CORPORATE PAYOUT POLICY IN FOUNDER AND FAMILY FIRMS

James Lau*, Joern H. Block**

Abstract

This paper investigates the tax and agency explanations of corporate payout policy by investigating the likelihood, the level and the method of payout in founder and family firms. Controlling founders and families are both subject to the tax disadvantage of dividends arising from their substantial shareholdings, but family firms are arguably subject to more severe agency conflicts than founder firms due to their susceptibility to wasteful expenditure and the adverse effects of intra-family conflicts. Results indicate that founder firms on average are less likely and pay a lower level of dividends than family firms. Moreover, founder firms prefer share repurchase over dividends as the main method of payout whereas family firms prefer dividends over share repurchase. Overall, our findings are consistent with the agency explanation of corporate payout policy.

Keywords: Corporate Payout Policy, Founder Firms, Family Firms, Agency Theory

** Department of Accounting and Corporate Governance, Faculty of Business and Economics, Macquarie University, North Ryde, NSW 2109, Australia*
Fax: 61 2 9850 8497
Tel.: 61 2 9850 9284
E-mail: james.lau@mq.edu.au
*** University of Trier*

1. Introduction

The relation between ownership structure and corporate payout policy has been well documented in the literature. Institutional ownership (Grinstein and Michaely, 2005), managerial ownership (Farinha, 2003; Rozeff, 1982; Schooley and Barney, 1994) and family ownership (Hu et al., 2007; Setia-Atmaja et al., 2009) have all been shown to be associated with the likelihood, the level and the method of corporate payout. The two widely used theoretical explanations in the literature are tax and agency explanations. Tax explanation focuses on whether a firm alters its payout policy to attract a particular group of shareholders (Dhaliwal, Erickson and Trezevant, 1999) and whether corporate insiders directly influence the firm's payout policy to suit their tax status (Hsieh and Wang, 2008). Empirical evidence shows that institutional investors, whose dividends are not tax disadvantaged, prefer to invest in dividend paying firms. In contrast, corporate insiders whose dividends are tax disadvantaged prefer to use share repurchase as the main method of payout. Thus there is a significant relation between corporate payout policies and the tax preferences of investors.

Agency explanation, on the other hand, views corporate payout as a monitoring mechanism that reduces the level of cash available to managers and therefore limits their opportunities to engage in wasteful spending (Easterbrook, 1984; Jensen, 1986). Rozeff (1982) shows that higher insider ownership is associated with a lower level of dividend payout as the interests between managers and shareholders are aligned. However, Farinha (2003) argues that managerial entrenchment may also occur when insider ownership reaches a certain level, which leads to more severe agency conflicts and the need to increase dividend payout. Both theoretical explanations appear to be supported in the literature, but most studies only adopt either the tax explanation or the agency explanation without dismissing or acknowledging the other as an alternative explanation. As a result, it is unclear whether tax and agency explanations are complementary or competing hypotheses on the relation between ownership structure and corporate payout policy.

This paper aims to extend the understanding of the relation between ownership structure and corporate payout policy in the following ways. First, existing empirical evidence shows that the presence of families as controlling shareholders has significant impact on corporate payout policy. In addition to controlling families, recent empirical studies identify founders as a separate type of controlling shareholder. Miller, Le Breton-Miller, Lester and Cannella (2007) define founder firms as firms with the presence of founders as top managers

or substantial shareholders but without the presence of other family members. They find that founder firms on average significantly outperform family firms. Block (2012), and Lau and Block (2012) find that the levels of R&D expenditure and cash holdings are significantly different between founder firms and family firms. Although both are characterised by the presence of controlling shareholders, recent empirical evidence suggests that these two types of firm exhibit different corporate behaviours. As a result, controlling founders and families are distinguished in this paper as two separate ownership structures and the impact of their presence on corporate payout policy is investigated.

Second, this paper investigates tax and agency explanations of corporate payout policy by investigating the likelihood, the level and the method of payout in founder and family firms. The distinction between the two types of firm provides an opportunity to investigate tax and agency explanations as competing hypotheses. Based on tax explanation, both founders and family members have substantial ownership stakes in their firms and they also often serve in top managerial and board positions, therefore they have strong incentives to set a payout policy that suits their needs. Given the tax disadvantage of dividends on individual investors, it is expected that both founder firms and family firms are less likely to prefer dividends as the major method of payout if tax is a major consideration that determines payout policy. On the other hand, based on agency explanation, it is expected that firms with more severe agency conflicts are more likely to use dividends as a monitoring mechanism. It is argued that the severity of agency conflicts in family firms is worse than in founder firms, because the empirical evidence shows that on average, family firms have lower investment efficiency (Fahlenbrach, 2009), a lower level of R&D expenditure (Block, 2012) and a lower level of cash holdings (Lau and Block, 2012) than founder firms. This indicates that family firms are more susceptible to wasteful expenditure and thus more likely to use dividend payment to mitigate agency conflicts. The literature shows that family firms may also suffer from intra-family conflict (Schulze, Lubatkin and Dino, 2003a), which originates from different sources of conflict of interest among family members such as sibling rivalry and role ambiguity among family members. The negative impact which arises from intra-family conflicts contributes to more severe agency conflicts in family firms compared to founder firms, which leads to the use of dividends as a monitoring mechanism.

Based on a sample of S&P 500 firms from 1994-2003, this paper finds that on average founder firms are less likely to pay dividends than family firms. Likewise, this paper finds that the level of dividends paid by founder firms is significantly lower than the level paid by family firms. This paper finds that founder firms prefer to use share repurchases as the main method of payout, whereas family firms prefer to use dividends. The results indicate that the corporate payout policy in founder firms is significantly different from the policy of family firms. Theoretically, the results appear to support the agency explanation of corporate payout.

The rest of the paper is organised as follows. Section 2 discusses the literature in relation to tax and agency explanations of corporate payout policy, and develops hypotheses in regards to the corporate payout policy in family and founder firms. Section 3 outlines the empirical models used in this paper. Section 4 describes the sample and provides descriptive statistics. Section 5 discusses the regression results and Section 6 concludes.

2. Ownership structure and corporate payout policy

2.1 Tax explanation

Miller and Modigliani (1961) argue that in a perfect capital market without taxes, a firm's dividend policy is irrelevant to investors. However, the introduction of taxes alters this irrelevance proposition. It is expected that rational investors would construct a portfolio that maximises their after-tax return. For instance, in the U.S., institutional investors are subject to a lower tax rate on dividends than on capital gains, whereas individual investors are subject to a higher tax rate on dividends than on capital gains. Empirical evidence (Dhaliwal et al., 1999; Hsieh and Wang, 2008; Scholz, 1992) shows that the differential tax treatment on dividends and capital gains on different groups of investors have implications for how they construct their portfolios and their reaction to changes in firms' dividend policies. It also shows how certain groups of influential investors affect a firm's payout policy, including the likelihood of initiating dividends, the level of dividends paid and the composition of the method of payout (dividends and repurchase).

Scholz (1992) documents a negative relation between the yield of an investor's portfolio and the differential tax treatment of dividends and capital gains. His results confirm that individual investors on average are sensitive to tax rates when constructing their investment portfolio. Likewise, Graham and Kumar (2006) show that low-income investors prefer to invest in dividend paying firms. However, they also find that individual investors as a group prefer to invest in non-dividend paying firms, and institutional investors prefer to invest in dividend paying firms. The results can be attributed to the tax advantage of institutional investors relative to individual investors in relation to

dividends (Allen, Bernardo and Welch, 2000). Dhaliwal et al. (1999) examine the changes in ownership after firms have initiated a dividend payment. They find that there is a significant increase in institutional ownership in firms that initiate a dividend payment. This is consistent with the expectation that institutional investors, whose dividends are not tax disadvantaged, will purchase shares from individual investors whose dividends are tax disadvantaged. Grinstein and Michaely (2005) also find that institutional investors prefer to invest in dividend paying firms; however they do not find that a higher level of dividends attracts a higher level of institutional ownership. Empirical evidence shows that tax status is a significant consideration for individual and institutional investors in response to changes in a firm's dividend policy.

A number of empirical studies suggest that some shareholders directly influence the payout policy to suit their tax status. For instance, Hsieh and Wang (2008) document a significant relation between corporate insiders' tax preferences and firms' choices of payout. They argue that insiders are subject to significant tax disadvantage on dividends due to their high level of compensation and high personal wealth. As a result, insiders have strong incentive to establish a payout policy that suits their tax status. Consistent with their expectation, firms with higher levels of insider ownership are associated with a higher proportion of share repurchases in the total payouts. They also show that the association is stronger in years when there is a greater gap between the tax rates on dividends and repurchases. Following the dividend tax cut in 2003 that eliminated the differential tax rate on dividends and capital gain, several studies show that firms with high levels of executive ownership were more likely to initiate and increase the level of dividend payment (Chetty and Saez, 2005), and also more likely to substitute dividends for repurchases (Brown, Liang and Weisbenner, 2007).

The existing empirical evidence suggests that there is a significant relation between corporate payout policy and the tax preferences of investors. Individual and institutional investors tend to react to changes in payout policies whereas corporate insiders tend to directly influence payout policies.

2.1.1 Family firms versus founder firms

Hsieh and Wang (2008) argue that corporate insiders with higher levels of ownership have incentives to alter payout policies because (1) they have substantial economic interest based on their significant ownership stake, high compensation and overall personal wealth; and (2) they are in a position to directly determine firms' payout policies. In this regard, it appears that both family members and founders satisfy these criteria. First, both founders and family members are significant shareholders who have substantial equity stakes in their firms. For instance, Anderson and Reeb (2003a) show that in S&P 500 firms, family members on average hold 18 per cent of outstanding equity in their firms. Miller et al. (2007) distinguish between founder firms and family firms based on Fortune 1000 listing and show that family members on average hold 18 per cent of shares in their firms, whereas founders on average hold 12 per cent of shares. These percentages of ownership are significantly higher than the average insider ownership displayed in the sample firms used in Hsieh and Wang (2008). Second, a significant proportion of family members and founders also serve as top managers and directors in their firms. For instance, Anderson and Reeb (2003a) show that 45 per cent of family firms appoint founders or other family members as CEO and Anderson et al. (2004) show that 20 per cent of board seats in family firms are occupied by family members. Thus like other corporate insiders, founders and family members have strong incentives to alter the corporate payout policy of their firms.

Unlike other corporate insiders whose tenure in their firms can be limited by their employment contracts, family members and founders often serve in their roles for a long period of time (James, 1999) and pass their shares across generations (Villalonga and Amit, 2006). Compared to other corporate insiders, founders and family members are more likely to retain their ownership stakes over a longer period, which means that they are more likely to store their wealth as unrealised gains. Consequently, the comparative tax disadvantage between dividends and share repurchases is higher for family members and founders than for other corporate insiders. Hu et al. (2007) find that family firms on average are less likely to pay dividends, and when they do, they pay lower levels of dividends than non-family firms due to the tax disadvantage of dividends. They also find that family firms on average prefer share repurchases over dividends as a method of corporate payout. In this paper, founder firms and family firms are differentiated and compared against widely held firms. It is argued that if tax is a major consideration in determining payout policy, both family members and founders would have similar motivations because they are both subject to the tax disadvantages of dividends. As a result, it is expected that both founder and family firms are less likely to prefer dividends as a method of corporate payout. The first set of hypotheses based on tax explanation is derived as follows:

H1a: The likelihood of paying dividends is lower in founder and family firms than in widely held firms

H1b: The level of dividends paid is lower in founder and family firms than in widely held firms

H1c: The proportion of dividends to share repurchases is lower in founder and family firms than in widely held firms

2.2 Agency explanation

Easterbrook (1984) argues that the consistent policy of paying dividends forces managers to constantly go to the capital market to raise capital or issue debt, thereby reducing agency costs by exposing managers to external monitoring by market participants. Jensen (1986) concurs with this view by stating that corporate payouts such as dividends and share repurchase reduce the free cash flow controlled by managers, which restricts them from investing in value-destroying projects at the expense of shareholders. Thus, corporate payout is viewed as an effective mechanism that mitigates the agency conflicts between managers and shareholders that arise from the separation of ownership and control (Jensen and Meckling, 1976).

Rozeff (1982) argues that the increase in insider ownership helps to align interests between managers and shareholders, which in turn lessens the need to pay dividends to reduce agency costs. He finds that higher insider ownership is associated with a lower level of dividend payout, and a higher dispersion of outsider ownership is associated with a higher level of dividend payout. Schooley and Barney (1994) and Farinha (2003) also find a significant relation between managerial ownership and dividend payout. However, instead of a linear relation, they document a U-shaped relationship between the two variables. They attribute their results to the presence of managerial entrenchment. They argue that at low managerial ownership levels, the increase in managerial ownership helps to reduce agency costs, which lowers the level of dividends paid. However, when the level of managerial ownership reaches a certain point, managers are likely to become entrenched as a result of increased control through voting power and reduced portfolio diversification due to higher stakes in their own firms. The presence of managerial entrenchment increases agency costs, which leads to a higher level of dividend payout.

The relation between managerial ownership and dividend payout is also affected by the level of shareholder protection, the level of ownership concentration and the identity of the controlling/managers. La Porta et al. (2000) show that stronger minority shareholder rights are associated with higher levels of dividend payout as the presence of stronger legal protection empowers minority shareholders to pressure managers to distribute cash. Faccio et al. (2001) find that the level of dividend payout by firms is significantly higher in Western Europe compared to East Asia. They state that, despite both regions being characterised by a high degree of ownership concentration with the presence of controlling shareholders and managers, the stronger investor protection and more effective monitoring of large block shareholders in European firms limits the scope of expropriation by controlling shareholders. In contrast, the weak investor protection and collusion between large block shareholders and controlling shareholders in Asian firms expose minority shareholders to managerial expropriation.

In regard to the identity of controlling shareholders/managers, Setia-Atamaja et al. (2009) focus on a particular type of controlling shareholder – the family shareholder. Based on a sample of Australian listed firms, they find that family firms on average pay a higher level of dividends than non-family firms. They argue that in a capital market environment with high investor protection and high private benefits of control due to high ownership concentration, family firms prefer to use dividends as a mechanism to mitigate agency conflicts. On the other hand, Hu et al. (2007) show that in the U.S., where there is strong investor protection and lower levels of ownership concentration, family firms on average are less likely to pay dividends, and when they do, they pay a lower level of dividend compared to non-family firms. Moreover, they distinguish between the ownership and management dimensions of family control and find that it is family management, rather than family ownership that explains the difference between family and non-family firms. They argue that the presence of family members as managers mitigates the conflict of interest between managers and shareholders, thus reducing the need to use dividends as a monitoring mechanism.

In addition to the likelihood and the level of dividend payments, the severity of agency conflicts may also affect the methods of corporate payout. Although agency theory does not explicitly distinguish between dividends and share repurchases as both methods of payout serve the purpose of reducing free cash flow controlled by managers (Jensen, 1986), Hu et al. (2007) argue that dividends are a more effective method than share repurchases due to the stickiness of dividend payments. Indeed, Lintner (1956) observes that managers in general prefer a smooth pattern of dividend payout. In contrast, share repurchases are used as a flexible mechanism to distribute cash (Brav, Graham, Harvey and Michaely, 2005; Jagannathan, Stephens and Weisbach, 2000). Leary and Michaely (2011) provide recent empirical evidence that the level of dividend smoothing remains high; at the same time, the pattern of share

repurchases is more volatile and more closely related to the level of corporate earnings. Hu et al. (2007) find that the presence of family members as managers leads to lower dividend payments relative to share repurchases compared to non-family firms, which is consistent with the expectation that firms with less severe agency conflicts will prefer repurchases over dividends.

The empirical evidence shows that corporate payout is an important mechanism for reducing agency costs and is significantly affected by different ownership structures. In this paper, founder firms and family firms are distinguished as separate types of ownership structure, and it seeks to investigate the implications of the severity of agency conflicts faced by these two types of firms on the likelihood, the level and the composition of corporate payouts.

2.2.1 Family versus founder firms

Rozeff (1982) shows that there is a negative relation between insider ownership and the level of dividend payment, as the higher level of insider ownership helps to mitigate conflicts of interest between managers and shareholders. In this regard, both family and founder firms are characterised by the presence of controlling shareholders, which lessens the needs to use dividend payment as a monitoring mechanism. Nevertheless, there are a number of reasons to suggest that the severity of agency conflicts in family firms is worse than in founder firms, which in turn may affect the likelihood, level and composition of corporate payouts.

First, Jensen (1986) argues that dividend payment reduces the level of cash held within the firm, which prevents self-interested managers from investing in value destroying projects. Thus firms that are more susceptible to wasteful expenditure are more likely to pay dividends to mitigate agency conflicts. A number of empirical studies show that the presence of controlling founders or family members affects the investment efficiency of firms. For instance, Fahlenbrach (2009) finds that firms with founders as CEOs have a higher level of R&D and capital expenditure, which results in higher firm value than other firms. Block (2012) compares the level of R&D investment and productivity in founder, family and widely held firms. He finds that founder ownership is positively associated with the level, as well as the productivity, of R&D; in contrast, family ownership is negatively associated with the level of R&D investment. Block (2012) argues that founders have both the incentive and the power to monitor the firm's management, which mitigates moral hazard and asymmetric information problems arising from R&D investment. Family members on the other hand are comparatively less committed and less knowledgeable about their businesses, which results in less effective monitoring of management and hence less R&D investment.

Lau and Block (2012) compare the agency costs of cash holdings and founder and family firms. They find that founder firms hold a significantly higher level of cash than family firms. Moreover, they document a positive interaction effect between founder management and cash holdings on firm value, which signals that the presence of founders as managers helps to mitigate the agency costs of cash holdings. They argue that founder firms are less likely to engage in wasteful expenditure due to founders' economic incentives, strong psychological commitment and superior knowledge. On the other hand, family firms are more susceptible to wasteful spending as a result of adverse selection and moral hazard arising from altruism. The empirical evidence cited indicates that founder firms on average are less susceptible to wasteful expenditure than family firms; therefore, it is expected that founder firms are also less likely than family firms to use dividend payments to mitigate agency conflicts.

Second, Villalonga and Amit (2006) argue that the classic agency conflict between owners and managers, as stated in Jensen and Meckling (1976) is mitigated in firms controlled by individuals (founders) and families because they have an incentive to monitor management. However, individuals or families may also use their controlling positions to exploit the interest of minority shareholders, which results in another agency problem. This view does not distinguish between founder firms and family firms, and is widely used in empirical studies that compare firm performance and behaviour between founder/family and widely held firms (Anderson and Reeb, 2003a; Villalonga and Amit, 2006). The major deficiency of this view is that it perceives families as a single unit with no conflict of interest between family members.

The existence of conflict of interest among family members, or intra-family conflict (Schulze et al., 2003a), is nevertheless well documented in the family business literature. Harvey and Evans (1994) describe family firms as 'fertile fields for conflicts': the combination of conflict from the business and conflict from the family are compounded in family firms. The sources of intra-family conflict include sibling rivalry (Dyer, 1994), role ambiguity among family members (Kellermanns and Eddleston, 2004), children's desire to differentiate themselves from their parents (Schulze et al., 2003a) and generational ownership dispersion (Eddleston and Kellermanns, 2007). High levels of intra-family conflict may lead to negative emotions such as anger and resentment among family members, which is shown to have a negative impact on firm performance (Eddleston

and Kellermanns, 2007). Moreover, intra-family conflict may lead to additional coordination costs and less effective monitoring of management, which results in a lower level of R&D investment and productivity (Block, 2012). The presence of intra-family conflict contributes to more severe agency conflicts in family firms than in founder firms, which may result in the need to use dividend payments as a monitoring mechanism.

It is argued that family firms are more susceptible to wasteful expenditure and more likely to suffer from intra-family conflicts than founder firms, therefore it is expected that family firms will be more likely than founder firms to prefer dividends as a form of corporate payout. The second set of hypotheses based on an agency explanation is derived as follows:

H2a: The likelihood of paying dividends is lower in founder firms than in family firms

H2b: The level of dividends paid is lower in founder firms than in family firms

H2c: The proportion of dividends to share repurchases is lower in founder firms than in family firms

3. Empirical model

3.1 The likelihood of paying dividends and share repurchase

Hypotheses 1a and 2a investigate whether the presence of founders and families affects the likelihood of firms paying dividends and conducting share repurchase. The logistic regression with clustered standard errors at the firm-level is used to regress the indicator variables of dividends and share repurchase against the family/founder indicator variables with the other firm characteristics as control variables. Logistic regression model is used because the dependent variable of this regression (likelihood of paying dividends and share repurchase) is a binary variable or in other words the variable can have only two possible outcomes; i.e. paid dividends or did not pay dividends. The two possible outcomes are coded as "1" or "0" and in this case it is coded as "1" if a firm paid dividends in any particular year and it is coded as "0" if a firm did not pay dividends in any particular year. Logistic regression is then used to predict the odds of paying dividends based on the values of the independent variables.

The regression models are derived as follows:

$$Dividends\ indicator_{i,t} = \alpha + \beta_1 Family\ firm_{i,t} + \beta_2 Founder\ firm_{i,t} + \beta_3 Institutional\ ownership_{i,t} + \beta_4 Corporate\ governance\ indices_{i,t} + \beta_5 Size_{i,t} + \beta_6 Market\text{–}to\text{-}book_{i,t} + \beta_7 Non\text{-}operating\ income_{i,t} + \beta_8 Retained\ earnings_{i,t} + \beta_9 Sales\ growth_{i,t} + \beta_{10} ROA_{i,t} + \beta_{11} StdROA_{i,t} + \beta_{12} Firm\ age_{i,t} + \beta_{13} Supershares_{i,t} + Industry\ dummies + Year\ dummies + \varepsilon_{i,t} \quad (1)$$

$$Repurchase\ indicator_{i,t} = \alpha + \beta_1 Family\ firm_{i,t} + \beta_2 Founder\ firm_{i,t} + \beta_3 Institutional\ ownership_{i,t} + \beta_4 Corporate\ governance\ indices_{i,t} + \beta_5 Size_{i,t} + \beta_6 Market\text{–}to\text{-}book_{i,t} + \beta_7 Non\text{-}operating\ income_{i,t} + \beta_8 Retained\ earnings_{i,t} + \beta_9 Sales\ growth_{i,t} + \beta_{10} ROA_{i,t} + \beta_{11} StdROA_{i,t} + \beta_{12} Firm\ age_{i,t} + \beta_{13} Supershares_{i,t} + Industry\ dummies + Year\ dummies + \varepsilon_{i,t} \quad (2)$$

The dependent variables of the regression include the indicator variable of dividends and repurchase, which take the value of 1 if a firm pays dividends or repurchases shares in a year. Dividends are measured as common dividends. Following Grullon and Michaely (2002) and Hsieh and Wang (2008), Dividends are measured as the total amount of dividends declared on the common stock and Repurchase is measured as the expenditure on the purchase of common and preferred stocks minus any reduction in the redemption value of preferred stock. The main independent variables are the indicator variables of the family and the founder, which include the ownership and management indicator variables of family and founder firms. Tax explanation predicts that family and founder firms are less likely to pay dividends than widely held firms. If supported, both the coefficients of founder firms and family firms are expected to be significantly negative. Agency explanation predicts that founder firms are less likely to pay dividends than family firms; if supported the coefficient of founder firms is expected to be significantly lower than the coefficient of family firms.

The control variables include a number of firm characteristics that have been shown in the literature to affect a firm's payout decisions. Fama and French (2001) identify size, profitability and growth opportunities as the determinants of a firm's likelihood to pay dividends. Following Hu et al. (2007), the natural log of sales is used to control for size; market-to-book ratio and sales growth to control for growth opportunities; and return on assets (ROA) to control for profitability. Market-to-book ratio is measured as market equity (stock price × number of shares outstanding) divided by book equity. Sales growth is measured as change in sales from last year divided by last year sales. ROA is measured as net income divided by book value of total assets. In addition to ROA, standard deviations of ROA (StdROA) and the proportion of non-operating income (Non-operating income) are also used to control for the risk of earnings. StdROA is measured as standard deviation of ROA over a three-year period and Non-operating income is measured as non-operating income divided by total assets. In addition to size, profitability and growth opportunities, the proportion of earned capital to contributed capital, which is measured as retained

earnings divided by book value of total assets, is also controlled. DeAngelo, DeAngelo and Stulz (2006) document a significant relation between the decision to pay dividends and the earned/contributed capital mix; they argue that it is a good proxy for a firm's life-cycle because firms are less likely to rely on external capital when they mature. Firm age is also used as an additional variable to proxy for a firm's life-cycle. Moreover, Jo and Pan (2009) show that there is a significant relation between managerial entrenchment and dividend policy. A number of variables are used to control for the degree of managerial entrenchment, which include the anti-takeover index (G-index) constructed by Gompers, Ishii and Metrick (2003), the entrenchment index (E-index) developed by Bebchuk, Cohen and Ferrell (2009), the percentage of institutional ownership and the presence of a class of shares with higher voting rights than cash flow rights (Supershares). Finally, SIC four digit code is used to control for industry effects and year indicators to control for time effects.

All financial variables are extracted from the Compustat database. Ownership, management, firm age and Supershares are manually collected from the SEC Edgar database. The governance indices are extracted from the authors' website. To minimise the effects of outliers, all financial variables are winsorised at the 1 per cent level of each tail.

3.2 The level of dividends and repurchase

Hypotheses 1b and 2b investigate whether the presence of families and founders affects the level of dividends paid and the level of repurchase conducted by firms. Following Hu et al. (2007), Tobit regression model is used to regress the level of dividends/repurchase against the indicator variables of family and founder firms, and other control variables. Tobit regression model is used because the dependent variable (the level of dividends and repurchase) takes on the value of 0 with positive probability but is a continuous random variable over strictly positive values. Using the level of dividends paid as an example, if the value of the dependent variable is 0, it means that the firm did not pay any dividends (a positive probability) in a particular year. On the other hand, if a firm pays dividend in any particular year, the dependent variable must be a positive value. In this situation, OLS regression model cannot be used the regression estimator is inconsistent. The use of OLS regression would lead to a downwards-biased estimate of the slope coefficient and an upwards-biased estimate of the intercept.

The regression models are derived as follows:

$$\begin{aligned}\textit{Dividends ratio}_{i,t} = {} & \alpha + \beta_1 \textit{Family firm}_{i,t} + \beta_2 \textit{Founder firm}_{i,t} + \beta_3 \textit{Institutional ownership}_{i,t} \\ & + \beta_4 \textit{Corporate governance indices}_{i,t} + \beta_5 \textit{Size}_{i,t} + \beta_6 \textit{Market-to-book}_{i,t} \\ & + \beta_7 \textit{Non-operating income}_{i,t} + \beta_8 \textit{Retained earnings}_{i,t} + \beta_9 \textit{Sales growth}_{i,t} \\ & + \beta_{10} \textit{ROA}_{i,t} + \beta_{11} \textit{Stdev of ROA}_{i,t} + \beta_{12} \textit{Firm age}_{i,t} + \beta_{13} \textit{Supershares}_{i,t} \\ & + \textit{Industry dummies} + \textit{Year dummies} + \varepsilon_{i,t} \end{aligned} \quad (3)$$

$$\begin{aligned}\textit{Repurchase ratio}_{i,t} = {} & \alpha + \beta_1 \textit{Family firm}_{i,t} + \beta_2 \textit{Founder firm}_{i,t} + \beta_3 \textit{Institutional ownership}_{i,t} \\ & + \beta_4 \textit{Corporate governance indices}_{i,t} + \beta_5 \textit{Size}_{i,t} + \beta_6 \textit{Market-to-book}_{i,t} \\ & + \beta_7 \textit{Non-operating income}_{i,t} + \beta_8 \textit{Retained earnings}_{i,t} + \beta_9 \textit{Sales growth}_{i,t} + \beta_{10} \textit{ROA}_{i,t} + \\ & \beta_{11} \textit{Stdev of ROA}_{i,t} + \beta_{12} \textit{Firm age}_{i,t} + \beta_{13} \textit{Supershares}_{i,t} \\ & + \textit{Industry dummies} + \textit{Year dummies} + \varepsilon_{i,t} \end{aligned} \quad (4)$$

The dependent variables include Dividends ratio and Repurchase ratio, which are measured as the dollar amount of dividends and repurchases divided by book value of total assets. Following Grinstein and Michaely (2005) and Hu et al. (2007), book value of assets instead of earnings or market value is used as a deflator, because losses or excessive volatility of market values may cause significant changes in the ratios but not necessarily the amount of dividends and repurchases. Firms that pay dividends or conduct repurchases in a year will have a positive ratio whereas firms that do not pay dividends or conduct repurchases will have the ratios censored at zero. Tax explanation predicts that family and founder firms are likely to pay less dividends and repurchases than widely held firms; if supported both the coefficients of founder firms and family firms are expected to be significantly negative. Agency explanation predicts that founder firms are likely to pay less dividends and repurchases compared to family firms; if supported the coefficient of founder firms is expected to be significantly lower than the coefficient of family firms.

3.3 Payout method

Hypotheses 1c and 2c investigate whether the presence of families and founders affects the method of payout. Following Hsieh and Wang (2008), Tobit regression is used to regress the proportion of repurchase to dividends paid by firms against the indicator variables of family and founder firms, and other control variables. The regression model is derived as follows:

$$\textit{Payout composition ratio}_{i,t} = \alpha + \beta_1 \textit{Family firm}_{i,t} + \beta_2 \textit{Founder firm}_{i,t} + \beta_3 \textit{Institutional ownership}_{i,t} + \beta_4 \textit{Corporate governance indices}_{i,t} + \beta_5 \textit{Size}_{i,t}$$

$+ \beta_6 Market\text{-}to\text{-}book_{i,t} + \beta_7 Non\text{-}operating\ income_{i,t} + \beta_8 Retained\ earnings_{i,t} + \beta_9 Sales\ growth_{i,t} + \beta_{10} ROA_{i,t} + \beta_{11} Stdev\ of\ ROA_{i,t} + \beta_{12} Firm\ age_{i,t} + \beta_{13} Supershares_{i,t} + Industry\ dummies + Year\ dummies + \varepsilon_{i,t}$ (5)

The dependent variable is payout composition ratio, which is defined as the amount of repurchase minus dividends divided by the amount of repurchase plus dividends ($\frac{REPO-DIV}{REPO+DIV}$). This ratio captures a firm's propensity to choose a specific form of payout as it shows the net percentage of total payout as repurchase (Hsieh and Wang, 2008). The ratio is constrained between -1 and +1 and is censored on both sides. Firms with a ratio of +1 use repurchase as the only form of payout in a particular year. In contrast, firms with a ratio of -1 use dividends as the only form of payout in a particular year. Firms with a ratio of 0 pay an equal amount of dividends and repurchase in a particular year. Firms that do not have any payout in a year are excluded from this analysis. Tax explanation predicts that family and founder firms will both prefer repurchase over dividends as the main payout method compared to widely held firms; if supported β_1 and β_2 are expected to be significantly positive. Agency explanation predicts that founder firms are more likely to choose repurchase as the main payout method compared to family firms; if supported β_2 is expected to be more positive or less negative than β_1.

4. Sample

4.1 Definitions of founder, family and widely held firms

The sample firms are classified into three different types: founder, family and widely held firms. The management and ownership dimensions of founder and family firms are further distinguished. Following the definitions used in Block (2012), a founder-owned firm is a firm in which the founder has at least five per cent of the firm's common equity but no other family members are present as large shareholders. A founder-managed firm is a firm in which the founder serves as CEO or chairperson but no family member of the founder is involved as CEO or chairperson. A family-owned firm is a firm in which the founding family owns at least five per cent of the firm. If both the founder and other family members are owners of the firm, it is classified as a family-owned firm. A family-managed firm is a firm in which a member of the founding family (excluding the founder) serves as CEO or chairperson. Firms without founders or other family members as substantial shareholders or serving as CEO or chairperson are classified as widely held firms.

4.2 Descriptive statistics

Table 1 reports the descriptive statistics of the sample. The means of dividends to assets and repurchase to assets ratios are 0.016 and 0.028 respectively. Consistent with prior studies in the U.S. (Brav et al., 2005; Grullon and Michaely, 2002), share repurchase has surpassed dividends as the dominant form of corporate payout. In addition to the average amount of payout, the methods of payout of the sample firms are also computed. Table 2 shows that approximately 15 per cent of firms in this sample do not pay any dividends or conduct any repurchase in a particular year. Of the remaining firms, around 20 per cent use dividends as the only form of payout; close to 15 per cent use repurchase as the only form of payout; and about half of the firms use a combination of dividends and repurchase. The proportion of no payout firms in this sample appears to be smaller than the other large scale U.S. studies (Fama and French, 2001; Hsieh and Wang, 2008). The reason is that this sample is restricted to S&P 500 firms; these firms are mature firms that are relatively large, with a long history and lower growth potential. According to the life-cycle theory (DeAngelo et al., 2006), these firms are more likely to distribute their earnings through dividends or repurchase. The proportion of no payout firms is comparable to Hu et al. (2007) who also drew their sample from S&P 500 firms.

This table provides summary statistics for the sample. Dividends ratio is measured as the dollar amount of common dividends divided by book value of total assets. Repurchase ratio is measured as the dollar amount of expenditure on the purchase of common and preferred stocks minus any reduction in redemption value of preferred stock divided by book value of total assets. Assets and Sales are measured in millions. Market-to-book ratio is measured as market equity (stock price multiplied by the number of shares outstanding) divided by book equity. Non-operating income and Retained earnings are measured as the dollar amount of non-operating income and retained earnings divided by book value of assets. Sales growth is measured as change in sales from last year divided by last year sales. ROA is measured as net income divided by book value of total assets. Standard deviation of ROA is measured as standard deviation of ROA over a three-year period. G-index is the anti-takeover index developed by Gompers et al. (2003). E-index is the entrenchment index developed by Bebchuk et al. (2009). Supershares takes the value of 1 if the firm issues shares that has a higher voting than cash flow rights. Firm age is the number of years for which the firm has existed. Founder management is an indicator variable that takes the value of 1 if a founder serves as either CEO or Chairperson. Founder ownership is an

indicator variable that takes the value of if a founder owns at least 5 per cent of ownership. Family management is an indicator variable that takes the value of 1 if a family member serves as CEO or Chairperson. Family ownership is an indicator variable that takes the value of 1 if a family member owns at least 5 per cent of ownership. Institutional ownership is the percentage of shares owned by institutions. All financial variables are winsorised at the 1 per cent level on either tail.

Table 1. Descriptive statistics

	Mean	Median	Standard Deviation	25th Percentile	75th Percentile
Dividends ratio	0.016	0.011	0.019	0.000	0.023
Repurchase ratio	0.028	0.005	0.049	0.000	0.034
Founder management	0.183	0	–	–	–
Founder ownership	0.014	0	0.053	0	0
Family management	0.109	0	–	–	–
Family ownership	0.04	0	0.124	0	0
Institutional ownership	0.135	0.12	0.115	0.055	0.206
E-index	2.315	2	1.38	1	3
G-index	9.626	10	2.629	8	12
Assets (in millions)	9091	4134	13113	2029	10805
Sales (in millions)	8178	4173	11485	1812	9689
Market-to-book ratio	4.511	3.109	4.759	2.002	5.147
Non-operating income	0.01	0.005	0.011	0.001	0.011
Retained earnings	0.298	0.298	0.257	0.145	0.449
Sales growth	0.126	0.085	0.26	0.01	0.187
Return on assets (ROA)	0.111	0.111	0.08	0.071	0.156
Standard deviation of ROA	0.033	0.021	0.041	0.01	0.038
Supershares	0.057	0	–	–	–
Firm age	67.146	66	44.281	26	98

Comparing the payout methods across founder, family and widely held firms, some noticeable differences are observed. First, the proportion of no payout firms is much higher in founder firms. More than one third of founder firms pay no dividends or repurchase any shares in a particular year compared to 13 per cent of widely-held firms and just five per cent of family firms. Second, the most popular payout methods for both family and widely held firms is the combination of dividends and repurchases, with 62 per cent and 53 per cent respectively. On the other hand, only 22 per cent of founder firms pay dividends and repurchase shares in the same year. Instead, over 30 per cent of founder firms prefer to conduct repurchase as the only form of payout. These figures reveal that although founder and family firms are both characterised as firms with controlling shareholders, their payout preferences are very different. A large proportion of founder firms prefer not to have any payout; those founder firms that do have some payout prefer to use share repurchase only. In contrast, most family firms have payout and they prefer either dividends only or a combination of dividends and share repurchase.

Table 2. Payout methods of founder, family and widely held firms

	No Payout	Dividend only	Repurchase only	Dividend and Repurchase	Total
Founder firm	165 (32.48%)	74 (14.57%)	153 (30.12%)	116 (22.83%)	508 (100%)
Family firm	24 (5.04%)	128 (26.89%)	28 (5.88%)	296 (62.18%)	476 (100%)
Widely held firm	226 (13.56%)	353 (21.18%)	202 (12.12%)	886 (53.15%)	1667 (100%)
All firms	415 (15.65%)	555 (20.94%)	383 (14.45%)	1298 (48.96%)	2651 (100%)

The table displays the methods of payout used by founder, family and widely held firms. Founder firm is a firm in which the founder is either the CEO or the chairman of the firm or the founder owns at least 5 per cent of the ownership. Family firm is a firm in which a family member other than

the founder is either the CEO or the chairperson of the firm or a family member owns at least 5 per cent of the ownership. Widely held firm is a firm in which there is no founder or family member who serves as CEO or chairperson of the firm or owns 5 per cent of ownership.

Table 3 reports the differences in means of firm characteristics among the three different types of firm. In relation to the level of payout, founder firms on average pay significantly lower amounts of dividends than both family and widely held firms but they have a significantly higher amount of share repurchase. Family firms on average pay a significantly higher amount of dividends than widely held firms and a similar amount of share repurchase. In relation to other firm characteristics, founder firms are smaller, younger, have stronger growth opportunities based on the market-to-book ratio and sales growth, and have better governance based on G-index compared to family and widely held firms.

The results from Table 5.2 and Table 5.3 show that the likelihood, level and preferences of payout appear to be different between founder firms and family firms. However, it is unclear whether the differences are driven by the identity of the controlling managers or shareholders, or due to the differences in firm characteristics between these two types of firm.

Table 3. Comparisons of firm characteristics in founder, family and widely held firms

	Founder-controlled Firms	Family-controlled Firms	Widely-held Firms	Founder vs. Family	Founder vs. Widely-held	Family vs. Widely-held
	Mean	Mean	Mean	Diff. in Means		
Dividends ratio	0.006	0.023	0.016	-0.017***	-0.01***	0.007***
Repurchase ratio	0.036	0.025	0.026	0.011***	0.009***	-0.001
E-index	1.89	2.032	2.526	-0.142	-0.636***	-0.495***
G-index	8.608	9.399	10	-0.791***	-1.392***	-0.601***
Institutional Ownership	0.126	0.081	0.154	0.045***	-0.028***	-0.073***
Firm size	7.922	8.373	8.48	-0.45***	-0.558***	-0.107**
Market-to-book ratio	5.653	4.476	4.174	1.177***	1.479***	0.303
Non-operating income	0.012	0.006	0.006	0.006***	0.006***	0.000
Retained earnings	0.306	0.393	0.268	-0.087***	0.038***	0.125***
Sales growth	0.185	0.118	0.111	0.067***	0.074***	0.007
Return on assets (ROA)	0.104	0.121	0.111	-0.017***	-0.007	0.01***
Standard deviation of ROA	0.047	0.021	0.031	0.026***	0.016***	-0.01***
Firm age	29.449	73.137	76.923	-43.689***	-47.474***	-3.787**

The differences in means of firm characteristics among founder, family and widely held firms are reported. Founder firm is a firm in which the founder is either the CEO or the chairman of the firm or the founder owns at least 5 per cent of the ownership. Family firm is a firm in which a family member other than the founder is either the CEO or the chairperson of the firm or a family member owns at least 5 per cent of the ownership. Widely held firm is a firm in which there is no founder or family member who serves as CEO or chairperson of the firm or owns 5 per cent of ownership. Dividends ratio is measured as the dollar amount of common dividends divided by book value of total assets. Repurchase ratio is measured as the dollar amount of expenditure on the purchase of common and preferred stocks minus any reduction in redemption value of preferred stock divided by book value of total assets. G-index is the anti-takeover index developed by Gompers et al. (2003). E-index is the entrenchment index developed by Bebchuk et al. (2009). Institutional ownership is the percentage of shares owned by institutions. Firm size is measured as the natural log of sales. Market-to-book ratio is measured as market equity (stock price multiplied by the number of shares outstanding) divided by book equity. Non-operating income and Retained earnings are measured as the dollar amount of non-operating income and retained earnings divided by book value of assets. Sales growth is measured as change in sales from last year divided by last year

sales. ROA is measured as net income divided by book value of total assets. Standard deviation of ROA is measured as standard deviation of ROA over a three-year period. Firm age is the number of years for which the firm has existed. The test of differences in means is based on the two-sample t test. ***, ** and * denote significance at the 1, 5 and 10 per cent levels respectively.

5. Regression results

5.1 The likelihood of paying dividends and repurchase

Table 4 reports the impact of the presence of controlling founders and families on the firm's likelihood of paying dividends and/or undertaking share repurchase. The dependent variable of Models 1 to 3 is the dividends indicator, whereas the dependent variable of Models 4 to 6 is the repurchase indicator. In Model 1, two indicator variables are included to identify founder-managed and founder-owned firms. The coefficient of the founder management indicator variable is significantly negative at the five per cent level (β = -0.798, z = -2.06), which indicates that firms with founders as managers are less likely to pay dividends than other firms. On the other hand, the coefficient of the founder ownership indicator variable is not statistically significant, which indicates that the presence of founders as owners does not affect the likelihood of paying dividends. In Model 2, two indicator variables are included to identify family-managed and family-owned firms. The coefficients of both indicator variables of family firms are significantly positive at the five per cent level (β = 1.315, z = 2.45; β = 1.034, z = 1.97). The results show that the presence of family members as managers or owners significantly increases the likelihood of firms paying dividends. In Model 3, all four indicator variables of founder and family firms are included. Consistent with the results from Models 1 and 2, the presence of founders as managers significantly decreases the likelihood of firms paying dividends, whereas the presence of family members as managers or owners significantly increases the likelihood of firms paying dividends compared to widely held firms.

Hu et al. (2007) find that family firms without active family management are more likely to pay dividends, while family firms with active family management are less likely to pay dividends than widely held firms. After separating founder and family firms, the results show that it is not the presence of active management of family members, but rather the identity of controlling owners that affects the likelihood of firms paying dividends. The results do not support the tax explanation. If tax was the primary concern in relation to dividend policy, the likelihood of paying dividends in both family firms and founder firms would be lower than in widely held firms. The results show that the likelihood of paying dividends is significantly higher in family firms than in widely held firms. Therefore, hypothesis 1a is not supported. On the other hand, the findings show that founder firms are significantly less likely to pay dividends than family firms, which is consistent with agency explanation that firms with more severe agency conflicts are associated with a higher likelihood of paying dividends. As a result, hypothesis 1b is supported.

In Models 4 to 6, whether the presence of controlling founders and families affects the likelihood of firms repurchasing shares is examined. In Model 6, the coefficients of all four indicator variables of founder and family firms are statistically insignificant. Consistent with Hu et al. (2007), the findings show that the presence of family members as managers or owners does not significantly affect the likelihood of firms repurchasing shares. The results show that there is no significant difference in relation to the likelihood of repurchasing shares in founder, family and widely held firms.

This table examines the relation between ownership structure (Founder, family and widely held firms) and the firm's likelihood of paying dividends and conduct share repurchase. Logistic regression is used to regress the indicator variables of dividends and share repurchase against the family/founder indicator variables and the other firm characteristics variables. The dependent variable of Models 1-3 is dividends indicator, which takes the value of 1 if a firm pays dividends in a year. The dependent variable of Models 4-6 is repurchase indicator, which takes the value of a firm conducts share repurchase in a year. Founder management is an indicator variable that takes the value of 1 if a founder serves as either CEO or Chairperson. Founder ownership is an indicator variable that takes the value of if a founder owns at least 5 per cent of ownership. Family management is an indicator variable that takes the value of 1 if a family member serves as CEO or Chairperson. Family ownership is an indicator variable that takes the value of 1 if a family member owns at least 5 per cent of ownership. Institutional ownership is the percentage of shares owned by institutions. E-index is the entrenchment index developed by Bebchuk et al. (2009). G-index is the anti-takeover index developed by Gompers et al. (2003). Firm size is measured as the natural log of sales. Market-to-book ratio is measured as market equity (stock price multiplied by the number of shares outstanding) divided by book equity. Non-operating income and Retained earnings are measured as the dollar amount of non-operating income and retained earnings divided by book value of assets. Sales growth is measured as change in sales from last

year divided by last year sales. ROA is measured as net income divided by book value of total assets. Standard deviation of ROA is measured as standard deviation of ROA over a three-year period. Firm age is the number of years for which the firm has existed. . For each regression, the first row is the coefficient on the independent variable and the second is the test statistic. Standard errors are estimated with clustered errors at the firm-level. ***, ** and * denote significance at the 1, 5 and 10 per cent levels respectively.

Table 4. The relation between ownership structure and the likelihood of firms' payout

Dependent variable:	Dividends indicator	Dividends indicator	Dividends indicator	Repurchase indicator	Repurchase indicator	Repurchase indicator
	(1)	(2)	(3)	(4)	(5)	(6)
Independent variables:						
Founder management	-0.798 (-2.06)**		-0.697 (-1.75)*	-0.015 (-0.06)		-0.013 (-0.05)
Founder ownership	-0.526 (-1.14)		-0.327 (0.71)	-0.396 (-1.48)		-0.451 (-1.62)
Family management		1.315 (2.45)**	1.067 (2.00)**		0.049 (0.17)	0.025 (0.08)
Family ownership		1.034 (1.97)**	1.041 (1.99)**		-0.243 (-0.79)	-0.302 (-0.97)
Institutional ownership	-2.534 (-2.68)***	-1.074 (-1.09)	-1.439 (-1.46)	-0.331 (-0.55)	-0.353 (-0.60)	-0.509 (-0.86)
E-index	-0.094 (-0.64)	-0.037 (-0.22)	-0.053 (-0.34)	-0.037 (-0.41)	-0.043 (-0.48)	-0.049 (-0.54)
G-index	0.221 (2.99)***	0.225 (2.68)***	0.228 (2.93)***	0.035 (0.75)	0.036 (0.77)	0.035 (0.74)
Firm size	0.498 (3.07)***	0.516 (3.1)***	0.529 (3.08)***	0.169 (1.86)*	0.168 (1.85)*	0.165 (1.78)*
Market-to-book ratio	0.015 (0.55)	0.012 (0.44)	0.02 (0.76)	-0.001 (0.04)	-0.002 (-0.14)	0.000 (0.02)
Non-operating income	-14.541 (-1.63)	-19.388 (-2.08)**	-14.569 (-1.60)	10.343 (1.56)	9.534 (1.48)	10.118 (1.54)
Retained earnings	2.87 (4.07)***	2.704 (3.81)***	2.828 (3.94)***	1.534 (4.44)***	1.528 (4.39)***	1.578 (4.55)***
Sales growth	-1.087 (-3.96)***	-1.15 (-4.38)***	-1.157 (-4.32)***	-1.048 (-4.25)***	-1.038 (-4.23)***	-1.051 (-4.24)***
Return on assets (ROA)	3.517 (1.99)**	3.548 (1.96)**	3.789 (2.10)**	3.531 (3.59)***	3.599 (3.67)***	3.519 (3.56)***
Standard deviation of ROA	-5.323 (-2.08)**	-4.745 (-1.78)*	-4.345 (-1.65)*	1.463 (0.77)	1.257 (0.66)	1.264 (0.66)
Firm age	0.026 (4.63)***	0.029 (5.55)***	0.026 (4.69)***	0.005 (2.49)**	0.006 (2.94)***	0.005 (2.47)**
Supershares	-0.923 (-1.43)	-1.746 (-2.67)***	-1.601 (-2.48)**	1.103 (2.65)***	1.147 (2.77)***	1.161 (2.79)***
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
No. of observation	2630	2630	2630	2628	2628	2628
Log likehihood	-927	-913	-898	-1530	-1532	-1528

Besides ownership structure, the results also show a significant association between the likelihood of paying dividends and other firm characteristics. Consistent with the life-cycle theory (DeAngelo et al., 2006), it is found that firms that are larger, older, more profitable, with less sales growth and a higher proportion of retained earnings are more likely to pay dividends than their counterparts. The results also indicate that firms with weaker governance based on G-index, are more likely to pay dividends, which is consistent with the results documented in Jo and Pan (2009) who show that entrenched managers are more likely to pay dividends. Moreover, the findings show that firms that issue shares with higher voting than cash flow rights are less likely to pay dividends. In relation to the likelihood of repurchasing shares, it is found that some of the firm characteristics that affect the likelihood of paying dividends such as firm size, firm age, profitability, sales growth and the proportion of retained earnings, also affect the likelihood of repurchasing shares. Interestingly, in contrast to the likelihood of paying dividends, the findings show that firms that issue shares with higher voting rights than cash flow rights are more likely to repurchase shares compared to their

counterparts. The results suggest that firms that issue shares with higher voting rights than cash flow rights prefer share repurchases over dividends.

5.2 The level of dividends and repurchase

Table 5 reports the impact of the presence of controlling founders and families on the level of dividends and repurchase paid by firms. The dependent variable of Models 1 to 3 is the dividend ratio whereas the dependent variable of Models 4 to 6 is the repurchase ratio. In Model 1, two indicator variables of founder firms are included. The coefficient of founder management is significantly negative at the 1 per cent level (β = -0.01, t = -3.40), which indicates that the presence of founders as managers is associated with a lower level of dividends paid. On the other hand, the coefficient of founder ownership is not statistically significant, which shows that the presence of founders as owners does not affect the level of dividends paid. In Model 2, two indicator variables of family firms are included. The coefficients of family ownership and management are significantly positive at the 10 per cent level (β = 0.005, t = 1.82; β = 0.006, t = 1.74). The results show that the presence of family members as managers or owners significantly increases the level of dividend paid. In Model 3, all four indicator variables of founder and family firms are included. The coefficient of founder management is significantly negative at the 1 per cent level (β = -0.01, t = -3.08) whereas family ownership is significantly positive at the 10 per cent level (β = 0.005, t = 1.77). The results indicate that the presence of founders as managers significantly decreases the level of dividends paid, whereas the presence of family members as owners significantly increases the level of dividends paid compared to widely held firms.

Hu et al. (2007) find that the presence of family members as owners significantly increases the level of dividends paid whereas the presence of family members as managers significantly decreases the level of dividends paid. After separating founder and family firms, it is also found that the presence of family members as owners significantly increases the level of dividends paid. However, the results indicate that only the presence of founders as managers significantly decreases the level of dividends paid. The presence of other family members as managers does not significantly affect the level of dividends paid. The results once again do not support tax explanation. Family members, despite being subject to tax disadvantage, prefer a higher level of dividends than founder and widely held firms. Therefore, hypothesis 2a is not supported. On the other hand, the findings show that the presence of founders as managers significantly decreases the level of dividends paid compared to family and widely held firms. The results support agency explanation that the presence of founders lessens the need to use dividend payments to mitigate agency conflicts. As a result, hypothesis 2b is supported.

Models 4 to 6 display the regression results in relation to the level of repurchase. In Model 6, the coefficients of all four indicators of family and founder firms are not statistically significant. The results indicate that the presence of founders or family members as managers and owners does not significantly affect the level of repurchase engaged by firms.

In relation to other firm characteristics, the findings show that the level of institutional ownership is negatively associated with the level of dividends paid, which is consistent with the findings by Grinstein and Michaely (2005) and Hu et al. (2007) that institutional shareholders do not prefer higher dividend payments. On the other hand, the level of institutional ownership is not related to the level of share repurchase. Consistent with life cycle theory, firms that are older, larger, more profitable, have a higher proportion of retained earnings and higher growth opportunities are associated with a higher level of dividends being paid. The level of share repurchase is not affected by the size or the age of firms; it is, however, affected by the proportion of retained earnings, growth opportunities and profitability. In regard to profitability, the level of share repurchase is also associated with the variability of profitability as well as the level of profitability. It is found that the standard deviation of ROA is positively associated with the level of share repurchase, which indicates that firms with relatively less predictable earnings are more likely to engage in a higher level of share repurchase compared to their counterparts.

The table examines the relation between ownership structure (Founder, family and widely held firms) and the level of dividends paid and the level of repurchase conducted by firms. Tobit regression is used to regress dividends/repurchase ratio against the family/founder indicator variables and the other firm characteristics variables. The dependent variable of Models 1-3 is dividends ratio, which is measured as the dollar amount of dividends divided by book value of total assets. The dependent variable of Models 4-6 is repurchase ratio, which is measured as the dollar amount of expenditure on repurchase divided by book value of total assets. Firms that pay dividends or conduct repurchase in a year will have a positive ratio whereas firms that do not pay dividends or conduct repurchase will have the ratios censored at zero. Founder management is an indicator variable that takes the value of 1 if a founder serves as either CEO or Chairperson. Founder ownership is an indicator variable that takes the value of if a founder owns at least 5 per cent of ownership. Family management is an indicator variable that

takes the value of 1 if a family member serves as CEO or Chairperson. Family ownership is an indicator variable that takes the value of 1 if a family member owns at least 5 per cent of ownership. Institutional ownership is the percentage of shares owned by institutions. E-index is the entrenchment index developed by Bebchuk et al. (2009). G-index is the anti-takeover index developed by Gompers et al. (2003). Firm size is measured as the natural log of sales. Market-to-book ratio is measured as market equity (stock price multiplied by the number of shares outstanding) divided by book equity. Non-operating income and Retained earnings are measured as the dollar amount of non-operating income and retained earnings divided by book value of assets. Sales growth is measured as change in sales from last year divided by last year sales. ROA is measured as net income divided by book value of total assets. Standard deviation of ROA is measured as standard deviation of ROA over a three-year period. Firm age is the number of years for which the firm has existed. . For each regression, the first row is the coefficient on the independent variable and the second is the test statistic. Standard errors are estimated with clustered errors at the firm-level. ***, ** and * denote significance at the 1, 5 and 10 per cent levels respectively.

Table 5. The relation between ownership structure and the level of firms' payout

Dependent variable:	Dividends ratio	Dividends ratio	Dividends ratio	Repurchase ratio	Repurchase ratio	Repurchase ratio
	(1)	(2)	(3)	(4)	(5)	(6)
Independent variables:						
Founder management	-0.01 (-3.40)***		-0.01 (-3.08)***	0.002 (0.26)		0.001 (0.18)
Founder ownership	-0.05 (-1.24)		-0.003 (-0.87)	-0.001 (-0.06)		-0.003 (-0.28)
Family management		0.005 (1.82)*	0.003 (1.16)		-0.004 (-0.55)	-0.004 (-0.51)
Family ownership		0.006 (1.74)*	0.005 (1.77)*		-0.01 (-1.32)	-0.01 (-1.35)
Institutional ownership	-0.023 (-3.66)***	-0.014 (-2.31)**	-0.017 (-2.87)***	0.004 (0.24)	-0.004 (-0.25)	-0.005 (-0.29)
E-index	-0.000 (-0.38)	0.000 (0.16)	-0.000 (-0.05)	-0.001 (-0.56)	-0.002 (-0.75)	-0.002 (-0.75)
G-index	0.001 (1.95)*	0.001 (1.68)*	0.001 (1.84)*	0.001 (0.69)	0.001 (0.71)	0.001 (0.70)
Firm size	0.002 (2.15)**	0.003 (2.43)**	0.002 (2.33)**	0.001 (0.42)	0.001 (0.30)	0.001 (0.30)
Market-to-book ratio	0.001 (4.89)***	0.001 (4.69)***	0.001 (5.00)***	0.002 (3.01)***	0.002 (2.90)***	0.002 (2.96)***
Non-operating income	-0.066 (-0.80)	-0.11 (-1.41)	-0.06 (-0.79)	0.211 (1.15)	0.205 (1.12)	0.204 (1.12)
Retained earnings	0.028 (5.64)***	0.026 (5.20)***	0.027 (5.57)***	0.049 (4.05)***	0.05 (4.16)***	0.05 (4.15)***
Sales growth	-0.014 (-5.80)***	-0.015 (-6.04)***	-0.014 (-5.96)***	-0.046 (-5.56)***	-0.046 (-5.58)***	-0.046 (-5.56)***
Return on assets (ROA)	0.048 (3.28)***	0.049 (3.26)***	0.05 (3.37)***	0.226 (5.41)***	0.223 (5.40)***	0.223 (5.38)***
Standard deviation of ROA	-0.01 (-0.46)	-0.01 (-0.46)	-0.000 (-0.02)	0.18 (2.89)***	0.168 (2.70)***	0.168 (2.69)***
Firm age	0.000 (6.22)***	0.000 (7.87)***	0.000 (6.33)***	0.000 (0.74)	0.000 (0.63)	0.000 (0.63)
Supershares	-0.006 (-1.16)	-0.01 (-1.94)*	-0.009 (-1.73)*	0.004 (0.50)	0.009 (0.98)	0.009 (0.96)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
No. of observation	2630	2630	2630	2630	2630	2630
Log likehihood	4383	4363	4403	1619	1612	1612

5.3 Payout method

Table 6 reports the impact of the presence of founders and family members on the preference of payout. In Model 1, two indicator variables of founder firms are included. The coefficient of founder management is significantly positive at the five per cent level ($\beta = 0.49$, $t = 2.49$). As a positive payout composition ratio represents a higher proportion of share repurchase relative to

dividends, the results indicate that firms with founders as managers prefer share repurchase over dividends. The coefficient of founder ownership is statistically insignificant, which means that the presence of founders as owners does not affect the firm's preference on payout. In Model 2, two indicator variables of family firms are included. Both the coefficients of family management and family ownership are significantly negative at the five per cent level (β = -0.382, t = -2.33, β = -0.354, t = -2.03). As a negative payout composition ratio represents a higher proportion of dividends relative to share repurchase, the results show that firms with family members as managers or owners prefer dividends over share repurchase. In Model 3, all four indicator variables of founder and family firms are included. Consistent with the results of Models 1 and 2, the findings show that firms with founders as managers prefer share repurchase as a method of payout, whereas firms with family members as managers or owners prefer dividends as a method of payout.

Table 6. The relation between ownership structure and the method of firms' payout

Dependent variable:	Payout Composition	Payout Composition	Payout Composition
	(1)	(2)	(3)
Independent variables:			
Founder management	0.49 (2.49)**		0.423 (2.12)**
Founder ownership	-0.042 (-0.18)		-0.131 (-0.55)
Family management		-0.382 (-2.33)**	-0.309 (-1.90)*
Family ownership		-0.354 (-2.03)**	-0.365 (2.16)**
Institutional ownership	0.822 (2.02)**	0.389 (0.96)	0.403 (1.01)
E-index	-0.037 (-0.70)	-0.065 (-1.22)	-0.059 (-1.13)
G-index	-0.042 (-1.40)	-0.038 (-1.27)	-0.039 (-1.34)
Firm size	-0.11 (-1.95)*	-0.126 (-2.27)**	-0.128 (-2.30)**
Market-to-book ratio	0.008 (0.89)	0.008 (0.85)	0.007 (0.72)
Non-operating income	10.346 (2.45)**	10.952 (2.82)***	10.022 (2.55)**
Retained earnings	-0.349 (-1.55)	-0.251 (-1.12)	-0.303 (-1.38)
Sales growth	-0.236 (-1.74)*	-0.201 (-1.50)	-0.222 (-1.67)*
Return on assets (ROA)	0.911 (1.25)	0.886 (1.22)	0.75 (1.04)
Standard deviation of ROA	4.244 (2.80)***	3.817 (2.61)***	3.376 (2.26)**
Firm age	-0.004 (-3.21)***	-0.006 (-4.43)***	-0.005 (-3.60)***
Supershares	0.517 (2.23)**	0.787 (3.38)***	0.735 (3.21)***
Year dummies	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes
No. of observation	2217	2217	2217
Log likehihood	-2721	-2705	-2693

This table examines the relation between ownership structure (Founder, family and widely held firms) and the method of payout used by firms. Tobit regression is used to regress the proportion of repurchase to dividends paid by firms against the family/founder indicator variables and the other firm characteristics variables. The dependent variable is payout composition ratio, which is defined as the amount of repurchase minus dividends divided by the amount of repurchase plus dividends. The ratio is constrained between -1 and +1 and it is censored on both sides. Founder management is an indicator variable that takes the value of 1 if a founder serves as either CEO or

Chairperson. Founder ownership is an indicator variable that takes the value of if a founder owns at least 5 per cent of ownership. Family management is an indicator variable that takes the value of 1 if a family member serves as CEO or Chairperson. Family ownership is an indicator variable that takes the value of 1 if a family member owns at least 5 per cent of ownership. Institutional ownership is the percentage of shares owned by institutions. E-index is the entrenchment index developed by Bebchuk et al. (2009). G-index is the anti-takeover index developed by Gompers et al. (2003). Firm size is measured as the natural log of sales. Market-to-book ratio is measured as market equity (stock price multiplied by the number of shares outstanding) divided by book equity. Non-operating income and Retained earnings are measured as the dollar amount of non-operating income and retained earnings divided by book value of assets. Sales growth is measured as change in sales from last year divided by last year sales. ROA is measured as net income divided by book value of total assets. Standard deviation of ROA is measured as standard deviation of ROA over a three-year period. Firm age is the number of years for which the firm has existed. . For each regression, the first row is the coefficient on the independent variable and the second is the test statistic. Standard errors are estimated with clustered errors at the firm-level. ***, ** and * denote significance at the 1, 5 and 10 per cent levels respectively. Hsieh and Wang (2008) find that firms with a higher level of insider ownership prefer share repurchase as a form of payout and they argue that tax considerations from insiders affect the choice of payout method. However, the results show that family members, who are also subject to tax disadvantage of dividends, prefer dividends over share repurchase. Moreover, Hu et al. (2007) show that family managed firms prefer share repurchase over dividends. After separating founder firms and family firms, it is found that only founder managed firms prefer share repurchase over dividends; family managed firms prefer dividends over share repurchase. The results highlight the importance of identifying different types of controlling owners and managers when examining the implication of ownership structure on payout preferences.

Tax explanation predicts that firms with concentrated owners, who are subject to tax disadvantage, prefer share repurchase as the form of payout. The findings show that founders and family members, despite both being subject to tax disadvantage, have different preferences for payout. The results do not support tax explanation; therefore hypothesis 1c is not supported. On the other hand, agency explanation predicts that firms with more severe agency conflicts prefer to use dividends as a form of payout. The findings show that family firms prefer dividends as a form of payout whereas founder firms prefer share repurchase as a form of payout, which is consistent with the argument that the severity of agency conflicts of family firms is higher than those of founder firms. As a result, hypothesis 2c is supported.

6. Conclusion

This paper investigates the tax and agency explanations of corporate payout policy by investigating the likelihood, level and method of payout in founder and family firms. The findings show that the presence of founders as managers significantly decreases the likelihood of paying dividends, whereas the presence of family members as managers or owners significantly increases the likelihood of paying dividends. The findings also show that the presence of founders as managers is associated with a lower level of dividends payment whereas the presence of family members as owners is associated with a higher level of dividends payments. In addition, firms with founders as managers prefer share repurchase as a method of payout, whereas firms with family members as managers or owners prefer dividends as a method of payout. Overall, the results are inconsistent with the tax explanation of corporate payout policy but support the agency explanation.

Empirical evidence shows that corporate insiders with high levels of ownership are more likely to adjust their firms' corporate payout policy in accordance with their tax preferences (Brown et al., 2007; Chetty and Saez, 2005; Hsieh and Wang, 2008). However, this paper finds that tax preference is not a major consideration in setting the payout policy in family firms. According to the tax explanation of payout policy, corporate insiders with high levels of ownership tend to avoid dividend payout and instead prefer to repurchase shares as a result of the tax disadvantage of dividends. The results show that family firms, despite the presence of family members as significant shareholders and/or as managers, prefer a higher level and a higher proportion of dividends to repurchase than founder and widely held firms. Thus it appears that the payout policy in family firms is not primarily driven by the tax preferences of family members.

According to the agency explanation of corporate payout policy, firms with more severe agency conflicts are more likely to use dividends as a monitoring mechanism. In this paper, it is argued that the severity of agency conflicts in family firms is worse than in founder firms, because family firms are more susceptible to wasteful expenditure and more likely to suffer from the adverse effects of intra-family conflicts. The findings show that family firms on average pay a higher level of dividend and also prefer dividends over share

repurchase than founder firms, which signals that family firms are more likely to use dividends as a monitoring mechanism to mitigate agency conflicts. The findings are consistent with a number of recent studies in relation to founder firms versus family firms. These studies (Block, 2012; Fahlenbrach, 2009; Lau and Block, 2012; Miller et al., 2007) show that founder firms have better performance, higher investment efficiency, higher level of R&D expenditure and lower agency cost of cash holdings. This paper further contributes to this line of research that the payout policy of founder firms is significantly different from that of family firms.

The main limitation of this paper is that the sample is restricted to the largest listed firms in the U.S. It is unclear whether the differences in payout policy between founder and family firms documented in this paper also apply to smaller listed firms or firms in other countries. For instance, the literature (Faccio et al., 2001; Farinha and López-de-Foronda, 2009) shows that the level of investor protection and the type of legal system also affect the relation between ownership structure and the preference of payout policy. Future studies could examine this issue in another setting.

Consistent with recent empirical evidence (Block, 2012; Miller et al., 2007), the findings highlight the importance of distinguishing between founder firms and family firms. Although both types of firm are characterised as firms with the presence of controlling shareholders who also often serve as top managers, the findings show that the identity of the controlling shareholders or managers has significant impact on the preference of payout policy. Combining these two types of firm could lead to misleading results. For instance, Hu et al. (2007) find that family firms with active management by family members are associated with lower levels of agency conflict, which result in a lower level of dividend payout. However, the findings show that after separating founder firms and family firms, only the active management by founders is associated with lower levels of dividend payout; the active management by family members has no significant implication for the level of dividend payout. The findings indicate that the presence of founders as managers helps to mitigate agency conflicts, which in turn lessens the need to use dividends as a monitoring mechanism.

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