.1406	0.0011	0.0212
Non-tradable	0.6455	0.6604	0.9966	0.1667	0.1201
Debt-to-Assets	0.3902	0.3918	0.7854	0.0300	0.1476
Cash Equivalents-to-Assets	0.1767	0.1547	0.6176	0.0026	0.1104
MJAccrual	0.0076	0.0041	0.6041	-0.8237	0.1048
LnAsset	21.1122	21.0290	24.7844	19.0331	0.8289
EPS	0.2475	0.2200	1.0196	0.0016	0.1438
EPSChg (Model 1)	-0.3261	-0.2903	-0.0027	-0.9978	0.2288
EPSChg (Model 2)	-0.3767	-0.3284	-0.0003	-0.9976	0.2413
Total Free Cash Flow (\$ million)	-99.5228	-27.4208	1,401.6664	-15,607.9082	757.1837
Free Cash Flow Per Share (\$)	-0.1970	-0.1178	2.7891	-4.2885	0.7090
Free Cash Flow-to-Assets	-0.0373	-0.0244	0.3689	-0.7042	0.1252

Notes: The differences in the EPSChg (Model 1) and EPSChg (Model 2) for the Chinese Firms Sample are significant at 0.10 level by both parametric (two-sample t-test) and non-parametric (Mann-Whitney test).

Table 2  
Cumulative Abnormal Returns (CARs) for Event of  
Positive Cash Dividend Payout and Unexpected Earnings Decline

We use 50% ownership to classify Large Non-tradable subsample and Small Non-tradable sub-sample for the Chinese firms sample. If the percentage of non-tradable shares to total shares is greater (smaller) than 50%, the observation is classified as a Large (Small) Non-tradable observation. We use the median value of cash-equivalent-to-assets of all firms in the sample to classify the Large Cash Equivalent and Small Cash Equivalent. If the percentage of cash equivalent-to-assets is greater (smaller) than the median value, the observation is classified as Large (Small) Cash Equivalent observation. We use the median value of free cash flow per share of all firms in the sample to classify the Large Free Cash Flow Per Share and Small Free Cash Flow Per Share. If the percentage of free cash flow per share is greater (smaller) than the median value, the observation is classified as Large (Small) Free Cash Flow Per Share observation.

	Sample Size	Cumulative Abnormal Return (CAR) (t-statistic)			
		$-10 \leq t \leq -2$	$-1 \leq t \leq +1$	$-3 \leq t \leq +3$	$-10 \leq t \leq +10$
All Chinese Firms Sample	633	-0.0019 (-1.10)	-0.0057 (-)	-0.0060 (-)	-0.0096 (-3.58)**
Small Non-tradable	64	0.0075 (1.39)	-0.0038 (-1.22)	0.0041 (0.86)	0.0056 (0.67)
Large Non-tradable	569	-0.0030 (-1.56)	-0.0059 (-)	-0.0072 (-)	-0.0114 (-3.87)**
Small Cash Equivalent-to-Assets	316	0.0032 (1.22)	-0.0030 (-1.98)*	-0.0042 (-1.80)	-0.0007 (-0.17)
Large Cash Equivalent-to-Assets	317	-0.0071 (-2.74)**	-0.0083 (-)	-0.0078 (-)	-0.0185 (-4.70)**
Small Free Cash Flow Per Share	316	-0.0045 (-1.80)	-0.0070 (-)	-0.0101 (-)	-0.0173 (-4.52)**
Large Free Cash Flow Per Share	317	0.0006 (0.24)	-0.0044 (-)	-0.0020 (-0.86)	-0.0020 (-0.52)

\* Significant at 0.05 level.

\*\* Significant at 0.01 level.

Table 3

## Two-sample Comparison

Cash Div-to-Assets is the ratio of total cash dividends to total assets. ROA is the ratio of earnings to total assets. Cash Equivalent-to-Assets is the ratio of cash equivalent assets (cash and investment holding) to total assets. We use 50% ownership to classify Large Non-tradable subsample and Small Non-tradable subsample. If the percentage of non-tradable shares to total shares is greater (smaller) than 50%, the observation is classified as Large (Small) Non-tradable observation. We use the median value of cash-equivalent-to-assets of all firms in the sample to classify the Large Cash Equivalent and Small Cash Equivalent. If the percentage of cash equivalent-to-assets is greater (smaller) than the median value, the observation is classified as Large (Small) Cash Equivalent observation. We use the median value of free cash flow per share of all firms in the sample to classify the Large Free Cash Flow Per Share and Small Free Cash Flow Per Share. If the percentage of free cash flow per share is greater (smaller) than the median value, the observation is classified as Large (Small) Free Cash Flow Per Share observation.

	Large Non-tradable Mean (Median)	Small Non-tradable Mean (Median)	Mean (Median) Difference [Large – Small]
Number of Observations	569	64	
Cash Div-to-Assets	0.0290 (0.0234)	0.0218 (0.0173)	0.0072 (0.0061)** <sup>++</sup>
ROA	0.0407 (0.0403)	0.0415 (0.0372)	-0.0008 (0.0031)
	Large Cash Equivalent Mean (Median)	Small Cash Equivalent Mean (Median)	Mean (Median) Difference [Large – Small]
Number of Observations	317	316	
Cash Div-to-Assets	0.0307 (0.0234)	0.0259 (0.0210)	0.0048 (0.0024)** <sup>++</sup>
Cash Equivalent-to- Assets	0.2601 (0.2289)	0.0930 (0.0973)	0.1671 (0.1316) ** <sup>++</sup>
	Large Cash Flow Per Share Mean	Small Cash Flow Per Share Mean	Mean (Median) Difference [Large – Small]

	(Median)	(Median)	
Number of Observations	317	316	
Cash Div-to-Assets	0.0281 (0.0233)	0.0285 (0.0213)	-0.0005 (0.0020)
Cash Flow Per Share	0.2868 (0.1689)	-0.6824 (-0.4772)	0.9691 (0.6461) **++

\* Significant at the 0.05 level (parametric test).

\*\* Significant at the 0.01 level (parametric test).

+ Significant at the 0.05 level (non-parametric test).

++ Significant at the 0.01 level (non-parametric test).

Table 4  
Regression Analysis

Cash Div-to-Assets is the ratio of total cash dividends to total assets, which is the dependent variable. Non-tradable is the percentage of non-tradable shares to total shares. Debt-to-Assets is the ratio of total liabilities to total assets. MJAccrual is the abnormal accrual estimated using a modified version of the Jones (1991) model. LnAsset is the log value of the total assets. Cash Equivalent-to-Assets is the ratio of cash equivalent assets (cash and investment holding) to total assets. Free Cash Flow Per Share is the ratio of free cash flow to number of shares outstanding. EPS is earnings per share. EPS\*Cash-Equivalent is the interactive variable of EPS and Cash Equivalent-to-Assets. P-values are adjusted for heteroskedasticity using White's procedure (1980).

	Beta Coefficient (p-value)				
	Equation (1a)	Equation (1b)	Equation (1c)	Equation (1d)	Equation (1e)
Intercept	0.0930 (0.00)	0.0933 (0.00)	0.0937 (0.00)	0.1351 (0.00)	0.1338 (0.00)
Non-tradable	0.0289 (0.00)**	0.0288 (0.00)**	0.0288 (0.00)**	0.0352 (0.00)**	0.0339 (0.00)**
Debt-to-Assets	-0.0462 (0.00)**	-0.0466 (0.00)**	-0.0468 (0.00)**	-0.0432 (0.00)**	-0.0446 (0.00)**
MJAccrual	-0.0116 (0.12)	-0.0185 (0.04)*	-0.0186 (0.04)*	-0.0108 (0.10)	-0.0116 (0.09)
LnAsset	-0.0031 (0.00)**	-0.0031 (0.00)**	-0.0031 (0.00)**	-0.0058 (0.00)**	-0.0051 (0.00)**
Cash Equivalents-to- Assets	-0.0022 (0.78)		-0.0009 (0.91)	-0.0090 (0.20)	-0.0601 (0.00)**
Free Cash Flow Per Share		-0.0020 (0.07)	-0.0020 (0.08)		
EPS				0.0492 (0.00)**	
EPS*Cash-Equivalent					0.2093 (0.00)**
Adjusted R <sup>2</sup>	0.1634	0.1664	0.1651	0.2622	0.2418
F-statistics	25.6913	26.2284	21.8250	38.4277	34.5971
p-value	0.00	0.00	0.00	0.00	0.00
Number of Observations	633	633	633	633	633

\* Significant at 0.05 level.

\*\* Significant at 0.01 level.

Table 5

Regression Analysis (Equation (1)) for the subsample of Earnings Decrease and Dividend Increase in Mainland Chinese Firms

Cash Div-to-Assets is the ratio of total cash dividends to total assets, which is the dependent variable. Non-tradable is the percentage of non-tradable shares to total shares. Debt-to-Assets is the ratio of total liabilities to total assets. MJAccrual is the abnormal accrual estimated using a modified version of the Jones (1991) model. LnAsset is the log value of the total assets. Cash Equivalent-to-Assets is the ratio of cash equivalent assets (cash and investment holding) to total assets. Free Cash Flow Per Share is the ratio of free cash flow to number of shares outstanding. EPS is earnings per share. EPS\*Cash-Equivalent is the interactive variable of EPS and Cash Equivalent-to-Assets. P-values are adjusted for heteroskedasticity using White's procedure (1980).

	Beta Coefficient (p-value)				
	Equation (1a)	Equation (1b)	Equation (1c)	Equation (1d)	Equation (1e)
Intercept	0.0688 (0.03)	0.0758 (0.02)	0.0731 (0.03)	0.1242 (0.00)	0.1087 (0.00)
Non-tradable	0.0443 (0.00)**	0.0435 (0.00)**	0.0435 (0.00)**	0.0456 (0.00)**	0.0458 (0.00)**
Debt-to-Assets	-0.0515 (0.00)**	-0.0527 (0.00)**	-0.0514 (0.00)**	-0.0489 (0.00)**	-0.0507 (0.00)**
MJAccrual	-0.0162 (0.10)	-0.0240 (0.05)*	-0.0238 (0.06)	-0.0141 (0.11)	-0.0163 (0.08)
LnAsset	-0.0021 (0.16)	-0.0024 (0.12)	-0.0023 (0.13)	-0.0053 (0.00)**	-0.0040 (0.02)*
Cash Equivalents-to-Assets	0.0047 (0.71)		0.0064 (0.62)	-0.0048 (0.70)	-0.0437 (0.01)**
Free Cash Flow Per Share		-0.0020 (0.25)	-0.0022 (0.23)		
EPS				0.0446 (0.00)**	
EPS*Cash-Equivalent					0.1566 (0.01)**
Adjusted R <sup>2</sup>	0.1620	0.1643	0.1622	0.2255	0.1970
F-statistics	12.5603	12.7538	10.6457	15.5128	13.2292
p-value	0.0000	0.0000	0.0000	0.0000	0.0000
Number of Observations	300	300	300	300	300

\* Significant at 0.05 level.

\*\* Significant at 0.01 level.