Ultimate Controlling Shareholders and Dividends Payout: Evidence from Hong Kong

Abstract

This study investigates how ultimate controlling shareholders influence dividends payout policy in industrial firms in the natural experimental setting of Hong Kong, which features no tax on dividends and the prevalence of concentrated ownership. We find that the ultimate control held by the controlling shareholders is negatively associated with the level of dividends payout and that the dividend payout behavior in firms with controlling shareholders exhibits similar patterns as in US, UK and EU firms. We also conduct separate analysis on family controlled and state controlled firms and find that the heterogeneity across these large shareholders has a confounding effect on corporate dividend payout behavior.

1. Introduction

Large shareholders are common in modern listed firms around the world (see, e.g. Claessens, Djankov and Lang 2000; Faccio and Lang 2002; Laeven and Levine 2008; Holderness 2009). A natural and an interesting question is whether and how large shareholders influence corporate dividend payout policy. The existing literature provides a theoretical and conceptual foundation regarding large shareholders and dividend policy. The influential views or concepts include but are not limited to ultimate ownership (see, e.g. La Porta, Lopez-de-Silanes and Shleifer 1999), monitoring role played by large shareholders (see, e.g. Shleifer and Vishny 1986), heterogeneity across large shareholders (see, e.g. Cronqvist and Fahlenbrach 2009) and agency costs explanation of dividends (e.g. Rozeff 1982; Easterbrook 1984; Jensen 1986; Fudenberg and Tirole 1995; Shleifer and Vishny 1997).

Given the importance of dividends and large shareholders in the literature of corporate finance and corporate governance, it is surprising that there is a dearth of specially and systematically designed empirical studies concerning whether and how large shareholders affect dividend payout policy. Focusing on one type of large shareholders, the ultimate controlling shareholders defined as the largest shareholder with the absolute majority of voting rights on the control chain, this study adds some preliminary empirical evidences to the literature regarding the impacts of controlling shareholders on dividend payout policy.

The recent literature on dividends employs cross-country studies (see, e.g. Denis and Osobov 2008; Von Eije and Megginson 2008). While the cross country sampling method possesses its strengths such as representing a general population, it also brings difficulties in controlling extraneous heterogeneities across countries, which although could be controlled to certain extent by adopting various econometric methods. In order to study the relationship between controlling shareholders and dividend payout policy, in this study we choose the sample within one single country/region to avoid the heterogeneities across countries such as in law origins, political structures, taxation and accounting rules, regulations and levels of development of economic systems.

Hong Kong provides an appropriate experimental setting for this study because of the following considerations. First, the presence of controlling shareholders is common for publicly listed firms in Hong Kong and the majority of the firms listed on Hong Kong Stock Exchange could be classified as family or state controlled (see, e.g. Claessens, Djankov and Lang 2000; Cheung, Rau and Stouraitis 2006). Second, labeled as a relatively free economy, there is no tax imposed on dividends or capital gains in Hong Kong, which eliminates the influence of taxation on dividend payout policy and shareholder's preference for dividends, and thus enables a more valid and reliable examination of the relationship between controlling

shareholders and dividend policy. Third, the financial market, the corporate governance practice and accounting standards etc. in Hong Kong are at a development level comparable to developed western countries and contrast sharply with those in developing countries (e.g. in the mainland China). With more firms from the mainland China getting listed in Hong Kong after 1996, comparative studies on the dividend policy of mainland China firms and Hong Kong firms can be carried out by examining firms listed on one stock exchange-the Hong Kong Stock Exchange.

This study adopts both cross-sectional and longitudinal analyses on dividend behavior in firms with controlling shareholders. Specifically, we examine the effect of the ultimate control held by the controlling shareholders and the degree of control divergence on dividend payout, the dividend smoothing and target payout, the propensity to pay dividends, and the concentration of dividends. Separate analyses are also conducted for state controlled and family controlled firms to gain some insights regarding the effect of heterogeneity across controlling shareholders on dividend payout policy.

This study provides mainly several findings. First, for the pooled sample, the ultimate control held by the controlling shareholders is significantly negatively associated with dividend rates and the control divergence has no significant impact on dividend rates. However, the control divergence becomes significant in the separate analyses for family controlled and state controlled firms. Second, firms with controlling shareholders show a trend of declining importance of targeting the payout ratio, reduced propensity to pay dividends and concentration of dividends over time. Third, family controlled and state controlled firms display significant differences in their dividend payouts.

The paper is organized as follows. Section 2 describes the sample and data. Section 3 reviews related literature and presents the results of data analysis. Section 4 summarizes the main findings of this study and discusses some implications for researchers and policy makers.

2. Sample and Data

Our sample selection starts with all the firms listed on the Main Board of the Hong Kong Stock Exchange. Firms listed on the Growth Enterprise Market of Hong Kong Stock Exchange are excluded to control the possible heterogeneous influence caused by business life cycle because growth firms tend to pay zero dividends (see, e.g. Fama and French 2001; Grullon, Michaely and Swaminathan 2002). To avoid potential heterogeneity of extraneous factors across industries, we sample only industrial firms (see, e.g. Fama and French 2001; DeAngelo, DeAngelo and Skinner 2004; Ferris, Sen and Yui 2006; Denis and Osobov 2008).

The financial, accounting and industrial classification data in this study are obtained from Datastream. The year of incorporation, the ultimate ownership data and the top management data are manually collected from the sources such as firms' annual reports, company websites, Hong Kong Stock Exchange, and Datastream. The implicit price deflator of GDP is quoted from the publication of the Census and Statistics Department of Hong Kong Government on its website.

Considering the complexity of shareholding patterns in modern corporations, this study adopts the concept of "Ultimate Ownership" introduced by La Porta, Lopez-de-Silanes and Shleifer (1999) to categorize the ownership structure. The most recent data of ultimate ownership for firms listed on Hong Kong Stock Exchange is only available as of 1996 (see, e.g. Claessens, Djankov and Lang 2000). Although ownership patterns tend to be stable (see, e.g. La Porta, Lopez-de-Silanes and Shleifer 1999), considering the facts that firms may have gone through substantial restructuring since the Asian financial crisis in 1997 and that many firms, especially firms from mainland China, get listed on the Hong Kong Stock Exchange after 1996, we manually collect the ultimate ownership data for the largest 312 "Industrial Firms" listed on the Main Board of the Hong Kong Stock Exchange as of 2007. These 312 firms share about 90% of the total market capitalization of all the "Industrial Firms" listed on the Main Board of the Hong Kong Stock Exchange in 2007 and 202 out of these 312 firms get listed after 1996. We treat both the percentage of the control right and ownership right held by the largest ultimate owner as a continuous variable and calculate the control right and ownership right as in Claessens, Djankov and Lang (2000) and measure the extent of control divergence with the ratio of ownership rights to control rights as in Faccio, Lang and Young (2001).

Some types of data may change over time and some may not. For example, the year of incorporation should not change over time. When different sources provide different years of incorporation, we follow some principles to make a reasonable judgment. First, concerning the reliability of the sources of information, we treat firm's annual report as primary, firm's own description on its website as secondary and other sources as tertiary sources of information. For example, there is no year of incorporation shown in the annual report for ESPRIT ASIA HOLDINGS LIMITED but the firm's own website specifies 1992 as its year of incorporation. So we record 1992 as the year of incorporation for ESPRIT ASIA HOLDINGS LIMITED and disregard any data from other sources such as 1993 from Datastream and 1981 from Claessens, Djankov and Lang (2000). Second, if no year of incorporation is specified in a firm's annual report or in the firm's own webpage, we combine all information available to decide on the year. For example, for CHOW SANG SANG HOLDINGS INTERNATIONAL, we obtain 1934, 1957 and 1992 as the year of incorporation from Businessweek, Datastream and Claessens, Djankov and Lang (2000) respectively. Although there is no specific year of incorporation in the firm's webpage, it says that its heritage spans over 70 years. So we take 1934 from Businessweek as the year of incorporation for CHOW SANG SANG HOLDINGS INTERNATIONAL. Third, if we could only obtain one source of information and could not double check

the data, we just record it as the year of incorporation for the firm. For example, Claessens, Djankov and Lang (2000) provide the only source of information on the year of incorporation for HARBOUR CENTRE DEVELOPMENT LIMITED, in this case we record 1965 as the year of incorporation for the firm. Fourth, if no specific year of incorporation could be obtained from any source, we treat it as a missing value.

Claessens, Djankov and Lang (2000) acknowledge the possible overestimation of the frequency of widely held firms in their final sample. In order to adopt valid data, we make corrections to the ultimate ownership data in Claessens, Djankov and Lang (2000) if we could secure more reliable information although some errors or biases might still remain. For example, we notice the three corporations of CHINA RESOURCES, CHINA TRAVEL INTERNATIONAL, and SHOUGANG CONCORD INTERNATIONAL have been controlled by the state all the time, so we record "State" as the ultimate owner of these three corporations instead of "Family" as in the study by Claessens, Djankov and Lang (2000).

As this study intends to examine both longitudinal and cross-sectional behaviors of dividends in firms with controlling shareholders, the sample size and sample period may vary with different analyses. Specifications for each analysis will be described later in Section 3.

3. Analysis Reports

3.1 Descriptive Statistics

We define dividends as total cash dividends paid to common and preferred shareholders. Although cash dividends paid to common should be more relevant, it is not a significant consideration in practice because in Hong Kong, the book value of preferred stock is extremely small (Faccio, Lang and Young 2001). Firms that pay dividends in year *t* is classified as dividends payers. A firm with a missing value of dividends is excluded from the sample firms in year *t*. Real dividends in 1996 and 2007 are nominal dividends converted to 2006 Hong Kong dollars using the implicit price deflator of GDP. Table 1 reports the aggregate nominal dividends, aggregate real dividends, mean and median real dividends in 1996 and in 2007. It can be seen that the aggregate nominal dividends, aggregate real dividends, mean and median real dividends all increase from 1996 to 2007 although the percentage of dividend payers decreases from 1996 to 2007.

<Insert Table 1 here>

3.2 Multivariate Analysis

3.2.1 Dividend Rates and Ultimate Control

As one of the effective devices, consistent policy of paying dividends plays a disciplinary role in addressing agency costs problems, monitoring managers and avoiding risk aversion from managers by keeping firms constantly in the market for capital (see, e.g. Rozeff 1982; Easterbrook 1984; Jensen 1986). Another effective device to control agency costs is the large shareholders' monitoring. Large shareholders often participate directly in decision making, selecting directors, and monitoring management. In particular, large shareholders play an important role in the process of takeovers (see, e.g. Shleifer and Vishny 1986). Any device of reducing agency costs is itself costly (see, e.g. Easterbrook 1984; Shleifer and Vishny 1986), it is reasonable to expect that consistent dividend policy and the monitoring by large shareholders are substitutes for each other, i.e. for firms without large shareholders' monitoring, the dividend policy is important to reduce agency costs, and as the controlling power of large shareholders increases, other things equal, dividend payout would become less valuable and would decrease, and vice versa (see, e.g. Easterbrook 1984).

However, firm's corporate policies are affected systematically by the heterogeneity in terms of characteristics across large shareholders such as the variances in potential power and ability to control，monitor and make decisions, the representation in board, and the involvement in management (see, e.g. Cronqvist and Fahlenbrach 2009). As two main categories of firms with controlling shareholders, the large shareholders in family controlled and state controlled firms show obvious heterogeneity in their characteristics, which possibly influences policy formulation and decision making. Specifically, it is worthwhile to discover whether and how the characteristics of large shareholders in family controlled and state controlled firms affect dividend payout policy.

For family controlled firms, on average about 60% of CEO, board chairman, or vice-chairman are members of the controlling family as of the year 1996 (see, e.g. Claessens, Djankov and Lang 2000) and about 95% of the controlling families have board or top management representation as of the year 2007 according to our manually collected data. Therefore, the agency conflicts in family controlled firms are mainly the expropriation of minority shareholders by the controlling families (see, e.g. Shleifer and Vishny 1997). In situations where there is no control divergence or control rights equal cash flow rights, higher cash flow rights by the controlling family leads to greater incentives to distribute dividends. While in other situations where the control rights by the controlling family exceed its cash flow rights, the controlling family will seek to keep control of corporate resources and pay low dividends due to the entrenchment effect. In the meantime, the costs of expropriation through paying less dividend would contain negative impacts on the corporation's market valuation, or the future terms on which it can access capital markets (see, e.g. Faccio, Lang and Young 2001; Claessens, Djankov, Fan and Lang 2002; Doidge, Karolyi and Stulz

2004). Therefore, for family controlled firms, the relationship between dividend payout and cash flow right or control right is complicated.

For state controlled firms, it is observed that state-owned firms are inefficient because they address the objectives of politicians rather than maximizing efficiency or shareholders wealth (see, e.g. Shleifer and Vishny 1994). In state-owned firms, the government/public manager is not the owner and has relatively weak incentives to reduce costs (see, e.g. Shleifer 1998), and the owner, the treasury, "is too soft to make him act as a full shareholder" (see, e.g. Boycko, Shleifer, and Vishny 1996). So the agency cost between the owner and the manager is more severe in state controlled firms. Based on the inefficiency view on state controlled firms (see, e.g. Shleifer and Vishny 1994) and the agency cost view (see, e.g. Rozeff 1982; Easterbrook 1984; Jensen 1986), the government manager would be in a dilemma regarding dividend policy. On the one hand, to maximize the wealth of shareholders, the treasury in particular, consistent dividend payout should be used as a tool to reduce the agency costs. On the other hand, without the pressure from shareholders or other agency cost control devices, such as regulations from corresponding authorities, the government managers are naturally unwilling to pay dividends because paying out dividends tightens the budget and exposes managers to the scrutiny of investors by raising capital from the financial market. Therefore, the dividend behavior in state controlled firms in the real world remains as an empirical issue, which depends on the regulations and the extent of the control.

To find the impacts of ultimate control and control divergence on dividend payout, this study chooses a research framework similar to that in Faccio, Lang and Young (2001) and uses their results as the benchmark analysis. Specifically, we conduct a cross-sectional regression analysis to quantify the marginal effect of controlling shareholders on dividend payout while controlling for other firm level characteristics such as leverage, profitability, growth opportunity, size and age.

We drop corporations reporting data that are not credible for a functioning business, such as reporting negative cash flows, negative earnings and dividends exceeding sales, cash flows or earnings (see, e.g. Faccio, Lang and Young 2001), and also omit the IPO year's observation to eliminate the IPO effect (see, e.g. Rozeff 1982). To smooth out noise and transitory factors, we use five-year averages rather than annual figures over 2003-2007. For corporations with incomplete data over the five-year period, we compute the average over the years with available data to maximize the size of our sample (see, e.g. Faccio, Lang and Young 2001)[1].

[1] There is no particular reason why we use five-year averages. As Faccio, Lang and Young (2001) use five-year averages in their analysis and in order to make parallel comparison, we also use five-year averages and their methodology with least modification in our analysis. In addition to the cross-sectional analysis using the five-year average as in Faccio, Lang and Young (2001), we also conduct a panel data analysis and the result is qualitatively similar. For brevity, we do not report the result here.

In the process of data screening, a phenomenon worth noting is that quite a few firms report negative cash flows, negative earnings or dividends exceeding sales, cash flows or earnings in some year(s) from 2003 to 2007. A conspicuous example is the firm named SHAW BROTHERS. SHAW BROTHERS was established in 1958 and got listed on the Hong Kong Stock Exchange in 1983. SHAW BROTHERS has been controlled by the SHAW family and the control right held by the SHAW family is about 75% as of the end of March 2008. SHAW BROTHERS had been paying dividends ever since 1984; dividend payout had been consistently exceeding sales, cash flows or earnings ever since 1995; and SHAW BROTHERS got delisted from the Hong Kong Stock Exchange in 2009. The examination of the reasons for the delisting of SHAW BROTHERS is beyond the scope of this study. However, this case echoes the findings of the reduced disciplinary effectiveness of dividend policy in their clinical study of the Times Mirror Company by DeAngelo and DeAngelo (2000).

Different from the study of Faccio, Lang and Young (2001) that examines the effect of control divergence and group affiliation on dividend rates, this study also pays attention to the "goodness of fit" of regression models. Therefore, we adapt their regression model with adjustment of some independent variables, e.g. including measures of profitability. The modified regression model is specified as follows:

$$Dividend = \beta_0 + \beta_1 Control + \beta_2 O/C + \beta_3 Leverage + \beta_4 Earnings + \beta_5 Growth + \beta_6 Size + \beta_7 Age + \varepsilon$$

where *Dividend* is measured by four ratios: the Dividend/Market-capitalization ratio, the Dividend/Sales ratio, the Dividend/Cash-flows ratio and the Dividend/Earnings ratio; *Control* is the percentage of control rights held by the controlling shareholder; *O/C* is the ratio of ownership right to control right held by the controlling shareholder; *Leverage* is the Debt/Equity ratio; *Earnings* are measured by the ratio of Net Income Before Extraordinary Items to total assets; *Growth* is the rank deciles for Growth of Sales, i.e. firms are ranked into ten equal-size groups in ascending order of Growth of Sales ranging from 1 to 10; *Size* is the logarithm of total assets and *Age* is the logarithm of firm years since incorporation.

Because of the possible substitution between dividend policy and controlling shareholders as agency-cost control devices (see, e.g. Easterbrook 1984), the sign for the coefficient of *Control* is expected to be negative. A corporation with a low O/C ratio will pay low dividends, since the controlling shareholder will seek to keep control of corporate resources. However, this consideration might be traded off against the impact of dividend policy on the corporation's market valuation, hence the future terms on which it can access capital markets (Faccio, Lang and Young 2001). So the expected sign for the coefficient of *O/C* is ambiguous. We expect the sign for the coefficient of *Leverage* to be negative because interest payments may reduce the amount of wealth left for shareholders, and debt and dividends are substitutes in controlling agency problems (see, e.g. Easterbrook 1984; Jensen 1986; Von Eije and

Megginson 2008). Higher earnings imply more wealth to be transferred to shareholders, so we expect a positive sign for the coefficient of *Earnings* (see, e.g. Fama and French 2001). Firms of large size tend to generate large earnings but also encounter bigger agency problems, hence the sign for the coefficient of *Size* is expected to be positive (see, e.g. Von Eije and Megginson 2008). Young and growth firms have more investment opportunities and the need to control agency-cost increases as a firm becomes older (see, e.g. Easterbrook 1984; Grullon, Michaely and Swaminathan 2002). Therefore, we expect a negative sign for the coefficient of *Growth* and a positive sign for the coefficient of *Age*.

<Insert Table 2 here>

The three columns in Table 2 show estimates of three regression models with different variables entering into the model respectively. In each regression, the four ratios of *Dividend* are separately regressed on *Control* and other variables. The model in column (1) (hereafter Model 1) includes the independent variables of *Control*, *Leverage*, *Earnings*, *Growth*, *Size* and *Age*. The model in column (2) (hereafter Model 2) is closest to the model in Faccio, Lang and Young (2001) including the independent variables of *Control*, *O/C*, *Leverage*, *Growth* and *Size*; and column (3) (hereafter Model 3) introduces all independent variables into the model.

The adjusted R^2 indicates that Model 2 has the lowest explanatory power compared with other two models. For the four ratios of *Dividend*, the signs of the coefficients of *Leverage*, *Earnings*, *Growth*, *Size* and *Age* are all as expected across the three models, consistent with the agency cost theory of dividends (see, e.g. Easterbrook 1984; Jensen 1986). For the Dividend/Sales ratio, the coefficient of *Control* is significantly negative at the 5% level in Model 1 and at the 10% level in both Model 2 and Model 3. For the Dividend/Cash-flows ratio, the coefficient of *Control* is significantly negative at the 5% level in both Model 1 and Model 2 and at the 10% level in Model 3. Similar to the result in Faccio, Lang and Young (2001), the O/C ratio has no significant effect on dividend rates as measured by the four ratios.

To investigate the dividend payout in family vs. state controlled firms, we split the sample into sub-samples according to whether the ultimate controlling shareholder is a state or a family. A firm is classified as a Family Firm if the ultimate owner of the firm is a family and as a State Firm if the ultimate owner of the firm is a state.

<Insert Table 3 here>

Panel A of Table 3 presents the descriptive statistics of variables for Family and State Firms. Relative to Family Firms, State Firms tend to have more concentrated control, less control divergence, less leverage, less earnings, higher growth, larger size and younger age. There is no significant difference in the mean/median dividend rates between Family Firms and State Firms across the four

ratios, which might be because the firm level characteristics are not controlled for in these descriptive statistics. Therefore, it is necessary to conduct multivariate analysis.

Using Family Firms as the reference group, we estimate the following regression model:

$$Dividend = \beta_0 + \alpha_0 State + \beta_1 Control + \alpha_1 State \times Control + \beta_2 O/C + \alpha_2 State \times O/C + \beta_3 Leverage + \beta_4 Earnings + \beta_5 Growth + \beta_6 Size + \beta_7 Age + \varepsilon$$

where *State* is a dummy variable which equals 1 if a firm is ultimately state controlled and 0 otherwise; and all other variables are as defined above. Panel B of Table 3 presents the regression results.

For Family Firms, the intercept term is significantly negative across the four regressions with Dividend/Market Capitalization ratio, Dividend/Sales ratio, Dividend/Cash-flows ratio and Dividend/Earnings ratio as dependent variable respectively. The coefficient for the *State* dummy variable measures the difference in the intercept term between Family Firms and State Firms. The coefficient for the *State* dummy variable is positive across the four regressions and significant when the Dividend/Sales ratio and Dividend/Earnings ratio are the respective dependent variables. So generally speaking, State Firms tend to have higher intercept term than Family Firms. The interpretation of the higher intercept terms for State Firms than for Family Firms is that State Firms tend to pay higher dividends than Family Firms after controlling for the effects of other variables or the mean dividend payout ratios in State Firms are higher than in Family Firms when other variables are equal to zero.

The main explanatory variable is the *O/C* ratio or the control divergence ratio while the main control variable is the *Control* variable. For Family Firms, none of the coefficients for the *Control* variable is significant and none of the coefficients for the interaction variable (*State*×*Control*) is significant. For Family Firms, the coefficient for the *O/C* ratio is significantly negative when Dividend/Cash-flows ratio is the dependent variable. This indicates that Family Firms tend to pay higher dividends when the *O/C* ratio is lower or the control divergence is greater, either because investors are more alert to expropriation by controlling families when the *O/C* ratio is lower or because minority investors trade off dividends for the monitoring by controlling shareholders when the *O/C* ratio is higher.

The coefficient for the interaction variable (*State*×*O/C*) is negative across the four regressions and significant when Dividend/Sales ratio is the dependent variable, which indicates that the slope for State Firms tend to be lower than that for Family Firms or at the same level of the *O/C* ratio, the rate of change in dividend payout ratios is faster for Family firms than for State Firms. So generally speaking, compared with Family Firms, State Firms tend to pay higher dividends when the *O/C* ratio is lower or the control divergence is greater, perhaps because investors are more alert to

the double agency problems in State Firms or because dividends payout plays the monitoring role as an agency cost control device. Altogether, one of the possible explanations for the lack of significant effect of the O/C ratio on dividend rates across all firms as shown in Table 2 might be the blurring effect arising from the heterogeneity across Family Firms and State Firms.

3.2.2 Dividend Smoothing and Target Payout

To be an agency cost control device, a necessary condition is that dividend policy should be stable over time and should not be affected substantially by short-term profits (see, e.g. Easterbrook 1984). But the stability of dividend payout is not a sufficient condition for dividends to be an agency cost control device, as pointed out by Fudenberg and Tirole (1995) that stable dividends or dividend smoothing might result from higher agency costs due to incumbency rent seeking on the side of managers.

Introducing the heterogeneity across large shareholders, we could further analyze the impact of family and state on the stability of dividend in family controlled and state controlled firms. As illustrated in the previous subsection, dividend payout in state controlled firms would just meet the requirements of regulations or fulfill their obligations in some contracts such as the conditions set forth when launching their IPO. Hence, the managers in state controlled firms will not frequently adjust the level of dividends payout due to the infrequent change of regulations or contract conditions. In contrast to state controlled firms, managers in family controlled firms represent the interests of the controlling family and would balance their benefits and costs when making decision on dividend payout.

We adopt a statistical model that is similar to the one built by Lintner (1956) and later used by several researchers (see, e.g. Brav et al. 2005, Von Eije and Megginson 2008). The empirical specification is given by

$$\Delta D_{i,t} = \alpha_i + \beta_{1i} D_{i,t-1} + \beta_{2i} E_{it} + u_{it}$$

Firm *i*'s change in annual dividend in year *t* is modeled as a function of lagged level of dividends (*D*) and current earnings (*E*). The speed of adjustment (SOA) is estimated as $-\hat{\beta}_1$ and the target payout (TP) as $-\hat{\beta}_2 / \hat{\beta}_1$. SOA indicates the speed with which firms adjust dividends and a higher value of SOA indicates a speedier adjustment or less smoothing of dividend payout. A lower value of TP indicates the declining of the importance of targeting the payout ratio.

From Table 4, we can see that SOA, the coefficient for *Earnings* and TP decline from 0.543, 0.152 and 28.0% in the sub-period of 1992-1996 to 0.312, 0.085

and 27.2% in the sub-period of 2003-2007, which implies more smoothing of dividends payout, less responsive of dividends payout to earnings and declining importance of targeting the payout ratio, and is consistent with the findings of Brav et al. (2005). Using the 1992-1996 sub-period as the reference period, the estimated differences of the coefficients indicate that the coefficients of D_{t-1} and E in the sub-period of 2003-2007 differ significantly from the corresponding coefficients in the sub-period of 1992-1996 at the 1% significance level. This suggests that dividends payout is more stable and less responsive to earnings in the sub-period of 2003-2007 than in the sub-period of 1992-1996.

<Insert Table 4 here>

<Insert Table 5 here>

Table 5 reports the results for Family Firms and State Firms for the sub-period of 2003-2007. We can see that the SOA for Family Firms is 0.399 higher than the SOA of 0.153 for State Firms and the estimated difference in the SOA between Family Firms and State Firms is significant at the 1% level. This indicates that Family Firms adjust dividends quicker than State Firms and the dividends payout is less stable in Family Firms than in State Firms. The coefficient for *Earnings* for Family Firms is 0.092 lower than the coefficient of 0.139 for State Firms, which implies that dividends payout in Family Firms is less responsive to earnings than in State Firms although the estimated difference is not significant. The estimated TP ratio of 90.8% for State Firms is substantially higher than the TP ratio of 23.1% for Family Firms, which is consistent with the regression result in Table 3 that the actual payout ratio in State Firms tends to be higher than that in Family Firms. The lower SOA and higher TP ratio for State Firms than for Family Firms in our sample is consistent with the finding of Gugler (2003) for a sample of Austrian firms over the 1991-1999 period and more new listings of State Firms might result in the more stable dividends payout observed for the sub-period of 2003-2007 as shown in Table 4.

3.2.3 Propensity to Pay Dividends

Fama and French (2001), Ferris, Sen and Yui (2006) and Von Eije and Megginson (2008) find a reduced propensity to pay dividends among US firms, UK firms and EU companies respectively. In this subsection we follow the methodology in Fama and French (2001) to examine whether firms in Hong Kong also become less likely to pay dividends. First, logit regressions are estimated to explain whether a firm with given characteristics, including size, profitability, and investment opportunities, pays dividends during the period 1992-1996. Then we apply the estimated annual coefficients from the 1992-1996 base period to the samples of firm characteristics observed in years from 2003-2007 to estimate the expected percent of dividend payers for each year. Since the probabilities associated with characteristics are fixed at their base period values, variation in the expected percent of payers in years from 2003-2007 is due to the changing characteristics of sample firms. We then use the

difference between the expected percent of payers for a year (calculated using the base period probabilities) and the actual percent to measure the change in the propensity to pay dividends. A decline in the propensity to pay implies a positive difference between expected and actual percents of payers.

Table 6 presents the two sets of results. One uses the market to book ratio (V_t/A_t) and the growth rate of assets (dA_t/A_t) to control for investment opportunities and the other uses only dA_t/A_t[2]. Both sets of results suggest an averagely increasing difference between expected and actual percents of payers. This implies a reduced propensity to pay dividends among our sample firms, which is consistent with patterns documented for firms in US, UK and EU countries (see, e.g. Fama and French 2001; Ferris, Sen and Yui 2006; and Von Eije and Megginson 2008).

Although the difference between expected and actual percents of payers in our sample firms exhibit a similar pattern as in the firms in US, UK and EU countries, it should be noted that both of the expected percent and the actual percent of dividends payers in our sample firms display an increasing trend, contrary to the decreasing pattern as observed in Fama and French (2001) and Ferris, Sen and Yui (2006). It may be due to the base period used to estimate the logit regressions in our analysis or due to the unique firm characteristics in our sample such as the presence of controlling shareholders.

<Insert Table 6 here>

Insights could not be gained on whether the reduced propensity to pay dividends also exists in family controlled firms versus state controlled firms due to the limited sample size in the base period and the requirement of logit regressions that the dependent variable must assume exactly two values on the cases being processed. Although longitudinal comparison is made unlikely by the limitation of the data, we conduct cross-sectional logit regression analysis on the likelihood to pay dividends by family controlled and state controlled firms separately and report the results in Table 7.

<Insert Table 7 here>

The independent variable is a dummy variable which equals 1 if a firm pays dividends in 2007 and 0 otherwise. The explanatory variables are profitability (*E/A*), the growth rate of assets (*dA/A*), the market-to-book ratio (*V/A*) and the percentage of our sample with the same or lower market capitalization as the specific firm (*Size*). *E* and *A* are earnings before interest but after taxes and total assets at the end of fiscal

[2] The reason for the two sets of results is that V_t/A_t might not satisfy the presumption of the approach that the proxies for investment opportunities have constant meaning through time so that the decline due to propensity to pay might be understated. Please refer to Page 24 & 26 of the paper by Fama and French (2001) for detailed discussion.

year 2007. *dA* is the change of total assets and *V* equals total assets minus book value of common equity then plus market value of common equity. Column 1 reports the logit regression result for family controlled firms and Column 2 reports the logit regression result for state controlled firms. The determinants of likelihood to pay dividends are different between family controlled firms and state controlled firms. For family controlled firms, dividend payers tend to be larger firms, more profitable and have less growth opportunity; while for state controlled firms, except the size matters, profitability and investment opportunities are not significant on the likelihood to pay dividends.

3.2.4 Concentration of Dividends and Earnings

DeAngelo, DeAngelo and Skinner (2004), Denis and Osobov (2008) and Von Eije and Megginson (2008) document concentration of dividends and earnings among a small number of firms in US and Europe. In this subsection we examine whether firms in Hong Kong also present the pattern of dividends concentration.

The sample is restricted to firms for which the dividends and earnings before extraordinary items are available for each year in question. Real dividends and real earnings in 1996 and in 2007 are nominal dividends and earnings converted to 2006 Hong Kong dollars using the implicit price deflator of GDP.

Table 8 ranks dividend-paying firms by cash dividends paid in 1996 and 2007, in groups of 20 firms. For each ranked group in 1996 and 2007, Column (1) and (2) report the percent of dividends paid, Column (3) and (4) report total real dividends, Column (5) and (6) report the percent of total earnings of dividend payers and Column (7) and (8) report total real earnings. In both years of 1996 and 2007, dividends and earnings are concentrated among top dividend payers in our sample firms, which is consistent with the evidences for US and European firms as documented by DeAngelo, DeAngelo and Skinner (2004), Denis and Osobov (2008), and Von Eije and Megginson (2008). In 1996, the top 20 dividend payers account for 76.4% of dividends and the extent of concentration increases from 1996 to 2007 as in 2007, the top 20 dividend payers account for 78.4% of dividends. In 1996, the top 20 dividend payers account for 75.5% of aggregate earnings among dividend payers and still account for 68.7% of aggregate earnings in 2007 though the extent of concentration declines a bit.

<Insert Table 8 here>

To examine whether there exists difference in the extent of dividend concentration between family and state controlled firms, we rank dividend payers among family and state controlled firms by cash dividends paid in 2007, in groups of 20 firms. For each ranked group, Column (1) and (2) of Table 9 report the percent of dividends paid, Column (3) and (4) of Table 9 report total nominal dividends in 2007,

Column (5) and (6) of Table 9 report the percent of total earnings of dividend payers and Column (7) and (8) of Table 9 report total nominal earnings in 2007.

<Insert Table 9 here>

Table 9 shows that dividends and earnings are also concentrated in family and state controlled firms. The top 20 dividend payers in family controlled firms account for 67.8% of the aggregate dividends paid by family controlled firms in 2007 and accounts for 59.9% of the aggregate earnings among the family controlled dividend payers in 2007. Compared with family controlled firms, dividends and earnings are more concentrated in state controlled firms. The top 20 dividend payers in state controlled firms account for 94.3% of the aggregate dividends paid by state controlled firms in 2007 and accounts for 86.9% of the aggregate earnings among the state controlled dividend payers in 2007. Therefore, the increased extent of dividend concentration among the top 20 payers in 2007 as observed in Table 8 is most likely attributable to the more concentrated dividends in state controlled firms than in family controlled firms.

4. Conclusion

Using a sample of large industrial firms listed on the main board of Hong Kong Stock Exchange, this study examines the dividends payout in firms with controlling shareholder along four dimensions, which are specifically the effect of control divergence on the level of dividend payout, the stability of dividend policy, the propensity to pay dividends and the concentration of dividends.

We find that the ultimate control held by the controlling shareholders is significantly negatively associated with dividend rates and the degree of control divergence measured by the ratio of ownership to control rights has no significant effect on dividend rates. The “speed of adjustment” parameter estimates based on Lintner’s model (1956) indicate the more smoothing dividend payout over time in firms with controlling shareholders. The dividend behavior in firms with controlling shareholders also exhibits similar patterns as in US, UK and EU firms. For example, we find more smoothing of dividend payout and declining importance of targeting the payout ratio as in Brav et al. (2005), reduced propensity to pay dividends as in Fama and French (2001), Ferris, Sen and Yui (2006) and Von Eije and Megginson (2008), and concentration of dividends as in DeAngelo, DeAngelo and Skinner (2004), Denis and Osobov (2008) and Von Eije and Megginson (2008).

Given the generality of large shareholders in modern firms around the world, e.g. in US, UK and EU firms (see, e.g. Faccio and Lang 2002; Laeven and Levine 2008; Cronqvist and Fahlenbrach 2009), this study contributes to the literature with the evidences of dividend behavior in firms with large shareholders, which has been generally overlooked or not articulated by previous literature. In particular, this study

hopes to enhance the understanding on how heterogeneity across large shareholders affects corporate policy by comparing the dividend behavior in family and state controlled firms.

In our sample, relative to family controlled firms, state controlled firms tend to have more concentrated control, less control divergence, less leverage, less earnings, higher growth, larger size and younger age. Generally speaking, the regression results of dividend rates on the control divergence indicate that state controlled firms tend to have higher intercept term than family controlled firms and tend to pay higher dividends when the control divergence is greater.

In terms of dividend smoothing and target payout, family controlled firms adjust dividends quicker than state controlled firms and the dividends payout is less stable and less responsive to earnings in family controlled firms than in state controlled firms. The target payout ratio in state controlled firms tends to be higher than that in family controlled firms.

The logit regression results on the likelihood to pay dividends by family and state controlled firms suggest that the determinants of likelihood to pay dividends are different between family controlled firms and state controlled firms. For family controlled firms, dividend payers tend to be larger firms, more profitable and have less growth opportunity; while for state controlled firms, except the size matters, profitability and investment opportunities are not significant on the likelihood to pay dividends. There also exists difference in the extent of dividend concentration between family and state controlled firms. Compared with family controlled firms, dividends and earnings are more concentrated in state controlled firms.

Finally, some caveats are in order. First, Hong Kong stock market is usually viewed as developed market with good corporate governance and investor protection. The role of more stringent regulations and institutions in Hong Kong might dominate the role of controlling shareholders, which might intervene the relationship between ultimate control and dividends payout and lead to less or no significant result. Second, the majority of the state controlled firms listed on Hong Kong Stock Exchange come from the mainland China recently. Compared with the mainland China, Hong Kong is of common law origin with better investor protection. These state controlled firms that are cross-listed in Hong Kong are subject to the more stringent regulations and institutions in Hong Kong, so the dividends payout might be upward biased compared with the state controlled firms in other regions/countries with poor investor protection. Therefore, we should be cautious in generalizing the results from this study and could not exclude alternate explanations. Third, this study only examines one of the important corporate policies, i.e. dividend policy, in firms with controlling shareholders. How large shareholders and the heterogeneity across large shareholders affect other important corporate policies such as investment policy and managerial compensation deserve further attention. These limitations provide directions for future research.

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Table 1: Aggregate dividends in 1996 and 2007 and related descriptive statistics

This table reports the aggregate nominal dividends, aggregate real dividends, mean and median real dividends in 1996 and in 2007. Firms that pay dividends in year *t* is classified as dividends payers. A firm with a missing value of dividends is excluded from the sample firms in year *t*. Real dividends in 1996 and 2007 are nominal dividends converted to 2006 Hong Kong dollars using the implicit price deflator of GDP.

	1996	2007	Absolute (%) change
1. Aggregate nominal dividends (HK$ millions)	$25,654.9	$211,860.5	$186,205.6 (+725.8%)
2. Aggregate real dividends (HK$ millions, 2006 base)	$21,504.5	$205,689.8	$184,185.3 (+856.5%)
3. Mean real dividend (HK$ millions, per dividend-paying firm)	$153.6	$681.1	$527.5 (+343.4%)
4. Median real dividend (HK$ millions, per dividend-paying firm)	$37.8	$74.0	$36.2 (+95.8%)
5. Number of dividend payers	125	232	107 (+85.6%)
6. Percent of dividend payers	89.3%	76.8%	-12.5%

Table 2: Regression of Dividends on Control, Control Divergence and Other Variables (Standard Errors in Parentheses)

The three columns represent three regression models with different variables entering into the model. In each regression, the four ratios of *Dividend* are separately regressed on *Control* and other variables. The model in column (1) includes the independent variables of *Control*, *Leverage*, *Earnings*, *Growth*, *Size* and *Age*. The model in column (2) includes the independent variables of *Control*, *O/C*, *Leverage*, *Growth* and *Size*; and column (3) introduces all independent variables into the model. *Dividend* is measured by four ratios (five-year average over 2003-2007): the Dividend/Market-capitalization ratio, the Dividend/Sales ratio, the Dividend/Cash-flows ratio and the Dividend/Earnings ratio; *Control* is the percentage of control rights held by the controlling shareholder as of the end of fiscal year 2007; *O/C* is the ratio of ownership right to control right held by the controlling shareholder as of the end of fiscal year 2007; *Leverage* is the Debt/Equity ratio (five-year average over 2003-2007); *Earnings* are measured by the ratio of Net Income Before Extraordinary Items to total assets (five-year average over 2003-2007); *Growth* is the rank decile for Growth of Sales (five-year average over 2003-2007), i.e. firms are ranked into ten equal-size groups in ascending order of Growth of Sales ranging from 1 to 10; *Size* is the logarithm of total assets(five-year average over 2003-2007) and *Age* is the logarithm of firm years since incorporation. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels respectively.

		Div/MarCap			Div/Sales		
	Expected Sign	(1)	(2)	(3)	(1)	(2)	(3)
Intercept	(?)	-0.030*	-0.009	-0.031*	-0.410***	-0.337***	-0.405***
		(0.018)	(0.018)	(0.018)	(0.132)	(0.127)	(0.132)
Control	(-)	0.000	-0.004	-0.001	-0.100**	-0.094*	-0.092*
		(0.006)	(0.007)	(0.007)	(0.047)	(0.049)	(0.048)
O/C	(?)		0.001	0.002		-0.031	-0.027
			(0.005)	(0.005)		(0.039)	(0.038)
Leverage	(-)	-0.004	-0.007***	-0.004	-0.049**	-0.073***	-0.052**
		(0.003)	(0.003)	(0.003)	(0.020)	(0.020)	(0.021)
Earnings	(+)	0.073***		0.073***	0.431***		0.424***
		(0.020)		(0.020)	(0.143)		(0.143)
Growth	(-)	-0.001**	-0.001***	-0.001**	-0.004	-0.003	-0.004
		(0.000)	(0.000)	(0.000)	(0.003)	(0.003)	(0.003)
Size	(+)	0.002**	0.002**	0.002**	0.023***	0.023***	0.023***
		(0.001)	(0.001)	(0.001)	(0.006)	(0.006)	(0.006)
Age	(+)	0.004**		0.004**	0.003		0.003
		(0.002)		(0.002)	(0.012)		(0.012)
Adj. R^2		18.5%	9.7%	18.1%	16.4%	12.2%	16.2%
F-statistics		8.098***	5.116***	6.935***	7.168***	6.354***	6.199***
No. of Observations		189	193	189	189	193	

Table 2 (Continued): Regression of Dividends on Control, Control Divergence and Other Variables (Standard Errors in Parentheses)

		Div/CashFlow			Div/Earnings		
	Expected Sign	(1)	(2)	(3)	(1)	(2)	(3)
Intercept	(?)	-0.778***	-0.445**	-0.762***	-0.572**	-0.363	-0.572**
		(0.179)	(0.183)	(0.178)	(0.235)	(0.227)	(0.236)
Control	(-)	-0.145**	-0.170**	-0.122*	-0.058	-0.087	-0.058
		(0.064)	(0.070)	(0.065)	(0.084)	(0.087)	(0.086)
O/C	(?)		-0.093	-0.083		-0.010	0.000
			(0.056)	(0.052)		(0.069)	(0.068)
Leverage	(-)	-0.096***	-0.151***	-0.103***	-0.112***	-0.152***	-0.112***
		(0.028)	(0.029)	(0.028)	(0.036)	(0.036)	(0.037)
Earnings	(+)	0.912***		0.892***	0.784***		0.784***
		(0.194)		(0.193)	(0.255)		(0.256)
Growth	(-)	-0.011***	-0.015***	-0.010***	-0.014***	-0.016***	-0.014***
		(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)
Size	(+)	0.040***	0.043***	0.042***	0.036***	0.037***	0.036***
		(0.008)	(0.008)	(0.008)	(0.010)	(0.010)	(0.010)
Age	(+)	0.064***		0.064***	0.039*		0.039*
		(0.016)		(0.016)	(0.021)		(0.021)
Adj. R^2		39.7%	27.5%	40.2%	23.5%	18.3%	23.1%
F-statistics		21.624***	15.569***	19.061***	10.620***	9.614***	9.052***
No. of Observations		189	193	189	189	193	189

Table 3: Comparison of Dividends Rates in Family and State Controlled Firms

Panel A presents the descriptive statistics of variables for Family and State Firms, and compare the mean/median of the four dividends ratios between family controlled and state controlled firms. The definitions of the variables in the regressions are given in Table 2. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels respectively.

Panel A: Descriptive statistics

	Mean (STD)		Median		1st Quartile		3rd Quartile	
	Family	State	Family	State	Family	State	Family	State
Control	0.419	0.507	0.401	0.519	0.319	0.404	0.531	0.595
	(0.159)	(0.155)						
O/C	0.876	0.970	1.000	1.000	0.881	1.000	1.000	1.000
	(0.234)	(0.107)						
Leverage	0.429	0.364	0.281	0.321	0.087	0.143	0.625	0.521
	(0.452)	(0.307)						
Earnings	0.087	0.069	0.078	0.058	0.045	0.034	0.110	0.088
	(0.058)	(0.046)						
Growth	5.176	6.118	5.000	7.000	3.000	4.000	8.000	8.000
	(3.001)	(2.503)						
Size	22.130	23.122	22.140	23.024	21.321	22.212	22.747	23.959
	(1.297)	(1.481)						
Age	3.098	2.672	3.113	2.639	2.565	2.303	3.638	2.773
	(0.699)	(0.596)						

	Mean (STD)			Median		
	Family	State	Mean Difference (Family-State)	Family	State	Median Difference (Family-State)
Div/MarCap	0.020	0.018	0.002	0.018	0.020	-0.002
	(0.017)	(0.013)				
Div/Sales	0.053	0.069	-0.016	0.023	0.019	0.004
	(0.113)	(0.133)				
Div/Cashflow	0.225	0.186	0.039	0.214	0.149	0.065
	(0.182)	(0.174)				
Div/Earnings	0.254	0.271	-0.017	0.217	0.262	-0.045
	(0.216)	(0.194)				

Table 3: (continued)

Using Family Firms as the reference group, we estimate the following regression model:

$$Dividend = \beta_0 + \alpha_0 State + \beta_1 Control + \alpha_1 State \times Control + \beta_2 O/C + \alpha_2 State \times O/C$$
$$+ \beta_3 Leverage + \beta_4 Earnings + \beta_5 Growth + \beta_6 Size + \beta_7 Age + \varepsilon$$

where *State* is a dummy variable which equals 1 if a firm is ultimately state controlled and 0 otherwise; and all other variables are as defined in Table 2. Panel B presents the regression results. Standard errors are in parentheses. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels respectively.

Panel B: Regression Analysis

	Div/MarCap	Div/Sales	Div/Cashflow	Div/Earnings
Intercept	-0.043**	-0.466***	-1.072***	-0.832***
	(0.021)	(0.159)	(0.205)	(0.271)
State	0.015	0.372**	0.235	0.440*
	(0.020)	(0.153)	(0.198)	(0.261)
Control	-0.004	-0.048	0.017	0.042
	(0.009)	(0.067)	(0.087)	(0.115)
*State*Control*	0.020	-0.160	-0.250	-0.068
	(0.017)	(0.124)	(0.160)	(0.211)
O/C	0.007	-0.074	-0.097*	0.032
	(0.006)	(0.045)	(0.059)	(0.077)
*State*O/C*	-0.027	-0.284*	-0.159	-0.414
	(0.020)	(0.149)	(0.193)	(0.255)
Leverage	-0.004	-0.053**	-0.124***	-0.122***
	(0.003)	(0.024)	(0.031)	(0.041)
Earnings	0.070***	0.546***	0.756***	0.744**
	(0.023)	(0.170)	(0.219)	(0.289)
Growth	-0.001	-0.002	-0.007	-0.009
	(0.000)	(0.003)	(0.004)	(0.006)
Size	0.002**	0.026***	0.054***	0.041***
	(0.001)	(0.007)	(0.009)	(0.011)
Age	0.004**	0.007	0.068***	0.054**
	(0.002)	(0.014)	(0.018)	(0.024)
Adj. R^2	17.1%	19.3%	40.8%	22.9%
F-statistics	4.252***	4.790***	11.883***	5.682***
No. of Observations	159	159	159	159

Table 4: Lintner's Model Regressions

This table provides summary statistics for speed-of-adjustment coefficients and the target payout ratios. We estimate the regression specification $\Delta D_{i,t} = \alpha_i + \beta_{1i} D_{i,t-1} + \beta_{2i} E_{it} + u_{it}$. The dependent variable is the change in cash dividends. The independent variables are the lagged value of cash dividends (D_{t-1}) and earnings before interest but after tax (E). The speed of adjustment (SOA) is estimated as $-\hat{\beta}_1$ and the target payout (TP) as $-\hat{\beta}_2 / \hat{\beta}_1$. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels respectively. "a" indicates the coefficients found in the sub-period 2003-2007 differ significantly from the coefficients in the sub-period 1992-1996 at the 1% significance level.

	1992-1996	2003-2007
Constant	0.059*	0.036***
	(0.032)	(0.011)
D_{t-1}	-0.543***	-0.312***a
	(0.062)	(0.031)
E	0.152***	0.085***a
	(0.016)	(0.009)
Adj. R^2	28.6%	10.5%
F-statistics	57.610***	58.565***
No. of observation	284	980
Target Payout Ratio	28.0%	27.2%

Table 5: Linter's Model Regressions for Family and State Controlled Firms

This table provides summary statistics for speed-of-adjustment coefficients and the target payout ratios in family and state controlled firms over the sub-period 2003-2007. The regression specification and definitions of the variables are given in Table 5. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels respectively. "a" indicates the coefficients found for family controlled firms differ significantly from the coefficients for state controlled firms in the period 2003-2007 at the 1% significance level.

	Family	State
Constant	0.051***	-0.013
	(0.018)	(0.014)
D_{t-1}	-0.399***	-0.153***[a]
	(0.044)	(0.046)
E	0.092***	0.139***
	(0.013)	(0.022)
Adj. R^2	13.5%	10.9%
F-statistics	44.705***	19.674***
No. of observation	561	305
Target Payout Ratio	23.1%	90.8% [a]

Table 6: Estimates from Logit Regressions of the Effect of Changing Characteristics and Declining Propensity to Pay on the Percent of Firms Paying Dividends

We use firms for each year of the 1992-1996 base period to estimate logit regressions that explain whether a firm pays dividends. The explanatory variables are profitability (E_t/A_t), the growth rate of assets (dA_t/A_t), the market-to-book ratio (V_t/A_t) and the percentage of our sample with the same or lower market capitalization as the specific firm. E_t and A_t are earnings before interest but after taxes and total assets at the end of fiscal year t. $dA_t=A_t-A_{t-1}$ and V_t equals total assets minus book value of common equity then plus market value of common equity. The number of firms and number of payers for a period refer to the average number for the period. Actual Percent is the percent of payers (the ratio of payers to firms, times 100). The Expected Percent of payers for a year t is estimated by applying the average logit regression coefficients for 1992-1996 to the values of the explanatory variables for each firm for year t, summing over firms, dividing by the number of firms, and then multiplying by 100. The evolution of Expected Percent measures the effects of changing characteristics on the percent of dividend payers. Expected-Actual measures the effect of propensity to pay. There are two sets of results. One uses V_t/A_t and dA_t/A_t to control for investment opportunities; the second uses only dA_t/A_t.

				V_t/A_t and dA_t/A_t		dA_t/A_t	
Year(s)	Number of Firms	Number of Payers	Actual (%)	Expected (%)	Expected -Actual (%)	Expected (%)	Expected -Actual (%)
1992-1996	71	68	96.7				
2003	191	129	67.5	80.3	12.8	68.1	0.6
2004	203	145	71.4	88.9	17.5	78.3	6.9
2005	220	164	74.5	90.8	16.3	81.0	6.5
2006	247	192	77.7	94.1	16.4	84.1	6.4
2007	269	213	79.2	97.7	18.5	89.3	10.1

Table 7: Likelihood to Pay Dividends by Family and State Controlled Firms

Only firms with non missing data of earnings, assets and market value for the year of 2007 are included in the sample. We estimate logit regressions about firm's propensity to pay dividends. The independent variable is a dummy variable which equals 1 if a firm pays dividends in 2007 and 0 otherwise. The explanatory variables are profitability (*E/A*), the growth rate of assets (*dA/A*), the market-to-book ratio (*V/A*) and the percentage of our sample with the same or lower market capitalization as the specific firm (*Size*). *E* and *A* are earnings before interest but after taxes and total assets at the end of fiscal year 2007. *dA* is the change of total assets and *V* equals total assets minus book value of common equity then plus market value of common equity. Column 1 reports the logit regression result for family controlled firms and Column 2 reports the logit regression result for state controlled firms. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels respectively.

	Family Firms (1)	State Firms (2)
Constant	0.869	-0.019
	(0.543)	(0.661)
E/A	9.633***	1.327
	(3.061)	(5.676)
V/A	-0.179	-0.321
	(0.117)	(0.270)
dA/A	-2.866***	0.273
	(1.082)	(1.116)
Size	2.263**	4.968***
	(0.886)	(1.483)
No. of observation	152	85
Psudo-R^2	33%	28.5%

Table 8: Dividend and Earnings Concentration of Dividend Payers in 1996 and in 2007

Real dividends and real earnings in 1996 and in 2007 are nominal dividends and earnings converted to 2006 Hong Kong dollars using the implicit price deflator of GDP. Dividend-paying firms are ranked by cash dividends paid in 1996 and 2007 in groups of 20 firms. For each ranked group in 1996 and 2007, Column (1) and (2) report the percent of dividends paid, Column (3) and (4) report total real dividends, Column (5) and (6) report the percent of total earnings of dividend payers and Column (7) and (8) report total real earnings. Each cell amount is rounded to the nearest significant digit that may not add up to the total.

	Percent of total dividends (%)		Real dividends (HK$millions, 2006 base)		Percent of total earnings of dividend payers (%)		Real earnings (HK$millions, 2006 base)	
Dividend Ranking	(1) 1996	(2) 2007	(3) 1996	(4) 2007	(5) 1996	(6) 2007	(7) 1996	(8) 2007
Top 20	76.4	78.4	$16,425	$161,281	75.5	68.7	$37,013	$378,459
21-40	11.6	8.7	2,494	17,973	11.9	8.2	5,824	45,321
41-60	5.8	4.1	1,257	8,397	6.7	6.5	3,295	35,886
61-80	3.4	2.7	736	5,458	3.7	3.2	1,829	17,360
81-100	1.9	1.8	404	3,768	0.5	3.3	230	17,926
101-120	0.9	1.3	185	2,771	1.9	2.6	922	14,055
121-140	<0.1	0.9	4	1,904	<0.1	1.7	-99	9,180
141-160		0.7		1,497		2.0		10,583
161-180		0.6		1,164		1.3		7,066
181-200		0.4		845		1.2		6,546
201-220		0.2		513		0.7		3,829
221-232		0.1		118		0.8		4,360
Total for all firms	100	100	$21,505	$205,689	100	100	$49,014	$550,571
Number of firms	125	232	125	232	125	232	125	232

Table 9: Dividend and Earnings Concentration of Dividend Payers in Family and State Controlled Firms

Dividend-paying firms are ranked by cash dividends paid in 2007 in groups of 20 firms. For each ranked group, Column (1) and (2) report the percent of dividends paid, Column (3) and (4) report total nominal dividends, Column (5) and (6) report the percent of total earnings of dividend payers and Column (7) and (8) report total nominal earnings. Each cell amount is rounded to the nearest significant digit that may not add up to the total.

	Percent of total dividends (%)		Nominal dividends (HK$millions, 2007)		Percent of total earnings of dividend payers (%)		Nominal earnings (HK$millions, 2007)	
Dividend Ranking	(1) Family	(2) State	(3) Family	(4) State	(5) Family	(6) State	(7) Family	(8) State
Top 20	67.8	94.3	$27,947	$149,537	59.9	86.9	$94,418	$321,435
21-40	13.3	4.4	5,469	7,053	11.2	8.5	17,721	31,298
41-60	8.0	1.1	3,285	1,685	10.8	4.3	17,027	15,818
61-80	5.0	0.2	2,052	367	5.6	0.4	8,767	1,509
81-100	3.3		1,341		3.9		6,137	
101-120	2.0		822		4.7		7,377	
121-138	0.7		275		4.0		6,252	
Total for all firms	100	100	$41,191	$158,642	100	100	$157,699	$370,060
Number of dividend payers	138	71	138	71	138	71	138	71
Number of firms	179	90	179	90	179	90	179	90