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Controlling shareholders and payout policy: Do founding families have a special “taste for dividends”?^{*}

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Abstract:

Around the world (with the U.S. and U.K. as exceptions) concentrated ownership structures and controlling shareholders are predominant even among listed firms. We provide novel empirical evidence how such controlling shareholders, in particular founding families, affect payout policy decisions. Thereby, we use a unique panel dataset of 660 listed firms in the 1995 to 2006 period from Germany, an economy that is traditionally characterized by concentrated ownership structures and strong family capitalism. We find that family firms exhibit a higher propensity and level for both dividend payments and total payouts. This result is driven by family ownership rather than family management. Conflicts between the founding family and non-family controlling shareholders and tensions within the founding family are important determinants of payout policy. While family blockholder increase the propensity for a payout to shareholders, outside blockholder have an opposing effect. Finally, we find that common action problems and conflicts among a multitude of family members and/or generations in “real family firms” lead to a higher “taste for dividend payments” if compared to firms dominated by the founder (“founder-controlled firms”). Our results prove to be stable against a battery of robustness tests including a matching estimator technique to demonstrate causal effects. Overall, our paper contributes to two strands of literature: the emerging literature on family firms and the more mature literature on corporate payout policy.

JEL Classification: G 32, G 34

Keywords: Family firms, founding family, family ownership, family management, controlling shareholders, agency costs, payout policy, dividends, share repurchases, corporate governance

1 Introduction

„They [family firms] are easily the commonest kind of corporate structure on the planet, and they show no signs of disappearing. Whether the company is Wal-Mart, Gucci, Cargill, Hyundai or most of Germany's Mittelstand and Latin America's grupos, a family firm is different in important ways from a firm in which a family plays no significant part.....

.....Indeed, managing the family's relationship with the firm can be as hard as managing the business itself. There may be tensions between family and non-family shareholders; but there may also be rifts between family members who do and don't work in the business. The owner-managers may want to plough back as much money as possible; the family outside the business may want generous dividends, especially if there is no ready market for their shares.“

The Economist, December 2000

Starting with the pathbreaking work by Lintner (1956) and Modigliani and Miller (1961), corporate payout policy is a topic that is traditionally on the agenda of research in financial economics. Just recently, DeAngelo et al. (2009) provided a comprehensive survey of this literature. They argue that security valuation problems related to asymmetric information between informed corporate insiders and uninformed outside investors (such as in Myers and Majluf (1984)) and agency costs of free cash flow (Jensen (1986)) are suitable to explain the majority of the observed payout policy phenomena – the massive payouts over the last decades, their timing over the firm's life cycle and the decision to use regular dividends, special dividends or share repurchases as vehicles for the distribution of corporate earnings to shareholders.

In this paper we analyze how company founders and their families as well as other controlling shareholders influence corporate payout policy. As indicated in the statement of the Economist, family firms are distinct from non-family firms along several important dimensions. We make use of this phenomenon and test whether typical family firm characteristics, such as lower agency costs between managers and shareholders, the long-term commitment of the founding family or their control considerations affect payout policy decisions. This seems to be interesting from two different perspectives: *First*, despite the world-wide importance of family firms (see LaPorta et al. (1999), Claessens et al. (2000), Faccio and Lang (2002), Bennedsen and Nielson (2010) or the Economist statement) detailed empirical evidence on their payout policy choices is so far missing. *Second*, the impact of controlling shareholders in general on payout policy is also a largely unexplored topic. Hence, this paper contributes to two strands of literature: the emerging literature on family firms and the more mature literature on corporate payout policy. In their recent survey DeAngelo et al. (2009) argue in the same direction and conclude that “the influence of controlling stockholders on payout policy – particularly in non-US firms, where controlling stockholders are common – is a promising area for future research” (DeAngelo et al. 2009, p. 100).

This paper builds exactly on this research gap by providing novel empirical evidence on corporate payout policy decisions of controlling shareholders outside the U.S. In particular, we explore the influence of company founders and their families on (i) the payout propensity and level. We also analyze (ii) their preferred vehicle of payout (dividends vs. share

repurchases) and (iii) whether their decisions are driven by family ownership or family management. Moreover, referring to the statement of the Economist we focus on (iv) tensions within the founding family and (v) potential conflicts of the founding family with other non-family shareholders.

To explore these issues, Germany provides an ideal economic setting as a country that is not only characterized by traditionally concentrated ownership structures (see e.g. LaPorta et al. (1999), Becht and Roell (1999), Becht and Böhmer (2003)) and strong family capitalism (Fohlin (2007), Franks et al. (2009)), but also by a comparatively weak investor protection, at least if compared to the U.S. and U.K. (LaPorta et al. (1997, 1998, 2000a) as well as the subsequent “law and finance”-literature surveyed in LaPorta et al. (2008)).¹ For example, in our panel dataset on 660 exchange-listed non-financial firms in the German CDAX (which is the broadest stock index representing about 95% of the market capitalization) from 1995 to 2006, we find that founding families continue to exert significant influence over their family businesses. Thereby, we define a sample firm as a family firm if the founding family has at least 25% of voting rights or if it has at least 5% of the voting rights and a family member is represented in the management and/or supervisory board.² Based on such a definition, family firms represent about 39% of all non-financial CDAX-firms and 23% of the CDAX market capitalization (cf. table 1 for a detailed overview of the sample composition). Within the family firms, the founding family retains a strong influence over the corporate decision making. In particular, the founding family holds on average about 45% of all voting rights and a seat in either the management or the supervisory board in about 91% of all cases. Our exclusive focus on founding families (rather than individual family shareholders in general) is justified by recent research indicating that founding families comprise a distinct group of controlling shareholders even if compared to other controlling, (non-founding) family shareholders (Villalonga and Amit (2009b)).

Following this literature, such family firms are characterized by the following distinct features that make them to an interesting test object in the context of payout policy decisions: As large shareholders founding families can overcome the free-rider problem commonly associated with atomistic shareholder structures and hence they have strong incentives to provide effective shareholder monitoring (Grossman and Hart (1980), Shleifer and Vishny (1986)). Moreover, in comparison to other types of external blockholders (such as strategic or financial investors) they are often actively involved in running the daily business. In a two-tier

¹ Although beginning in 1995 Germany underwent several regulatory initiatives (partly driven by EU directions) that have continuously increased transparency, investor protection and accountability in the German financial system, the main features of its corporate governance regime including the concentrated ownership structures, the prevalence of controlling shareholders and the lack of an active market for corporate control remain unchanged until today (Goergen et al. (2008a and 2008b)).

² Please note that we use a similar but more restrictive definition in comparison to the existing literature, e.g. Anderson and Reeb (2003a, 2003b), Villalonga and Amit (2006) for the U.S., Sraer and Thesmar (2007) for France or Andres (2007, 2008) and Ampenberger et al. (2009) for Germany. Our definition is similar since we also use the founding family’s involvement in the firm’s governance structure to define a family firm. However, family ownership seems to be of critical importance for the desire to receive corporate payouts. In this sense, our definition is more restrictive than the ones used in previous empirical studies since we have decided to limit our family firm definition to such cases in which the founding family has at least 5% of voting rights even if family members are represented in the management and/or supervisory board. A similar definition was recently used by Deutsche Börse, operator of the German stock exchange, to introduce the DAX plus family in 2010 – a stock index measuring the performance of family firms listed at the Prime Standard of Frankfurt stock exchange.

governance structure,³ which is the case among listed firms in Germany, the founding family often is represented in the management or supervisory board. Such seats in the two governing bodies provide a direct channel for the founding family to exert strong influence on the corporate decision making. From this perspective, family firms are characterized by lower agency conflicts between managers and shareholders (agency conflict I).

Rozeff (1982), Easterbrook (1984) and Jensen (1986) argue that dividends and debt are useful instruments to reduce agency problems stemming from the shareholder-manager conflict. Such agency problems include but are not limited to deliberate managerial misbehavior, such as empire building, consumption-on-the-job and tunneling (Jensen and Meckling (1976), Johnson et al. (2000)). In a broader sense, such agency problems can also include behavioral managerial biases, such as overconfidence or managerial hubris (Roll (1986), Malmendier and Tate (2005, 2008), DeAngelo et al. (2009)). If this agency conflict I and henceforth agency costs of free cash flow (Jensen (1986)) are less severe in family firms, we expect them to have a lower payout propensity and level in comparison to non-family firms. In particular, we suppose that this phenomenon is driven mostly by the active participation of the founding family in the firm's management or supervisory board. Hence, we pose this as the *agency cost hypothesis of family management*.

Otherwise, founding families have a strong need to remain control over the family business. They provide "patient capital" and long-term commitment, often spanning over more than one family generation (James (1999)).⁴ In many cases, the reputation of the founding family is closely related to the reputation and economic success of the family business (Dyer and Whetten (2006)). Finally, the founding family has a strong intrinsic motivation to preserve family wealth and bequeath the family business to future generations (Casson (1999), Chami (2001), Villalonga and Amit (2009b)). If the members of the founding family intend to remain control over the family business, any dilution of their ownership (and voting rights) by selling their ownership stake is not appropriate. However, if they at the same time do not want to abstain from a steady income, they might have a strong desire for a continuous payout. This "taste for dividends" might be pronounced if there are common action problems within a multitude of family members and/or family generations (DeAngelo et al. (2009)). Such conflicts and disagreements within the family are exactly described in the Economist's statement at the beginning of our article. Following these arguments, we expect family firms to have a higher payout propensity and level. In particular, we expect family ownership to be the driving channel for the higher payout propensity and level in family firms. Moreover, we expect that the desire for payout is stronger if there are non-founder

³ Traditionally, Germany is classified by a two-tier corporate governance structure with the management board (Vorstand) being responsible for the management decisions concerning the daily business and the supervisory board (Aufsichtsrat) for monitoring the management board. Thereby, the management board is a committee appointed by the supervisory board which itself is compromised by shareholder representatives (and subject to legal requirements potentially additional employee representatives). Among others, Gorton and Schmid (2004) or Fauver and Fürst (2006) provide a detailed description of the German two-tier corporate governance structure.

⁴ For example, Franks et al. (2009) show that family ownership in Continental Europe is enduring. They analyze information on the ownership structure of the 1.000 largest private and exchange-listed firms (in terms of sales) in Germany, Italy and France at two points of time, in 1996 and 2006. One interesting result of their study is that of all family firms in 1996, 74% (Germany), 78% (Italy) and 64% (France) are still family firms in 2006. This is a strong indication for the long-term commitment of family shareholders, at least in a Continental European institutional setting.

family owners. We combine these aspects in our *income and control hypothesis of family ownership*.

We contribute to the literature along several important dimensions: *First*, with regard to the literature on family firms the majority of studies has so far focused on issues of corporate performance (Anderson and Reeb (2003a), Villalonga and Amit (2006), Maury (2006), Miller et al. (2007), Barontini and Caprio (2008), Fahlenbrach (2009) among others), the impact of succession problems (Perez-Gonzalez (2006), Bennedsen et al. (2007), Bloom and van Reenen (2007), Cuculleli and Micucci (2008), Adams et al. (2009)) or the wedge between cash-flow and voting rights (Claessens et al. (2002), Villalonga and Amit (2006), Villalonga and Amit (2009a), Bennedsen and Nilson (2010)). There seems to be a consensus in the literature that family firms show a better performance at least if there is no wedge between cash-flow and voting rights and the founder is still active in firm management. In addition, several studies suggest that the critical event of a “within-family succession” is on average destroying firm value; at least if the succession decision is not based on the careful selection of a well-qualified member within the family. However, the reasons for the observed differences in corporate performance are largely unexplored. In this sense, our study complements the emerging literature on corporate decision making in family firms regarding capital structure, investment policy or payout decisions (cf. Mishra and McConaughy (1999), Anderson and Reeb (2003b), Ellul (2009), Fahlenbrach (2009), Anderson et al. (2009), Ampenberger et al. (2009) among others). Thereby, to our best knowledge, this is the first analysis of payout policy decisions in a corporate governance regime like Germany, where concentrated ownership structures and controlling shareholders are common even among listed firms (LaPorta et al. (1999), Faccio and Lang (2002)).⁵

In a first step, we use probit regression models to show that family firms have a significantly higher propensity for dividend payments (and total payouts) if compared to non-family firms. Consistent with the *income and control hypothesis of family ownership* the higher propensity for dividends (and total payouts) is driven by family ownership rather than family management. Even in times the firm realizes a loss family firms have a higher propensity for dividend payments, suggesting that their payout decisions are more continuous.

In a second step, we analyze payout ratios. In principle, firms can use two vehicles to distribute earnings among shareholders: Dividends and share repurchases. We focus on dividend payout ratios as dividends are of predominant importance in Germany relative to share repurchases. There are only 389 share repurchase events in the 1995 to 2006 period and share repurchases account for less than 10% of total payout volume over the whole sample period. The low importance of share repurchases relative to dividends is related to the German stock corporation act (AktG) which limits share repurchases to a maximum of 10% of the ordinary share capital (§ 71 AktG). Before 1998, share repurchases were even generally prohibited by law and only allowed under very restrictive circumstances. However, we have additionally reported the results for the payout ratio based on share repurchases and total

⁵ To our best knowledge, the only other exception in the literature that deals with issues of payout policy in family firms is the working paper by Hu et al. (2009). However, this paper focuses on payout policy decisions in the context of U.S. family firms in the S&P-500, an institutional setting where controlling shareholders and concentrated ownership structures are less prevalent.

payouts in the appendix. This allows us to show that our results for dividend payout ratios hold in general also for total payout ratios (but not for payout ratios in terms of share repurchases). We show that family firms have a higher dividend payout ratio, measured as percentage of earnings. Consistent with the control theory and the desire for a continuous income we find again that family ownership is the main channel for the higher level of dividends. Thereby, we use pooled OLS-regressions, random-effects and firm-fixed effects models. The firm-fixed effects models allow us to control for unobserved, time-constant heterogeneity in firm characteristics.

We further argue that conflicts *within the founding family* seem to be an important issue. Following Miller et al. (2007) in terms of methodology, we compare two types of family firms: “Founder-controlled firms” and “real family firms”. In real family firms, other family members (not the founder) are involved simultaneously or over time. Thereby, these other family members can be large owners (in fact, with at least 25% of voting rights) or they hold 5% of the voting rights and are represented in top-management. By contrast, founder-controlled firms are firms which are still dominated by the founder himself. Thereby, this comparison between the two groups yields significant differences in terms of payout policy decisions. While both types of family firms have a higher propensity to pay out dividends (and total payouts) if compared to non-family firms, we find that regarding the dividend payout ratio only the real family firms have a higher payout ratio relative to non-family firms.

Finally, we argue that there seem to be significant tensions *between family and non-family shareholders*. For example, we find in all our models regarding the payout propensity that the existence of non-family controlling shareholders in contrast to family shareholders has a significant negative influence on the payout propensity. This result is robust if we distinguish according to the type of the controlling outside shareholder in (i) strategic shareholders, (ii) financial investors, (iii) government shareholders, and (iv) individual shareholders. While strategic and financial investors exhibit a significant negative correlation with the propensity for dividend payments, the dummy variable for government and individual shareholders is insignificant. However, the influence of family shareholders on the propensity to pay dividends remains strong and positive. Furthermore, we show that the likelihood for payouts increases with the voting power of the founding family (measured relative to the voting power of other non-family shareholders with at least 5% of voting rights). Overall, our results confirm the anecdotal evidence in the Economist statement that both *tensions within the founding family* and conflicts *between family and non-family shareholders* are important determinants of corporate payout policy.

In order to alleviate concerns of endogeneity, we apply a propensity score based matching procedure. The interpretation of this matching estimator suggests that the propensity for dividend payments (and total payouts in general) significantly decreases if the firm experiences a transition from a family firm to a non-family firm. Overall, this test proposes a causal link (rather than a simple correlation) between family firm characteristics and payout policy. Regarding the dividend payout ratio we perform a similar matching estimator corroborating our findings from the OLS-, the random-effects- and fixed-effects-regressions. Finally, our results prove to be stable against a battery of further robustness tests including

misspecification issues, sample composition aspects, tax regime effects and insider ownership effects.

Second, with regard to the more mature literature on corporate payout policy, we contribute by analyzing *how and why* influential shareholders affect payout policy. In contrast to previous studies that focused on tax preferences of influential shareholders (Lie and Lie (1999), Perez-Gonzalez (2002), Hsieh and Wang (2008) among others) we focus on agency aspects and control motives. For such an analysis, Germany's typical Continental European setting with its concentrated ownership structures and the strong corporate governance role of controlling shareholders provides an ideal research environment. Our analysis presents novel empirical evidence that in such a corporate governance regime controlling shareholders have a strong impact on payout decisions. While family shareholders prefer higher payouts, large non-family shareholders (whose ability to realize capital gains by selling their ownership stake makes them more flexible regarding the way to achieve a return on their investment) prefer the opposite. Thereby, the fact that Germany underwent a major tax reform in 2001 ("Gesetz zur Senkung der Steuersätze und zur Reform der Unternehmensbesteuerung") allows us to show that this result does not depend on whether dividends are taxed under a full imputation system (before 2001) or a shareholder relief system (starting 2001).

Our *third* contribution is related to the analysis of payout policy in Germany. Thereby, we complement the existing studies on dividend policy in Germany by Amihud and Murgia (1997), Gugler and Yurtoglu (2003), Goergen et al. (2005) and Andres et al. (2008). Our study allows us to confirm recent international trends in payout policy for Germany (von Eije and Megginson (2008) and Denis and Osobov (2008); see DeAngelo et al. (2009) for a review). Overall (and independent of the ownership and board structure), we find that the fraction of dividend payers is declining heavily over the 1995 to 2006 period (from 78% to 45%), although the aggregate level of dividends is even increasing. Hence, a small fraction of large, established and profitable non-financial firms accounts for the majority of dividend payments. While this trend is similar to U.S.-based and international evidence, we find that share repurchases have not as heavily gained in importance in Germany as in the U.S. This might be related to the legal restrictions in the use of share repurchases inherent in the German stock corporation act and less flexible opportunities to raise new capital via seasoned equity offerings with respect to mandatory rights issues and time-consuming approval by the shareholder meeting beforehand.

Of course, our paper is related to the empirical work of Gugler and Yurtoglu (2003) who already argue that corporate governance does matter for payout policy. In particular, they use panel data between 1992 and 1998 on 266 major German firms to show that the presence of a majority shareholder leads to lower payout ratios, at least if there is no second large shareholder that is able to monitor the majority shareholder. They interpret this finding in a way that dominant shareholders avoid "pro-rata distribution of earnings" via dividends and instead prefer to exploit minority shareholders via tunneling activities. Although we are able to confirm this result in general using a much broader dataset, we show that the identity of the dominant shareholder is of critical importance. While large external shareholders have a negative effect on payout propensity, the presence of family shareholders leads to a higher likelihood of a payout. This result suggests that in Germany family shareholders at large do

not exploit minority shareholders (agency conflict II between majority-minority shareholders). Our interpretation that founding families are a special type of controlling shareholders is consistent with earlier empirical evidence by Andres (2008) in the context of firm performance. In terms of methodology, our study complements the one by Gugler and Yurtoglu (2003) since they largely use stock price reactions to dividend announcements (an event study methodology), while we exploit cross-sectional and time-series variance in the payout propensity and dividend level among different shareholder groups.

The remainder of the paper is structured as follows: Section 2 motivates our paper based on two ways: We start with a summary of recent empirical findings for payout policy in the U.S and other countries and continue with an explanation why family firms are especially adequate to analyze the influence of controlling shareholders on payout policy. Section 3 explains the construction of our dataset while Section 4 presents our empirical results. Section 5 shows several robustness tests. Finally, section 6 concludes and provides policy implications.

2 Motivation and literature review

2.1 Recent trends in U.S. payout policy

Most published research on corporate payout policy has focused on the U.S. Although it is beyond the scope of this section to summarize this extensive and mature strand of literature,⁶ we want to highlight the most recent trends in U.S. payout policy: *First*, Fama and French (2001) show that the number of firms paying cash dividends has declined heavily from 66.5% in 1978 to 20.8% in 1999. The authors argue that this development can in part be attributed to changing characteristics of publicly traded firms. In fact, the number of listed firms in the U.S. has grown rapidly during the 1990s with new lists that are smaller, less profitable and faster growing. In addition, their asset base is dominated by intangibles rather than fixed assets (Fama and French (2004)). However, Fama and French (2001) also show that the propensity to pay dividends has even declined after controlling for changing firm characteristics.

Second, Fama and French's (2001) striking finding might be related to changing patterns of corporate payout policy over the last decades: While the meaning of share repurchases as a payout policy instrument has increased, the importance of cash dividends has decreased. Skinner (2008) reports that the aggregate level of stock repurchases has now approximately the same magnitude as the aggregate amount of cash dividends.⁷ Firms that only pay dividends are largely extinct. Instead, three groups of firms have emerged: (i) firms that pay dividends and make regular repurchases (ii) firms that make regular repurchases and (iii) firms that make occasional repurchases. Brav et al. (2005) provide survey evidence that group (i) consists of large, established firms that continue to pay cash dividends with regard to

⁶ For excellent reviews of the literature, see e.g. Allen and Michaely (2003) or DeAngelo et al. (2009). For a similar description of recent trends in corporate payout policy in the U.S., see von Eije and Megginson (2008).

⁷ For further evidence that the level of stock repurchases has increased dramatically over the last decades and stock repurchases function at least partly as a substitution for cash dividends, cf. Grullon and Michaely (2002).

their history – most of those firms have paid dividends for years and are therefore obliged to continue this practice.

Third, Weston and Sui (2003) show another trend: Overall, firms tend to distribute an increasing part of their earnings. In a first step, they analyze the corporate sector's cash dividends as percentage of corporate earnings and find an increase of this ratio from 40% in 1971 to 60% in 1990 and finally to even 81% in 2001. If they include both dividends and share repurchases in their analysis, the level of payout in relation to corporate earnings even reached 116% in 2001. Hence, in 2001 firms decided to pay out more than they earned.

Fourth, the trend to increase the payout ratio is driven by just a minority of very profitable firms as indicated by DeAngelo et al. (2004). They find that “the 25 firms that paid the largest dividends in 2000 account for a majority of the aggregate dividends and earnings of industrial firms” (DeAngelo et al. (2004), p. 425). The substantial increase in payouts of mature firms more than substitutes the large number of small and medium-sized listed firms that refrains from paying dividends. In another article, DeAngelo et al. (2006) add one important piece to this puzzle by showing that dividend payment is related to the life-cycle of the firm. Mature firms with high retained earnings pay higher dividends than younger firms with a large portion of contributed equity (and a low portion of retained earnings) and better investment opportunities.

Fifth, there are some studies that analyze how different ownership categories affect payout policy (Lie and Lie (1999), Perez-Gonzalez (2002), Hsieh and Wang (2008) among others). In contrast to our paper, their motivation to use ownership data is to study tax clientele effects rather than corporate governance issues or inter- and intra-shareholder conflicts. Based on exogenous variation in personal income taxes, Perez-Gonzalez (2002) can show that tax preferences of large shareholders indeed matter for the choice between dividends and capital gains. In a similar vein, Lie and Lie (1999) and Hsieh and Wang (2008) argue that corporate insiders' ownership stakes and tax preferences have an influence on the decision between dividends and share repurchases as the means of payout policy. The next section focuses on empirical evidence outside the U.S.

2.2 What do we know about payout policy outside the U.S.?

In comparison to the extensive empirical research on payout policy in the U.S., there is still comparatively little evidence on payout policy patterns in Europe. This is surprising since the “law and finance”-literature originating in the late 1990s suggests a strong link between legal origin, institutional setting and corporate policy choices (see for example LaPorta et al. (1997, 1998) for the beginning of this literature and LaPorta et al. (2008) for a comprehensive review).

First, LaPorta et al. (2000b) indicate that dividend payments are increasing in investor protection and decreasing in agency costs. They use the cross-country heterogeneity in terms of agency costs associated with the institutional setting for an international study on dividend policy of more than 4,000 firms from 33 countries. They argue that agency costs can influence dividend decisions in two ways: minority shareholders might “pressure” corporate insiders to distribute cash (outcome model) or firms might pay dividends in order to favor future

investors in the event of seasoned equity issues (substitute model). They conclude that in line with the “outcome model of dividends” firms in countries with better investor protection pay higher dividends. Moreover, in such countries investors are willing to wait for their dividends along the life-cycle of firms as indicated by the fact that high growth firms pay lower dividends than low growth firms. However, the sole focus of LaPorta et al. (2000) lies on dividends.

Second, two studies provide recent evidence on differences in payout policy throughout several developed economies and Europe: Denis and Osobov (2008) examine the likelihood to pay dividends in a set of seven developed economies between 1989 and 2002 (in particular they analyze the United States, Canada, the United Kingdom, Germany, France and Japan). They find cross-country evidence for the Fama and French (2001) observation that the propensity to pay dividends is positively related to firm size and profitability but negatively to growth options. Moreover, they show that the earned/contributed capital mix has high explanatory power for dividend policy as proposed by DeAngelo et al. (2006). In contradiction to the U.S. evidence by Fama and French (2001), Denis and Osobov (2008) find no indication that dividend payments declined outside the U.S. In fact, the aggregate level of dividends is constant and concentrated among a number of large, profitable and established firms (which is largely in line with U.S. based evidence provided by DeAngelo et al. (2004) and the life-cycle theory of dividends suggested by DeAngelo et al. (2006)). To the extent that a dividend decline exists it is primarily driven by the failure of newly listed firms to pay dividends. Finally, in contrast to the U.S. the analysis cannot provide supporting evidence for catering explanations of dividends (see Baker and Wurgler (2004a, 2004b) for the catering explanation of dividend policy).

Von Eije and Megginson (2008) analyze both dividends and share repurchases for 15 countries within the European Union between 1989 and 2005. They provide a number of interesting findings: Although total real dividends paid have increased, the fraction of dividend payers has declined. While the overall propensity to pay dividends has declined, the propensity for share repurchases and the total value of share repurchases has increased. As in the U.S., common factors such as firm size, market-to-book or profitability seem to have high explanatory power for payout policy in Europe. Although fewer European firms than U.S. firms repurchase shares, there seems to be evidence for a complimentary effect of share repurchases for dividends. The former seem to be more sensitive to corporate earnings especially in the last years of the study period (2001-2005). In addition, von Eije and Megginson (2008) find a positive relationship between financial reporting frequency, which has increased from an average of 1.2 to 2.4 per year within the EU from 1989 to 2005, and the payout level. They also report that privatized firms are usually strong dividend payers. While they only account for 2% of the listed firms, they are responsible for almost one quarter of cash dividends. Interestingly, and in contrast to the findings of DeAngelo et al. (2006) for the U.S. and Denis and Osobov (2008) on an international dataset they find no significant relationship between the mix of retained/contributed capital and corporate payout policy.

Third, with regard to Germany, the following empirical results are important: Von Eije and Megginson (2008) find a strong decline in the number of regular dividend payers, from 84% of all listed firms in their dataset in 1991 to only 37% in 2004. They relate this finding to

the large number of entrepreneurial firms that went public during Germany's boom phase at the high-tech segment Neuer Markt between 1998 and 2000. Concerning share repurchases, they document (without reporting concrete numbers) that they were almost non-existing in Germany before 1998 and were used in a comparatively moderate way after 1998. Goergen et al. (2005) provide large-scale empirical evidence that dividend policy in Germany is more flexible than in the U.S. Temporary dividend cuts and omissions – especially after the occurrence of a loss – seem to be a common feature. This result is in strong contrast to the predictions of Lintner (1956) and empirical evidence of DeAngelo et al. (1992) who report that U.S. firms reduce their dividend permanently if earnings deteriorate. In this context, Andres et al. (2008) argue that German firms use cash-flows instead of earnings to determine target dividends. Finally, Gugler and Yurtoglu (2003) already argue that corporate governance is important for dividend policy in Germany. In particular, they show that controlling shareholders – if they are not monitored by a second large shareholder – are decreasing the “pro-rata payouts” through dividends and instead prefer to consume private benefits of control. Overall, empirical evidence on payout policy outside the U.S. is still comparatively scarce. The same is true for empirical studies dealing with the influence of controlling shareholders on payout policy. In this sense, founding families are typical controlling shareholders with distinct characteristics (Villalonga and Amit (2009b)) that differentiate them from other types of large shareholders. The next section summarizes our predictions concerning their behavior.

2.3 Family firms in the context of payout policy decisions

We explore two hypotheses in the context of payout policy in family firms. The first one is related to agency costs. Rozeff (1982), Easterbrook (1984) and Jensen (1986) argue that dividend payments have a disciplinary character. According to Jensen's (1986) Free-Cash-Flow Hypothesis managers can use substantial free cash flow for dividends or share repurchases instead of investing in low return projects or even waste the money otherwise (Jensen (1986)). If the manager wants to finance further projects despite the distribution of dividends, he is forced to issue new external capital. As a consequence, external capital providers are available for monitoring activities and the reduction of information asymmetries (Easterbrook (1984)).

However, to put the Free-Cash-Flow Hypothesis in the context of family firms, one has to consider that family firms differ from widely-held firms in several important aspects. In terms of monitoring the firm's management, founding families are large shareholders that can overcome the free-rider problem commonly associated with atomistic shareholder structures of widely-held firms (Grossmann and Hart (1980), Shleifer and Vishny (1986)). Their monitoring efforts alleviate the classical shareholder-manager conflict in widely-held firms. In contrast to other controlling shareholders which have similar incentives to monitor management, the founding family members regularly participate in the firm's top management. Under such circumstances the agency conflict between management and shareholders is further decreased or even non-existing. Family representation in the management or supervisory board leads to a convergence-of-interest-effect between the

founding family and outside shareholders. Consequently, we expect agency costs to be significantly lower in family firms, especially in those family firms with family management. The disciplining role of dividends seems to become less important. Hence, we expect family firms to have a lower propensity to pay dividends and lower payout ratios. We state this as the *agency cost hypothesis of family management*.

Founding families typically show long-term commitment (often spanning more than one generation), provide “patient capital” and even intend to bequeath the family firm to future generation (James (1999), Casson (1999) and Chami (1999)).⁸ Moreover, they usually dedicate a significant part of their personal wealth to the family firm and can therefore be considered as undiversified, large shareholders.⁹ Both aspects taken together create a strong incentive for the founding family to retain control over the firm and hence make a sale of shares accompanied by a loss of voting rights unlikely. At the same time the members of the founding family might not want to abstain from generating a steady income in order to fund personal consumption. Therefore, we expect a strong desire for dividends caused by family ownership. We pose this as the *income and control hypothesis of family ownership*.

3 Dataset, institutional setting and variables

3.1 Data and sample

One reason why research on the impact of controlling shareholders on corporate decision making outside the U.S. is scarce is that information on ownership and board structures is not systematically available in any database. As a consequence, we use hand-collected information on company founders, ownership and board structures of German CDAX firms. Overall, our panel dataset covers 660 non-financial firms from Germany over the period 1995-2006.¹⁰

The core of our data comes from *Hoppenstedt Aktienführer*. *Hoppenstedt* collects annual data on ownership structures, management and supervisory board composition of all publicly listed German firms. In order to verify the ownership information from our primary source, we have further used the following data sources: *Bureau van Dijk's Amadeus database*, *Commerzbank's Wer gehört zu wem* and the *director dealings' database from the Federal Financial Supervisory Authority (BaFin)*. We start our analysis in 1995 since reliable information on ownership structures are rarely available for German firms beforehand. Starting in 1995, according to the German Securities Trading Act (*Wertpapierhandelsgesetz*)

⁸ Klasa (2007) identifies during the 1984-1998 period only 84 transactions in the large U.S. capital market where controlling families sell their ownership stake via a block trade. Within the three Continental European countries France, Germany and Italy Franks et al. (2009) show that family ownership is enduring over the 1996 to 2006 period. Altogether, both empirical studies underline the long-term character of family firm investments.

⁹ In fact, Anderson et al. (2003) report that based on information from the Forbes' Wealthiest Americans data, families have on average 69% of their wealth tied to the firm. Holmen et al. (2007) find similar results for Sweden. In their study of listed Swedish firms during 1988 and 1991, they have detailed data on the portfolio diversification of Swedish shareholders. Swedish families invest on average 50% of their personal wealth in their firms. They show that the invested wealth is between 0.4% (minimum) and 147% (maximum), i.e. some families even borrow to invest in their firms. Cf. Holmen et al. (2007).

¹⁰ Following several other studies, we have decided to exclude 153 financial firms (based on the primary two-digit SIC-Codes 60-65 and 67) from our sample due to their balance sheet specifics.

firms have to report large shareholders with voting rights (of at least 5%) to both the Federal Financial Supervisory Authority (BaFin) and the traded company itself.¹¹ Our sample period ends in 2006 which is the most recent year with available data on ownership and board structures when collecting the dataset.

To collect information on company founders we rely primarily on the firm's history section from *Hoovers Online Database*. However, we supplement missing information with press research from *Factiva* and *LexisNexis*. Despite intensive research, we are not able to obtain this information for 26 firms (or less than 4% of all non-financial CDAX-firms), which are excluded from our sample.

Finally, we merge our hand-collected information on company founders, ownership and board composition with accounting and capital market data from the *Thomson Financials Worldscope and Datastream databases*. Information about share repurchases is complemented from annual reports. Our final sample covers 660 non-financial firms (5,135 firm years).¹² It contains a wide variety of firms: *First*, it includes world-renown, large and well-established firms with a long firm history mostly operating in traditional manufacturing industries, such as Siemens, Bayerische Motoren Werke or Thyssen-Krupp. *Second*, there are companies that emerged during Germany's post-war economic miracle, such as the publishing house Axel Springer or the former state-owned airline Lufthansa. *Finally*, the sample covers also successful new-economy start-ups from high-tech industries, such as internet, biotech or solar-energy.

3.2 The institutional setting in Germany

In Germany, the payout policy is determined in the following way: The management board announces a proposal for the distribution of net income (including dividends and share repurchases), which has to be presented to the supervisory board and approved by the annual shareholder meeting (§§ 170 and 174 AktG). Although formally a simple majority of voting rights is necessary, the de facto majority is even below 50% considering the traditionally comparative low representation of voting capital at annual shareholder meetings in Germany indicated by previous case study research (e.g. Baums and Fraune (1995)). This procedure underlines our argument that controlling shareholders have considerable power and discretion in determining the firm's payout policy. Hence, in our analysis we focus on voting rights (instead of cash-flow rights) of the most influential shareholders. Thereby, a controlling shareholder according to our definition holds at least 25% of voting rights while a second largest shareholder holds at least 5% of voting rights. In the spirit of Gugler and Yurtoglu (2003) this allows us to analyze how the firm's control structure influences payout policy.

¹¹ In January 2007 the European Union's Transparency Directive 2004/109/EG was implemented with the *Transparenzrichtlinien-Umsetzungsgesetz (TUG)*, which has further reduced the mandatory reporting limit to 3% of voting rights according to §21 *WpHG*. Currently, the thresholds for shareholders' mandatory reporting according to the *WpHG* are 3%, 5%, 10%, 15%, 20%, 25%, 30%, 50% and 75% of voting rights. In case of bypassing any of these thresholds shareholders have to report their voting rights to both the listed company and the Federal Financial Supervisory Authority (BaFin).

¹² Although we have complete ownership and board data for 5,135 firm-year observations, we cannot use all observations in our regressions (section 4) due to incomplete or missing accounting data from Worldscope.

However, dividends are distributed on a pro-rata basis to the shareholders' cash-flow rights. Whenever there is a deviation from the one share-one vote principle, shareholders might have strong incentives to seek other forms of compensation not based on a "pro-rata" income distribution. Since German ownership structures are historically frequently characterized by pyramids, cross-holdings and dual-class shares (Köke (2001)), we consequently integrate a dummy variable into our analysis indicating whether there is a wedge between control and cash-flow rights.¹³

Besides this general decision making process there are some limitations to the shareholders' discretion over the payout policy: *First*, the annual net income – which is the basis for any profit distribution decision by the annual shareholder meeting – is under substantial managerial discretion due to earnings management practices. This is especially important if financial statements are prepared under Germany's conservative accounting system (cf. Harris et al. 1994 for an overview of German GAAP, so called *Handelsgesetzbuch*). The principle of prudence encourages conservative asset valuation. For example, the imparity principle suggests to record unrealized losses but not unrealized gains. Moreover, management may have incentives to reduce reported earnings in order to avoid shareholder pressure for higher payouts.

However, please consider that our sample period from 1995 through 2006 is characterized by a huge heterogeneity in terms of applied accounting standards. This is again related to changes in the legal environment: Since 1998, according to the capital raising facilitating act (*Kapitalaufnahmeerleichterungsgesetz, KapAEG*), all listed German consolidated companies have the possibility to prepare annual consolidated financial statements in IFRS/IAS or US-GAAP. Simultaneously they face no necessity to prepare additional annual consolidated (not individual) financial statement in German GAAP if they apply IFRS or US-GAAP. From 2005 onwards, the usage of IFRS is mandatory for consolidated companies according to § 315a German GAAP.¹⁴ To control for this heterogeneity, we use a dummy variable that takes unit value one if German GAAP was used in the respective firm-year observation.

Second, management and supervisory board jointly can decide to retain up to 50% of the annual net income without consulting the shareholders. In addition, the articles of association can even further allow for an increase of this legally determined 50%-proportion as long as the balance sheet position "other retained earnings" is less than half of the firm's equity (§ 58 II AktG). Hence, the decision about corporate payout policy is influenced by

¹³ We suspect that deviations from the one share-one vote principle have been mitigated during the last decade, with respect to the following legal reforms: The act on control and transparency of corporations in 1998 (Gesetz zur Kontrolle und Transparenz im Unternehmensbereich, KontraG) has abandoned the legality of multiple voting shares. Moreover the issuance of (non-voting) preferred shares is limited to at most 50% of the ordinary share capital according to § 139 stock corporation act. However, the policy to issue preferred shares has declined heavily among newly listed firms over the last decade. Hence, the phenomenon of preferred shares does only occur in 284 firm-year observations (6% of all firm-year observations) in our sample. Finally, with the tax reform in 2002 capital gains tax has no longer been incurred on divestitures of equity ownership stakes at the corporate level. This reform intends to reduce cross-holdings and the financial institutions' common equity holdings of industrial firms (Goergen et al. 2008b).

¹⁴ According to Günther et al. (2009) there are 255 voluntary adopters and 152 mandatory adopters of IFRS in their sample of German CDAX-firms between 1995 and 2005.

several corporate governance institutions: management board, supervisory board and the annual shareholder meeting.

Third, there are strong legal limitations in the use of share repurchases as payout policy instrument. Share repurchases have only been possible under special circumstances (§ 71 AktG) in Germany before 1998, for example in order to offer repurchased stock to employees or to avoid any serious damage to the company. This strong legal restriction was abandoned in 1998 with the law on transparency and control in the corporate sector. It has enabled listed firms to buy back its own shares up to a limit of 10% of outstanding ordinary share capital. Hence, share repurchases in Germany have rarely occurred before 1998 and are still treated restrictively in comparison to other countries. Besides the legal restrictions, there are some other obstacles to share repurchases that have to be considered, at least if compared to other countries with more developed capital markets. In Germany, seasoned equity offerings require time-consuming shareholder meetings' approval and mandatory rights issues. Hence, beyond the legal restrictions the difficulties to issue new equity might make management more reluctant to buy back shares in Germany if compared for example to Anglo-Saxon countries.

Fourth, several studies argue that shareholders' tax considerations influence corporate payout decisions (among others Lie and Lie (1999), Perez-Gonzalez (2002), Hsieh and Wang (2008), Barclay et al. (forthcoming)). Against this background, Germany is an interesting case since it underwent a major amendment of its tax code in 2000. The new tax code became effective in 2001 and changed the tax system with regard to equity income from a full imputation system to a shareholder relief system. To consider this regulatory change, we calculate zero distribution profits as basis for our payout ratio and test for the impact of tax effects for family owners in our robustness section. In principal, equity income in Germany is subject to corporate and personal taxes. Before 2001, Germany is characterized by an imputation system for the taxation of dividends (Vollanrechnungsverfahren). According to this system, retained earnings were taxed at a higher rate than earnings distributed as dividends at the corporate level. Hence, corporate tax liabilities are subject to dividend distributions.

Following previous work on dividend policy in Germany (Goergen et al. (2005), Andres et al. (2008)), we use "zero distribution profits" to calculate a payout ratio. "Zero distribution profits" are thereby defined as follows:

$$\frac{D(1-t_c)}{(1-t_d)} + R$$

where t_d stands for the tax rate on dividend distributed, t_c stands for the tax rate on retained earnings, $D(1-t_c)$ are the dividends after corporate tax, $D/(1-t_d)$ are the dividends gross of tax distributions and R are retained earnings (after corporate tax). To understand how the tax system affects the dividend policy in Germany, suppose the firm incurs a loss. If the firm decides to omit the dividend, there will be no tax liability. If the firm decides to pay out a dividend despite the loss, there will be a tax liability (which is t_d times the dividend distributed). Under the imputation system, shareholders were able to credit corporate tax

payments against their dividend tax liabilities. At the end, gross dividends were taxed at the personal tax rate.

After the tax reform in 2001 (Gesetz zur Senkung der Steuersätze und zur Reform der Unternehmensbesteuerung) the taxation system in Germany changed from a full imputation system to a shareholder relief system.¹⁵ Under this new system, retained and distributed earnings are no longer taxed at different rates. Capital gains of individual investors were in general tax-exempt if (i) shares were held more than one year and (ii) the shareholder is not a qualified shareholder, i.e. he owned less than 1% in the firm during the last five years.¹⁶ However, since founding-families (and other controlling shareholders) are usually large, qualified shareholders the tax-exemption of capital gains does not apply to them. Hence, all equity income generated by family shareholders (dividends and capital gains) under the shareholder relief system were taxed at half of the personal tax rate starting in 2002 (Halbeinkünfteverfahren).¹⁷ Hence, assuming the marginal tax rate a family shareholder had to pay is between 0.21 Euro (in 2005) and 0.235 Euro (in 2002) taxes for one Euro dividend and capital gain after the tax reform.

Overall, before 2001 family shareholders should have preferred capital gains over dividends if they simply want to maximize their private wealth. However, if they wanted to realize capital gains (and generate income), they were forced to sell shares and hence dilute their ownership stake. Taking these control considerations into account, the only alternative for family shareholder to generate a steady income without decreasing their ownership stake, are dividends (which incurred higher corporate taxes before 2001). After the tax reform, family shareholders are expected to be indifferent concerning the payout vehicle from a tax point of view.¹⁸ Eggert and Weichenrieder (2002) argue that in general the 2001 tax reform does not change any priority of financing policy from a tax point of view. They further demonstrate that for major shareholders beyond the 1%-stake it is more advantageous to retain earnings for dividend distribution and simultaneously raise new equity to finance internal NPV-positive investment projects (“Schütt-aus-hol-zurück-Politik”). However, such a policy is not attractive for family shareholders to generate income, since they either have to fear a loss of control with the new equity issue or receive no income if they use the payout to participate in the new equity issue. Hence, we argue that the tax reform should not affect family shareholders preferences for either dividends or share repurchases. Furthermore, survey evidence by Pellens and Schremper (2000) among top executives suggests that tax

¹⁵ This change from an imputation to a shareholder relief taxation system is related to the fact that under the full imputation system domestic and foreign shareholders have been treated differently. Using the corporate tax as an imputation for the personal tax liability was only possible for dividends paid by domestic companies to domestic shareholders. An important decision by the European court of justice (ECJ of 9.7.2006, C 319-02 (Manninen)) confirmed that such a differential taxation depending on the national status of the company and the taxpayer is contrary to European law and the principle of free-capital movement. As a consequence, full imputation systems have been abolished in several European countries.

¹⁶ See for the speculative period of one year § 22 II in connection with § 23 I (1) Nr. 1 EstG and for the 1%-tax threshold § 17 I EstG. The tax-exempt threshold was 25% before 1999 and 10% in 1999 and 2000. From 2001 on it was 1%

¹⁷ See for the taxation of dividends § 3 Nr. 40 EstG and for the taxation of capital gains § 17 I EstG. Eggert and Weichenrieder (2002) provide a similar description of the tax code reform in Germany.

¹⁸ Of course, there is one advantage of share repurchases that is independent of tax treatment. Investors can decide upon when to realize capital gains. Hence, in contrast to tax payments on dividends, tax payments on capital gains can be postponed.

arguments are not imperative for payout policy decisions in German listed firms. Nevertheless, we control for such tax effects by including (i) year dummies in our regressions and (ii) dividing our sample into two time periods from 1995 to 2000 (before the tax reform) and from 2001 to 2006 (after the tax reform). We can show that our results remain unchanged during both sub-periods and are therefore robust to the changes in taxation.¹⁹

3.3 Family firm variables

We identify family firms based on the founding family's involvement in the firm's governance structure. In particular, we focus on the following two components: family ownership and family management. A sample firm qualifies as a family firm if (i) the founding family has at least 25% of voting rights or (ii) the founding family has at least 5% of voting rights and a member of the founding family is present in the management board and/or in the supervisory board. If more than one member of the founding family is invested we calculate the cumulated ownership fraction of the founding family. Similarly, if a firm has more than one founder we consider the accumulated ownership fraction of all founding families. This definition is more restrictive than the existing body of literature on listed family firms (for example, see Anderson and Reeb (2003a, 2003b), Villalonga and Amit (2006) for the U.S., Sraer and Thesmar (2007) for France and Andres (2007, 2008) or Ampenberger et al. (2009) for Germany).

Our definition requires a strong influence of the founding family on the family firm's decision making process: With regard to the more concentrated ownership structures in Continental Europe (in comparison to the U.S and U.K, see LaPorta et al. (1999) or Barca and Becht (2002) among others), we require that family shareholders have at least 25% of voting rights, which is also an important control threshold according to the German stock corporation act.²⁰ In contrast to previous studies about listed family firms in Germany (Andres (2007, 2008) or Ampenberger et al. (2009)), we further require a minimum ownership threshold of 5% even if the founding family is active in firm management. Since the desire to receive corporate payout depends largely on the family's cash-flow rights (and the power to exert influence via voting rights) this minimum ownership threshold seems to be justified in the context of corporate payout policy. Based on this rather restrictive definition we have created a dummy variable called family firm which is one if the firm qualifies as a family business and zero otherwise.

In a next step, we calculate a number of additional variables to measure the influence of family ownership vs. family management, within-family conflicts and tensions of family shareholders with non-family shareholders. The variables are constructed in the following way: *First*, we construct a dummy variable for family ownership that equals 1 if the founding family holds at least 25% of the firm's equity and zero otherwise. Straightforward, the dummy variable for family management equals 1 if a member of the founding family is

¹⁹ In general, see Goergen et al. (2005) or Andres et al. (2008) for a similar description of the institutional environment for payout policy in Germany.

²⁰ Several other studies about family firms in Europe have adjusted the ownership thresholds in their family firm definition to the more concentrated ownership structures in Europe in a similar way. Among others cf. Andres (2007, 2008), Sraer and Thesmar (2007) or Ampenberger et al. (2009).

present in the management or supervisory board. *Second*, we also construct a floating variable for family ownership that is simply the percentage ownership of the family (voting rights). Furthermore, we want to measure conflicts within the founding family on the one hand and tensions between family shareholders and non-family shareholders on the other hand. *Third*, to measure tensions within the founding family we split the universe of family firms into two sub-groups: Founder-controlled firms and real family firms. Thereby, we follow Miller et al. (2007) in terms of methodology, but adopt their definitions to account for the more concentrated ownership structures in Germany. A real family firm is a firm in which family members beyond the founder hold a significant ownership stake. Thereby, we require that non-founder family members have a substantial ownership stake of at least 25% or they are involved in either the firm's management and/or supervisory board and hold at least 5% of voting rights. In contrast, founder-controlled firms are all other family firms which do not fulfill the criteria of a real family firm. They are almost exclusively dominated by the founder as the following ownership information illustrates: The average ownership of the founder in founder-controlled firms is 35.6%, whereas it is only 2.6% in real family firms. Non-founder family members hold on average 52.5% of the voting rights in real family firms. In contrast, they own on average less than 4% in founder-controlled firms. If tensions between family members lead to a stronger desire for corporate payouts as suggested by the Economist statement in our introduction, we expect the propensity for payout and the payout level to be higher in real family firms than in founder-controlled firms. *Fourth*, regarding the conflicts with outside shareholders we calculate the voting rights of the founding family relative to the voting rights of other large, non-family shareholders (with voting-rights of at least 5%). Following the *income and control hypothesis of family ownership* we expect payouts to be particularly high if the founding family has considerable voting power relative to other shareholders. A detailed overview of the variables can be found in table 2.

3.4 Measurement of payout and repurchase decisions

In a first step we want to analyze the *propensity* to pay out dividends or buy back shares. For that reason we calculate several measures: (i) *First*, we apply a dummy variable for dividend payment which equals 1 if the firm pays any dividend to common and preferred equity in year t (DIVIDEND). (ii) *Second*, we calculate a dummy variable for share repurchases (REPURCHASE). The variable equals 1 if the company buys back shares in year t and zero otherwise²¹ (iii) *Third*, since we consider dividend payments and share repurchases to be substitutes for payout to shareholders, we additionally use a dummy variable for the total payout propensity that is 1 if the firm either pays dividends or repurchases shares (PAYOUT).

In a second step, we analyze the *level* of payout with regard to dividends and share repurchases. The measures applied are: (i) *First*, the dividend-payout-ratio is calculated by the total amount of common and preferred dividends divided by zero distribution profits

²¹ Hereby, we use the Worldscope item for repurchases of outstanding shares (wc04751). However, the data coverage of this item is rather poor for our sample (about 55%). Hence, we use firms' annual reports if they are available to complement the Worldscope data on share repurchases. Altogether there are 335 share repurchasing events from Worldscope and 54 share repurchasing events taken from annual reports.

(DIVIDEND-TO-EARNINGS). However, we adopt the dividend-to-earnings ratio as suggested by Julio and Ikenberry (2004) and von Eije et al. (2008): We set the dividend-to-earnings ratio to 1 if it is negative (because of negative income) or above one. (ii) *Second*, the share repurchases-payout ratio is calculated by the repurchasing volume divided by zero distribution profits. (iii) *Third*, we calculate a total payout ratio based on the combined dividend and share repurchase volume relative to zero-distribution profits. (iv) *Fourth*, as robustness tests, we perform two other specifications: We calculate both payout ratios with net income available to common (instead of using zero distribution profits) since this is more common in International empirical studies. However, as indicated in the robustness tests, this does not change our results. In addition, we use cash-flows (calculated as zero distribution profits plus depreciation and changes in pension provisions) as denominator in our payout ratios. This is related to the reasoning of Andres et al. (2008) that German firms determine their dividend payments based on cash-flows rather than earnings. Again, as indicated in our robustness section, our results remain qualitatively unchanged.

3.5 Definition of control variables

In our analysis, we use the following set of control variables (for a detailed overview of all variables applied in the regressions cf. table 2).

Decisions about payout policy are dependent on the firm's governance structure. In particular, the payout policy decisions might not only be influenced by family shareholders but also by other controlling shareholders (Gugler and Yurtoglu (2003)). Hence, we include a dummy variable (OUTSIDE BLOCKHOLDER) which equals one if there is an outside blockholder with an ownership stake of at least 25% and zero otherwise. Moreover, deviations from the one-share-one-vote-principle can impact payout decisions. Hence, we include a dummy variable that is one if there is a divergence between cash-flow and voting rights of the largest shareholder with respect to pyramidal ownership or if the firm uses dual-class shares (DIVERGENCE CASH-FLOW RIGHTS).

As shown by Fama and French (2001), large and profitable companies are more likely to pay dividends. Hence, we include firm size, measured by the natural logarithm of total assets, as control variable in all of our regressions (FIRM SIZE). In addition, we control for profitability in all regressions regarding the payout propensity. We measure the level of profitability with the zero distribution profits scaled by total assets (PROFITABILITY). Of course, we expect both firm size and profitability to be positively correlated with the analyzed payout variables.

Following the Free-Cash-Flow-theory of Jensen (1986), leverage and dividends are substitutes in disciplining management. From this perspective, we include the leverage ratio as an alternative mechanism to reduce agency costs of free cash flow. Firms with high leverage ratios are expected to face lower agency problems because they pay higher interest rates on their loans and hence have less free cashflow. In addition, creditors may prevent these firms to transfer wealth to their shareholders, either with dividend payments or share repurchases. We measure leverage as the firm's total liabilities divided by the sum of the

firm's book value of equity plus total liabilities (LEVERAGE). Consequently, we expect a negative relationship between the leverage ratio and payout variables.

One potential concern is that founding family ownership is not randomly assigned to industries with different risk profiles (Villalonga and Amit (2009b)). Consequently, we include a measure of firm-specific risk (FIRM SPECIFIC RISK). Firm-specific risk captures the part of stock price volatility that is unique to an individual firm and thus related to specific operations. It is calculated as the residuals' sum of squares (SSE) from a regression of the individual stock returns on the returns of the market (CDAX) over the preceding calendar year based on stock prices from calendar year end.²²

Firm age (FIRM AGE) is the natural logarithm of the number of years since the firms' incorporation. It is calculated as the current sample year minus the year of the firm's incorporation. Following Fama and French (2004), we expect younger firms ceteris paribus to have better internal growth options than older firms. By contrast, we expect mature firms to be more likely to distribute a larger share of their corporate earnings to shareholders. Hence, the expected relationship between firm age and dividend payment is positive.

Furthermore, we control for the firm's growth opportunities by including the market-to-book ratio (MARKET-TO-BOOK) into our regressions. Firms with good investment options may prefer to retain earnings instead of distributing them. Hence, we expect market-to-book ratio to be negatively related to payout decisions.²³

The payout decisions of firms may be influenced by the behavior of other companies in their industry. Recent survey evidence on this topic is, for example, provided by Brav et al. (2005). Hence, we include the industry's mean propensity to pay a dividend (mean industry dividend payout ratio) in all regressions to control for industry payout effects. Similarly, we include a measure for the industry's mean share repurchase and total payout propensity and level in all regressions. Thereby, the firm's industry is measured by the first digit of its primary SIC Code. Of course, we expect a positive relationship between the firm's payout decisions and the behavior of its industry peers.

Finally, as already described in the section about the institutional environment the applied accounting system might have a major impact on corporate earnings. The period of our analysis is characterized by a huge heterogeneity in terms of applied accounting standards, in particular the conservative accounting system German GAAP (HGB) vs. true-and-fair-view accounting systems (IFRS/IAS, US-GAAP). To control for this aspect we include a dummy variable for the application of HGB (HGB ACCOUNTING DUMMY).

To control for industry peculiarities, we further include industry dummies based on one-digit SIC codes. Payout policy decisions might be subject to macroeconomic and legal conditions as well. For example, a change in taxation of dividends – which has occurred in 2001 – might have a direct influence on the payout policy decisions. To control for such time effects we include year dummies in our analysis.

²² One might argue that a measure of total risk (market risk plus firm-specific risk) is more suitable than firm-specific risk in our context. However, we have used total risk as an alternative control variable in our analysis. Results remain unchanged and are therefore robust to the usage of total risk as an alternative measure of firm risk.

²³ For further empirical evidence that firm size, profitability and investment opportunities are influential to dividend policy in the suggested direction see for example Fama and French (2001).

4 Empirical results

4.1 Descriptive Statistics

Ownership of German corporations

Our dataset covers 660 listed non-financial firms in the 1995 to 2006 period. Table 1 provides a comprehensive overview of the sample composition over time. In 1995, there are 230 firms in our sample, 55 family firms (24%) and 175 non-family firms (76%). The 55 family firms can be further divided in 12 founder-controlled firms and 43 real family firms. With regard to the exceptional large number of IPOs during the 1998 to 2000 period (particularly at the technology stock exchange “Neuer Markt”), the sample composition changes substantially over time. In 2006, we have 494 firms in our dataset, 184 family firms (37%) and 310 non-family firms (63%). In particular, the number of founder-controlled firms has significantly increased. While there are 128 founder-controlled firms in 2006, there are 56 real family firms (cf. table 1 for a detailed overview about the sample composition). Within the family firms, the founding family plays an important role: Family members hold on average about 45% of the firm’s voting rights.

In general, German ownership structures are very concentrated: In about 70% of all firm-year observations we observe one large, controlling shareholder with at least 25% of voting rights. In about 30% of all firm-year observations, this controlling shareholder is the founding family, but other types of controlling (non-family) shareholders are also common: Strategic blockholders (other companies) account for about 24% of firm-year observations, financial blockholders (banks, insurances, mutual funds, venture capital or private equity firms) for about 10%, individual blockholders (wealthy outside individuals) for about 4% and government blockholders (all public authorities) for about 2% of firm-year observations. Of course, in the remaining 30% of firm-year observations there is no controlling shareholder with at least 25% of voting rights.

If there are controlling shareholders, their average ownership stake measured in voting rights is substantial: Strategic blockholders hold on average 69% of voting rights, financial blockholders 47%, individual blockholders 54% and government blockholders 49%. In about 40% of all firm year observations the controlling shareholder is “uncontrolled” in a sense that there is no second large shareholder with voting rights of at least 5%. However, in 30% of all firm-year observations the controlling shareholder is “controlled” in the sense that there is such a second shareholder with at least 5% of voting rights. These figures underline our claim that Germany provides an ideal economic setting to analyze corporate payout policy from a corporate governance perspective. In particular, we use this unique heterogeneity in terms of shareholder dominance and identity to explore the controlling shareholders’ influence on payout policy choices. Thereby, a special focus lies on founding families as they are regarded to be a distinct type of controlling shareholders (Villalonga and Amit (2009b)).

Payout Policy in family and non-family firms

A descriptive analysis of payout policy decisions between family firms and non-family firms leads to the following results: At first glance (and only in this univariate, descriptive analysis), family firms have a lower propensity for dividend payments (and total payouts). While the propensity for dividend payments (total payouts) is 43% (57%) in family firms it is 56% (66%) in non-family firms. Regarding the payout ratio, family firms have also lower ratios regarding dividend payments (total dividends to common and preferred shareholders as percentage of zero distribution profits) and total payouts (total payouts as percentage of zero distribution profits) if compared to non-family firms. A t-test for differences in means indicates that the results are statistically significant at the 1%-level. Regarding share repurchases, family firms have a higher propensity to buy back own shares. However, there are two important limitations with this univariate analysis. *First*, it neglects that there are significant differences between family and non-family firms regarding several firm-specific characteristics, such as for example firm size and the stage within the firm's life cycle. Family firms are significantly smaller (in terms of assets, sales and employees) and younger (in terms of firm age and IPO age) than non-family firms (cf. table 3). *Second*, it seems to be important whether the family firm is dominated by the founder (founder-controlled firms) or influenced by more than one family member (real family firm). While the former have a significantly lower payout propensity and level if compared to non-family firms, the latter have equal or even higher payout propensities and levels (cf. table 4). We account for both aspects (firm-specific characteristics and differences between different types of family firms) in our multivariate analysis, but we first continue with a more general analysis of time trends in payout policy in Germany over the last years.

4.2 Payout policy in Germany – time trends

We start our empirical analysis by documenting recent trends in the payout policy of German non-financial firms. Figure 1 shows the percentage of companies that pay dividends and buy back shares during the years 1995 to 2006. The fraction of dividend-paying firms declines heavily until 2004 and starts to slightly recover again during the last two years of our sample period. Overall, the percentage of dividend payers fell from nearly 80% in 1995 to 40% in 2004. Our results concerning this phenomenon are in line with previous results from a cross-European study by von Eije and Megginson (2008) who document that the decline in industrial dividend paying firms is a phenomenon independent of geographical region within the EU15. However, the extent of the decline varies across countries with Germany and the United Kingdom being especially prominent examples. For the decline of dividend paying firms, von Eije and Megginson (2008) find a magnitude comparable to our study, from a fraction of 84% dividend payers in 1991 to 37% in 2004.

– Insert figure 1 about here –

In a second step, we analyze the mean dividend-to-earnings ratio calculated over all firms that are in our sample, not only over dividend payers. We find a very similar time trend (see figure 2). The mean dividend-to-earnings ratio declines from 56% in 1995 to 18% in 2005. In 2006, the mean dividend-to-earnings ratio starts to slightly increase again to 22%.

– Insert figure 2 about here –

However, if we investigate the mean dividend-to-earnings ratio of dividend paying firms, we find that there is no visible time trend (see figure 3). Instead, the dividend-to-earnings ratio was rather randomly fluctuating between 40% and 70%. One possible explanation for that issue is that profits of dividend paying firms grew with approximately the same rate as their absolute dividends, leading to roughly constant dividend-to-earnings ratios.

– Insert figure 3 about here –

Several U.S. based studies (e.g. Grullon and Michaely (2002) or Skinner (2008)) and survey evidence among financial executives in the U.S. provided by Brav et al. (2005) suggests that manager prefer share repurchases over dividends as the more flexible instrument to distribute earnings and excess cash to investors. However, as already pointed out in the description of the institutional environment, there have been and still are some legal obstacles to fully utilize share repurchases as the major payout policy instrument in Germany. In figure 1, the percentage of share repurchasing firms is displayed. Before 1998, share repurchases were only allowed in Germany under special circumstances defined in the German stock corporation act. Consequently, as expected the fraction of share repurchasing firms is fairly low in Germany before 1998. With the introduction of the law on transparency and control in the corporate sector, share repurchases became legal, at least to a certain degree. Hence, the percentage of companies repurchasing shares increases after 1998. In 2000 and 2006 (the two years with the highest fraction of share repurchasing firms), about 16% of all sample firms use share repurchases as a payout vehicle. However, overall the importance of share repurchases in Germany is rather limited. For example, about 55% (49%) of all firms pay dividends in 2000 (2006).. In terms of overall payout volume over the 1995 to 2006 period, share repurchases account for a maximum of 9% of all payouts in the year 2000 (cf. figure 4 that shows the volume of share repurchases relative to total payout). Hence, dividends are by far the most common way for German firms to distribute their earnings to shareholders. This is in strong contrast to the empirical evidence for the U.S. capital market. Skinner (2008) documents that share repurchases are an economically relevant phenomenon since the early 1980s in the U.S. and have nowadays reached the same magnitude as aggregate dividends. While von Eije and Megginson (2008) do not report any number on the fraction of share repurchasing firms in Germany, they show that share repurchases have gained importance in the EU15-countries although to a lesser extent than in the U.S. In line with our more detailed analysis, von Eije and Megginson (2008) show that the aggregate level of share repurchases in Germany has grown modestly since 1998.

– Insert figure 4 about here –

Figure 5 shows the percentage of firms that (i) use dividends and repurchase shares as payout vehicles, (ii) use only dividends, (iii) use only share repurchases, or (iv) do not provide any payouts to their shareholders. For example, for the year 1995 we find that 78% of firms use only dividends and 22% of all firms provide no payouts at all. For 2006, we find that 10% of all firms use both dividends and share repurchases, 39% pay only dividends, 6% use only share repurchases and 46% provide no payouts at all. In contrast to the U.S. there is still a large fraction of firms in Germany that use only dividends to distribute earnings (cf. Skinner (2008) for the U.S.).

– Insert figure 5 about here –

Although the percentage of dividend paying firms mainly decreases over time, the mean dividend paid in each year shows an increasing trend. If we consider only companies which pay a dividend, this effect is even stronger (see figure 6). While the mean dividend distributed by a dividend paying firm in 1995 was about 25 million euro, it increased to over 100 million euro in 2006. This finding is in line with the empirical evidence for the U.S. showing that a small fraction of large, established and profitable firms accounts for the majority of aggregated earnings and dividends (cf. DeAngelo et al. (2004)). In particular, the 10% of the most profitable firms (largest firms) in our sample account for 61% (68%) of all dividend payments in the year 1995 (cf. figure 7). This ratio increases dramatically over time. In 2006, they account for 91% (90%) of all dividend payments. Similar results for the EU15-countries and based on an international database have been obtained by von Eije and Magginson (2008) and Denis and Osobov (2008).

– Insert figure 6 about here –

– Insert figure 7 about here –

To conclude, we find that the percentage of firms paying dividends is declining over our sample period from 1995 to 2006. Contrary to that finding, the aggregate level of dividends and the mean dividends paid by firms show the opposite trend, especially if we only consider dividend paying firms. However, since the dividend-to-earnings ratio is rather stable over time, we conclude that a small fraction of very profitable firms is responsible for the majority of aggregate earnings and dividends. Finally, we demonstrate that share repurchases are by far less common than dividend payments in Germany. Please note that although only mean values are reported in the figures, we find very similar time characteristics for median values of the payout ratios. To enhance the clarity of the figures, we have decided not to report median and mean values simultaneously.

4.3 Family firms vs. non-family firms

The *agency cost hypothesis of family management* posits that family firms have a lower dividend (payout) propensity and level while the *income and control hypothesis of family ownership* predicts the opposite. Hence, whether family firms have a higher or lower dividend (payout) propensity and level remains an empirical question that is analyzed in this section. We employ a series of probit estimations on the propensity to pay dividends, buy back shares and conduct any payout. Within these probit estimations the coefficient of interest is the dummy variable for family firms (and to a lesser extent the comparison with the dummy variable for the existence of other large, non-family shareholder). Results are reported in table 5.

Thereby, in our multivariate analysis we observe that family firms have a significantly higher propensity to pay dividends, while the existence of other non-family shareholders has the opposite effect (model Ia). With regard to the propensity for share repurchases there seems to be no difference between family firms and non-family firms (model Ib). However, the low number of only 389 share repurchase events in the 1995 to 2006 period might adversely affect the estimation quality of our probit model for share repurchases. While the Pseudo R-square for the probit model on dividend payments and total payout is 41% and 33%, it is only 12% for the probit model on share repurchases. Hence, the estimation results for share repurchases have to be interpreted cautious with regard to the low relative importance of share repurchases as a payout vehicle in Germany. If we analyze the overall probability for any kind of payout (dividend or share repurchase), we again find that family firms have a significantly higher payout probability than non-family firms (while again there is a negative correlation between the existence of a non-family controlling shareholder and the payout propensity, cf. model Ic).

In a second step, we analyze the payout level (cf. table 6). We use “zero distribution profits” as proxy for corporate earnings to normalize total dividends (which include dividends to common and preferred shares), share repurchases and the sum of both payout vehicles. The results on share repurchase activities and total payouts are reported in the appendix (as dividends are by far the most important payout vehicle). If compared to non-family firms, we find that family firms have a higher dividend payout ratio. The differences in the pooled-OLS-estimations and random-effects-models are statistically significant at the 5%- and 1%-confidence-intervall, respectively (cf. model Ia and Ic). If we use firm-fixed effects to control for unobserved and time-constant heterogeneity in firm characteristics, the results remain qualitatively unchanged. The result is statistically significant at the 10%-level (model Ib). The analysis on total payout ratios leads to similar results, while we find no significant differences between family and non-family firms in terms of share repurchase ratios (cf. the appendix). Overall, our results suggest that family firms are characterized by a higher payout propensity and higher payout levels in comparison to non-family firms. In the next section we analyze *how* founding families affect payout policy choices.

4.4 Family ownership vs. family management

We have argued that the agency conflicts between shareholders and management should be less pronounced if the founding family is at the same time a large shareholder and part of the firm's management or supervisory board. Hence, based on *the agency cost hypothesis of family management* there is less need for payouts in order to reduce the free cash flow available at managerial discretion. However, with regard to their long-term commitment and the desire to bequeath the family business to future generations, the founding family wants to avoid any dilution of their voting rights. In such a situation, payouts (especially dividends) are the only feasible opportunity to generate a steady income out of their investment. We state this as *the income and control hypothesis of family ownership*. Cf. tables 5 and 6 for the empirical results.

In a first step, we observe that the propensity to pay dividends is positively affected by family ownership while family management does have no impact (table 5, model IIa and IIIa). Thereby, it does not matter whether we measure family ownership as a dummy variable (that is one if the founding family holds at least 25% of voting rights) or as a continuous variable (the cumulative voting rights held by the founding family). A similar effect can be observed for the total payout propensity (table 5, model IIc and IIIc). All effects are statistically significant at least at the 5%-confidence interval. However, neither family ownership nor family management has any impact on the probability of share repurchases (table 5, model IIb and IIIb).

Regarding the dividend payout ratios we receive similar results. Family ownership has a strong positive influence on the dividend payout ratio while the influence of family management is insignificant. Thereby, the results are qualitatively similar if we measure family ownership as a dummy variable or as a continuous variable (table 6, models IIa to IIc and IIIa to IIIc). As shown in the appendix, we find similar results for the total payout ratio but no correlation between family ownership and the payout level in terms of share repurchases (see the appendix). Again, the goodness of fit is much better in the regression models for dividend payments (as indicated by an adjusted R-square of about 25% for the OLS- and random-effects-models and 50% for the firm-fixed effects-models) than in the regression models for share repurchases (with an adjusted R-square of about 5% in the OLS- and random-effects models). This is certainly related to the low importance of share repurchases in Germany. The firm-fixed effects models yield qualitatively similar results as the pooled OLS-estimations. Hence, the results that family ownership rather than family management is the main channel how founding families affect payout policy is robust against unobserved, time-constant heterogeneity in firm characteristics. Overall, our results provide strong support for the *income and control hypotheses of family ownership*. It seems that family ownership creates a strong desire for dividends (payouts) and at the same time any avoidance of a loss in voting rights.

4.5 Conflicts within the family

The Economist states that tensions within the family can affect payout policy choices. Such tensions are important if there is more than one family member involved in the business. Intra-family disagreements about payout policy might be pronounced if there are conflicts between multiple family members and/or generations. For example, in the early years of the business, the founder might be willing to forego corporate payouts in order to develop the business while at the same time preserving control. In the later stage of the family business, as new family members and/or generations are added to the controlling group, the potential for disagreement over the magnitude and timing of payouts might grow (DeAngelo et al. (2009)). To investigate this issue in greater detail we follow the methodology of Miller et al. (2007) in order to distinguish between family firms that are still dominated by the company founder (founder-controlled firms) and family firms where multiple family members are involved at the same time or over time (real family firms). Within the universe of family firms in our dataset, we find that 62% are founder-controlled firms and 38% are real family firms. We would expect that the desire for dividends and payouts is stronger in real family firms than in founder-controlled firms with respect to the within-family tensions and common action problems among a multitude of family members and/or family generations. Results can be found in tables 5 and 6.

Indeed, we find that the desire for dividends and payouts is stronger in real family firms compared to founder-controlled firms. Both coefficients for the dummy variable for founder-controlled firms and real family firms are positive and statistically significant in a probit model for dividend payments and total payouts, but the coefficients for real family firms have a larger magnitude. Moreover, in pooled OLS-estimations and firm-fixed effects models we find that only real family firms have higher dividend payout ratios than non-family firms. Overall, our results suggest that conflicts within the family play an important role in the context of payout decisions. We find strong evidence for higher dividend propensity and level in real family firms, whereas indications for higher payout levels in founder-controlled firms are limited.

4.6 Controlling shareholders and conflicts between family and non-family shareholders

The rate at which corporations distribute earnings to shareholders via dividends is a measure for the expropriation of minority shareholders since dividends transfer wealth on a pro rata basis. By contrast, balance-sheet-items and corporate resources above the dividend line can be manipulated in favor of the controlling shareholder (Faccio and Lang (2001)). Such manipulation leads to the consumption of private benefits of control or resource tunneling out of the firm to controlling shareholders via outright theft and fraud or “sweet-heart deals” (asset sales, transfer pricing, excess compensation) at favourable conditions for the controlling shareholders (Johnson et al. (2000), LaPorta et al. (2000a), DeAngelo et al. (2009)). Gugler and Yurtoglu (2003) argue that large, controlling shareholders want to avoid “pro rata distributions” via dividends in order to exploit minority shareholders. They label this as their “rent extraction hypothesis”. In particular, they show that majority shareholders in

Germany reduce the dividend-payout-ratio while the presence of a large, second shareholder mitigates this effect (similar evidence on the rent extraction potential of large shareholders within European firms is provided by Faccio and Lang (2001)). Moreover, Gugler and Yurtoglu (2003) analyze announcement effects to 736 changes in dividend policies. Consistent with their “rent extraction hypothesis” they find stronger stock price reactions if dividends are reduced in those firms that have (1) “an unchecked majority owner” and (2) pyramidal ownership structures. We follow the argument of Gugler and Yurtoglu (2003) and Faccio and Lang (2001) and in general corroborate their findings. However, we argue that the identity of the controlling shareholder is important. The results are reported in table 7.

We use four different dummy variables to test the impact of “controlled” and “uncontrolled” blockholders: The variable “uncontrolled outside blockholder” equals one if an outside blockholder with at least 25% voting rights exists, but no further blockholder with ownership stakes over 5%. If at least one such additional blockholder exists the dummy variable “controlled outside blockholder” is set to one. A similar procedure applies for family blockholders. If the founding family owns more than 25% and no other blockholder with voting rights over 5% exists, the variable “uncontrolled family blockholder” equals one. If at least one external blockholder exists beneath the founding family, the dummy “controlled family blockholder” is set to one. Model Ia shows that the existence of an “uncontrolled outside blockholder” has a significant negative impact on the propensity to pay dividends. The coefficient of the dummy variable is -0.38 and statistically different from zero at the 1%-level. If we compare this to the effect of “controlled outside blockholder”, the effect is weaker. The coefficient is -0.20 and hence still negative, but of lower magnitude and only statistically different from zero at the 10%-level. This result is similar to the one of Gugler and Yurtoglu (2003). However, we further argue that founding families are a special type of blockholder. In model Ia, we find that the dummy variable for “uncontrolled family blockholder” shows a strong positive correlation with the propensity for dividend payments. The coefficient of the dummy variable is 0.39 and statistically significant at the 1%-level. However, the effect for “controlled family blockholder” is also positive, with a coefficient of lower magnitude (0.31) that is also statistically different from zero at the 1%-confidence interval. Overall, model Ia suggests that family shareholders in comparison to non-family shareholders have exactly the opposite impact on the propensity to pay dividends. This result is pronounced if we only include firm-year observations with a loss (model Ib). In this specification only the “uncontrolled family blockholder” have a statistically significant influence on the propensity to pay dividends. Again, the coefficient is positive with a magnitude of 0.49 and statistically different from zero at the 1%-level. By contrast, the dummy variables for the other three categories (“uncontrolled” and “controlled” outside blockholder as well as “controlled” family blockholder) are insignificant. This suggests that family firms are much more likely to continue their dividend payments although they suffer from losses.

Additionally, we find that the number of outside blockholders has a negative effect on payout propensity if we analyze all firms (model IIa). Interestingly, this effect changes to the opposite if we restrict our test sample to firms with a controlling outside shareholder who owns at least 25% of the firm’s voting rights. In this case, the effect of additional

blockholders on dividend propensity is positive (model IIb). This finding is consistent with the results of Gugler and Yurtolgu (2003), who argue that “rent extraction” of large blockholders may be limited if there are other powerful shareholder.

If we calculate the founding family’s voting rights relative to the voting rights of all blockholders (family power), we find that the propensity for dividends is increasing in the power of the founding family (model III). Our results are statistically significant at the 1%-confidence interval.

The results are unchanged if we measure the influence of the controlling shareholders more accurate: For example, we use the outside shareholders’ voting rights instead of a dummy variable (not reported) or we use several dummy variables in order to distinguish further according to the identity of the outside shareholders (model IVa and IVb). We build dummy variables for the following blockholder categories: (i) government blockholder (all public authorities), (ii) financial blockholder (banks, insurances, mutual funds, venture capital and private equity investors), (iii) individual blockholder (wealthy investors) and (iv) strategic blockholder (other companies). Each blockholder holds at least 25% of voting rights. Andres (2008) has already analyzed the blockholders’ influence on firm performance in Germany and used the same blockholder categories. Our results are similar to the ones of Andres (2008) in a different context. We find that while the influence of family shareholders is robust under several specifications (and the positive correlation with the propensity to pay dividends remains strong), other types of large, controlling shareholders have the opposite or no effect. In particular, model Ia shows that large, strategic and financial shareholders have a negative influence on the dividend propensity. While the effect for strategic shareholders is statistically significant at the 1%-level, the one for financial investors is statistically significant at the 10%-level. Government blockholder and individual blockholder do not affect payout policy (at least the coefficients for these dummy variables are not statistically different from zero). If we further analyze only firm-year observations in which a loss occurs, the influence of family shareholders remains positive and statistically different from zero at the 1%-level. By contrast, the effects of all other types of controlling shareholders are insignificant.

Overall, the findings suggest that (i) the identity of the controlling shareholder is important, (ii) tensions between family and non-family shareholders are present and (iii) that while family shareholders have a positive effect on dividends (and total payouts) other types of controlling shareholders have the opposite effect. Overall, we interpret these effects in a way that the founding family is one particular type of controlling shareholder that is able to balance the agency problems stemming from the agency conflict I (between managers and shareholders) and the agency conflict II (between majority and minority shareholders). Founders and their families constitute a group of controlling shareholders that is beneficial for minority shareholders and different from other types of large, controlling owners. This result seems to be in line with previous research on the effect of large, controlling shareholders in Germany on firm performance. In his study, Andres (2008) finds that founding families represent the only type of large, controlling shareholder that has a positive effect on firm performance (both on operating profit and Tobin’s Q, in particular if the founding family is not only a shareholder but also involved in firm management). Although Andres (2008) follows a different research approach by analyzing firm performance, he draws a similar

conclusion with regard to benefits of family shareholders and differences in comparison to other types of large owners: “Families seem to add value to a company in a way that distinguishes them from all other types of blockholder” (Andres (2008), p. 441). Overall, our analysis confirms the anecdotal evidence in the Economist statement that conflicts between family shareholders and other controlling owners are imperative for payout policy decisions. Furthermore, our findings suggest that while family shareholders are beneficial for minority shareholders by fostering a “pro-rata distribution of earnings”, other controlling shareholders are not.

4.7 Control variables

As described in the section 3 we control for a number of firm- and industry-specific characteristics. We find that firm size, profitability and firm age are positively correlated with the propensity for dividends or any payout. Larger, older and more profitable firms have a higher payout probability. In addition, the usage of control-enhancing instruments (such as pyramidal ownership or dual-class shares) and the associated deviation from the one share-one vote-principle increases the probability for payouts. Firms that operate in industries with a large number of dividend paying firms show a higher payout probability. In contrast, firm-specific risk is negatively correlated with the dividend payment propensity. In some of our models, leverage has a negative and significant coefficient. Finally, there seems to be no significant influence of the market-to-book ratio (as a proxy for investment opportunities). Additionally, we include industry- and year dummy variables in all our models. For the probit estimations on share repurchases, we find that the control variables are less significant and point partly in different directions. Again, we want to emphasize that these models have to be interpreted with caution because of the limited number of share repurchases in Germany.

With respect to the dividend payout ratios, we also find a significant and positive correlation for firm size, the dummy variable for deviations from the one share-one vote-principle, firm age and the mean dividend payments within the industry. Moreover, the dummy variable for the usage of German GAAP is significant and positive. By contrast, there is a significant and negative correlation with leverage and firm-specific risk, while the market-to-book value and the dummy variable for the existence of outside blockholder are insignificant. In addition, we include industry- and year dummy variables in all our models.

5 Robustness tests

This section explores the robustness of our results. We focus on the following aspects: (i) issues of misspecification, (ii) sample composition effects (iii) tax regime effects (iv) insider ownership effects and (v) concerns of endogeneity. In this section, we report probit estimations for the propensity to pay dividends. Thereby, we analyze differences between family and non-family firms. We focus on dividends (rather than share repurchases or total payouts) in our robustness tests since dividends are the dominant payout vehicle in Germany. However, in general (unreported) robustness tests with the overall propensity for payout instead of the dividend payout propensity as dependent variable lead to similar results.

Moreover, (unreported) robustness tests with the dividend payout ratio and robustness tests with family ownership vs. family management instead of the dummy variable for family firms lead to qualitatively similar results as in section 5. Overall, our results prove to be stable along several dimensions. We report the results of our robustness tests in table 8.

5.1 Issues of misspecification

Our results are stable against the usage of several alternative control variables, such as \ln sales or \ln employees in lieu of \ln assets as a proxy for firm size, \ln IPO age in lieu of \ln firm age as a proxy for the firm's life cycle stage or total risk in lieu of firm-specific risk. The results remain also robust if we use only dividends to common shareholders instead of dividends to common and preferred shareholders (unreported).

In addition, we use a broader definition of a family firm that does not require a minimum ownership threshold of 5% voting rights. According to this alternative definition a firm qualifies as a family business if the founding family holds 25% of the voting rights and/or a member of the founding family is present in the management or supervisory board. Essentially, this is the same definition as in Andres (2007, 2008) or in Ampenberger et al. (2009). However, model I in table 8 shows that the results are robust against the usage of such a broader family firm definition, since the dummy variable for family firms is still significant at the 1%-level.

There is a tendency that large established and profitable firms account for the majority of payouts (DeAngelo et al. (2004)). This trend is also confirmed in our sample as over the entire sample period on average 10% of the most profitable firms account for 79% of all payouts. Moreover, from the perspective of the free-cash-flow hypothesis (Jensen (1986)) the disciplinary role of dividend payments should be particularly strong among large and established firms. To test, whether non-linear size effects affect our results, we use the median firm size in order to divide our sample in a subset of large and small firms in model II. Thereby, we find that the coefficient for family firms is positive and statistically different from zero at the 1%-significance-level in the subset of large firms but the coefficient for family firms is insignificant in the subset of small firms. One reason for this result might be indeed that the propensity to pay out dividends is strongly correlated with firm size. In general, larger and mature firms are more likely to pay dividends (and distribute their earnings) than young and growing firms (which prefer to retain earnings for profitable investments).

Following the previous literature on dividend policy in Germany (Goergen et al. (2005) or Andres et al. (2008)), we use "zero-distribution-profits" in order to normalize dividend payments, share repurchase and total payouts. One advantage of these payout ratios is that they account for the difference in taxation of retained and distributed earnings under the full imputation system before 2001. However, from a legal perspective payout decisions are based on annual net income (which is also used to calculate payout ratios in former empirical work, e.g. in Julio and Ikenberry (2004) or von Eije and Megginson (2008)). Additionally, Andres et al. (2008) argue that German firms base their dividend payout decisions on cash-flows rather than earnings. For these reasons, we calculate two alternative

payout ratios: *First*, we normalize dividend payments by annual net income (model IIIa) and *second* by cash-flow (IIIb). Thereby, we calculate the cash-flow as the “zero-distribution profits” plus depreciation and pension provision and charges (similar as in Goergen et al. (2005) and Andres et al. (2008)). In both models the coefficient for family firms remains positive. It is statistically different from zero at the 1%-level (model IIIa) and 10%-level (model IIIb) respectively.

Finally, our empirical results are also similar if we use lagged control variables instead of contemporaneous control variables (model IVa). In this model the dummy variable for family firms remains statistically significant at the 5%-level. If we do not only lag the control variables but also the dummy variable for family firms (model IVb), the effect remains significant. In general, our results prove to be stable against several issues of misspecifications.

5.2 Sample composition effects

Our unbalanced sample is influenced by a large number of firms that went public during the 1998 to 2000 IPO boom phase.²⁴ Against the background of the comparatively less developed German stock market this was an uncommon IPO wave. Most of those new lists are young high-tech firms that went public at the technology stock exchange “Neuer Markt”. Table 1 indicates that the importance of family firms in our sample is increasing over time. While in 1995 – the starting year of our sample period – 24% of firms are family businesses (55 firms out of 230), in 2006 37% are family businesses (184 out of 494 firms). In the context of payout policy decisions, the changing sample composition can affect our results in several ways. One concern is that new lists during the 1998 to 2000 period have different firm characteristics than established companies. For the U.S., Fama and French (2004) have argued that both the number and characteristics of new lists have changed dramatically in the U.S. Cross-sectional characteristics of new lists show more left skewed profitability in combination with more right skewed growth options resulting in a sharp decline of survival rate. Furthermore, Fama and French (2001) show that these changing firm characteristics can have a large influence on corporate policy decisions. Along that line, von Eije and Megginson (2008) argue that the huge increase in listed firms on technology markets such as the Alternative Investment Market (U.K.) or the Neuer Markt (Germany), might be responsible for the large decline in terms of cash dividend payers. If we follow the argument that “high-tech” firms distribute fewer profits among their shareholders due to high internal growth opportunities, this might be a reasonable explanation. Hence, we analyze whether the changing characteristics of new lists affect our results for firms’ payout policy decisions. To do so, we run all regression models for two additional, separate sub-samples: One regression is based on a sub-sample of firms whose Initial Public Offering was in the 1998 to 2000 period and one regression for the sub-sample of firms with an IPO before or after this IPO boom phase (models Va and Vb). As an alternative test, we use the full sample and include a dummy variable for the Going Public between 1998 and 2000 (model Vc). In general, the

²⁴ Out of the 660 firms in our sample, 328 had their IPO in this time period.

three tests show that our results are relatively stable against issues of sample composition. The coefficients for family firms are positive in all three specifications. However, we have to admit that the level of significance is lower (at a 10%-level) in model Va that includes all firms with an IPO between 1998 and 2000. By contrast, the coefficient for family firms remains different from zero at the 1%-significance-level in the other two models. This suggests that the family firm effect is somewhat stronger among established firms if compared to new lists.

5.3 Tax regime effects

One possible concern about our analysis is that changes in the taxation of dividends and share repurchases may influence firms' payout decisions depending on their ownership structure. Or in other words: Changes in taxation policy might not affect all firms equally and lead to different adjustments of payout policy between family firms and non-family firms. Several authors have argued for such a tax clientele effect (cf. e.g. Lie and Lie (1999), Fenn and Liang (2001), Perez-Gonzalez (2002), Graham and Kumar (2006), Brown et al. (2007), Barclay et al. (forthcoming) and Hsieh and Wang (2008)). Since Germany underwent a major tax reform in the year 2001 (cf. section 3.3 about the institutional environment for a detailed discussion), we control for this issue by dividing our sample into two sub-periods: one sub-sample covers only observations during the 1995 to 2000 period (six years under the "old" tax regime, model VIa) while the other sub-sample covers only firm-year observations during the 2001 to 2006 period (six years under the "new" tax regime, model VIb). However, our results indicate that family firms have a higher propensity to pay dividends before and after the tax reform. The coefficient for family firms is statistically significant at the 5%-level in both time periods and has also a similar magnitude. Hence, we argue that our results are not subject to changes in the tax system from a full imputation system to a shareholder relief system.

5.4 Insider ownership effects

Insider ownership, i.e. ownership by members of the management and supervisory board, is a common phenomenon in the German capital market (Kaserer and Moldenhauer (2008)). Hence, there are still a large number of firms with significant (non-family) insider ownership. Such insiders might be a similar shareholder category as the founding family with regard to their strong desire for control and dividends at the same time. To alleviate the concern that we find an insider ownership effect rather than a founding family ownership effect, we use the following test: We limit our analysis to those firms which have no insider ownership (model VIIa). Additionally, we use the level of insider ownership as an alternative control variable (model VIIb). However, we find that in both models (which include only firms without insider ownership), family firms in comparison to non-family firms have still a significantly higher probability to pay dividends. Overall, based on these tests we argue to find a family firm effect rather than an insider ownership effect.

5.5 Endogeneity issues

A drawback of our analysis is the potentially endogenous relationship between family ownership and control, firm profitability and payout policy. In particular, the founding family's decision to remain a large shareholder may be endogenous. For example, if there are information asymmetries between informed family owners and outside investors, the former may have incentives to sell their ownership stake if they believe the stock is overvalued or the firm will make substantial losses in the future (Villalonga and Amit (2006)). Under such circumstances the positive relationship between family ownership and the higher payout propensity and level may be subject to reverse causality. In order to alleviate concerns of endogeneity, we apply a propensity score based matching technique (described in Heckman et al. (1997, 1998), Angrist (1998) or Todd (2006)).

We identify 78 firms that transition from a family firm to a non-family firm during our sample period. The propensity score based matching technique allows us to match those 78 firms with firms that remain family firms but have a similar propensity to transition into a non-family firm. The matching procedure is based on observable firm characteristics using a probit model. In our case, the dependent variable of the probit model is a dummy variable for the transition from a family firm to a non-family firm. For the determination of this propensity we use family ownership (as a floating variable), family management (dummy variable), outside blockholder ownership (as a floating variable), firm size and age, profitability and industry affiliation one year before the treatment. Most of the variables are statistically significant and the Pseudo-R-square is comparatively high with 31%. In particular, we use two types of matching estimators: the nearest neighbor estimator and kernel estimator. Based on both estimators we compare the propensity to pay dividends two years before the year of transition and two years after the year of transition. Thereby, we acknowledge that it takes some time for the new management to establish changes in payout policy. Both estimators lead to similar results: The propensity to pay dividends is significantly reduced through the transition from a family firm to a non-family firm. If we simply analyze the 78 transition cases, 12 firms cut dividend payments, while 64 firms continue their prior dividend policy. Not surprising, the results for the control group point in the opposite direction: Among the 78 matched firms in the nearest-neighbor approach, 20 firms even started to pay dividends, whereas no firm made a dividend cut. If we compare the treatment group with the control group (average treatment effect on the treated), the propensity to pay out dividends is about 40% lower in the treatment group based on nearest neighbor matching. The results are statistically significant at least at the 5%-confidence interval (also if we use bootstrapped standard errors). Hence, the transition from a family firm to a non-family firm leads to a significantly lower propensity for dividend payments. Results from the kernel matching estimator are significant as well and point in the same direction.

Finally, we perform a similar analysis for the dividend payout ratio. Thereby, we find that the payout ratio decreases by 25 percentage points based on the nearest neighbor matching estimator (average treatment effect on the treated). This result is statistically significant at the 5%-confidence interval (t-value of 2.53). However, the kernel matching estimator for the payout ratio is insignificant although the coefficient is also negative. We

receive similar standard errors if we apply a bootstrap-procedure. Altogether, the robustness test for potential endogeneity in the family firm payout relationship based on a propensity based matching technique suggests that there is indeed a causal relationship between family firm characteristics (in particular family ownership) and dividend policy choices.

6 Conclusion

In this paper, we test two theories why family firms might differ from non-family firms in terms of payout policy. The *first* theory, which refers to lower agency costs in family firms (mainly realized by family management) suggests a lower payout propensity and level, while the *second* one, which is related to control considerations and the desire for a steady income (associated with family ownership) predicts the opposite.

Using a unique, hand-collected panel dataset of 660 publicly-listed firms in Germany between 1995 and 2006, we find that overall family firms have a higher propensity (and level) of dividend payments and total payouts. As expected with regard to legal restrictions, we find that share repurchases are still of minor importance in Germany. We can further show that family ownership is the main channel for the higher payout propensity and level. Our results are stable against a battery of robustness tests including a propensity score based matching estimator to alleviate concerns of endogeneity.

Our results further suggest that tensions within the founding family on the one hand and conflicts between the founding family and other large, controlling shareholders on the other hand are important determinants of payout policy choices. We find that the dividend payout level is larger in firms in which family members beyond the founder are important for the family business (real family firm) compared to firms mainly controlled by the founder (founder-controlled firms). This suggests that disagreements and common action problems between a multitude of family members and/or generations are an important determinant of payout policy in family firms. In addition, we analyze conflicts between family shareholders and other non-family controlling shareholders. Thereby, we can show that family shareholders have a positive impact on the propensity to pay dividends while large, non-family shareholders have a negative impact. Moreover, the propensity for dividends is increasing in the voting power of the founding family relative to the voting power of non-family shareholders.

Our paper contributes to two strands of literature: With regard to the emerging literature on family firms our study is the first to illuminate payout policy in great detail (including an analysis of conflicts within the founding family and between the founding family and large outside blockholders). With respect to the more mature literature on payout policy our study is among the first to explore the influence of controlling shareholders in a non-U.S. setting (a major research gap according to DeAngelo et al. (2009)) and with a focus on corporate governance aspects rather than tax considerations.

Overall, our analysis suggests that the identity of the controlling shareholder is important. While family shareholders seem to be able to successfully balance agency costs from the manager-shareholder and the majority-minority shareholder conflict (as in Andres (2008)), by contrast non-family shareholders seem to be not very beneficial for minority

shareholders (as in Gugler and Yurtoglu (2003) and Faccio and Lang (2001)). However, expropriation of minority shareholders has adverse effects on external financing, for example the development of stock markets (Shleifer and Vishny (1997), LaPorta et al. (1997, 2000a)). From this perspective, our results call for increasing transparency and a better protection of minority shareholders against expropriation by large, outside controlling shareholders. Within the last years, Germany (partly driven by EU directions) underwent already several legal reforms (including voluntary codes) in the security, company and bankruptcy law to increase transparency and accountability within the financial system. However, the German case shows that the improvement in the regulation itself (Goergen et al. (2008a, 2008b)) needs to be accompanied by strong legal regulatory and judicial enforcement in order to further improve minority investors' protection.

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Table 1: Composition of sample

Year	Firms	Family Firms	Real Family Firms	Founder-controlled Firms	Non-Family Firms
1995	230	55	43	12	175
1996	235	59	45	14	176
1997	250	66	50	16	184
1998	312	97	63	34	215
1999	430	180	78	102	250
2000	566	266	93	173	300
2001	568	265	92	173	303
2002	542	238	70	168	304
2003	514	218	68	150	296
2004	500	199	60	139	301
2005	494	189	55	134	305
2006	494	184	56	128	310
	5135	2016	773	1243	3119

Note: This table shows the development of the sample composition over time. Column 1 presents the 12 sample years between 1995 and 2006, column 2 the number of firms in each year, column 3 the number of family firms, column 4 the number of real family firms, column 5 the number of founder-controlled firms and column 6 the number of non-family firms in each year.

Table 2: Definition of Variables

Variable group	Variable name	Description of variable
Corporate Governance Variables	Family Firm [Dummy]	Dummy which is 1 if (a) the cumulative ownership stake of the founding family is at least 25% and/or (b) a member of the founding family is represented in either the management or supervisory board and the cumulative ownership stake of the founding family is at least 5%
	Real Family Firm [Dummy]	Dummy which is 1 if (a) the ownership stake of the members of the founding family (except founders) is at least 25% and/or (b) a member of the founding family (except founders) is represented in either the management or supervisory board and the cumulative ownership stake of the founding family (except founders) is at least 5%
	Founder-controlled Firm [Dummy]	Dummy which is 1 if the firm is a family firm but does not fulfil the criteria of a real family firm
	Family Ownership [Dummy]	Equals 1 if stock ownership held by all members of the founding family is at least 25%
	Family Management [Dummy]	Equals 1 if a member of the founding family is involved in the management or supervisory board
	Family Ownership [Floating]	Percentage of stock ownership held by all members of the founding family
	Family Power	Founding family ownership / total block-ownership
Control Variables	Outside Blockholder [Dummy]	Equals 1 if a outside blockholder with at least 25% of the firm's voting rights exists
	Firm Size [Ln]	Ln of the firm's total assets
	Profitability	Zero distribution profits / total assets
	Divergence Cashflow Rights [Dummy]	Equals one if the firm issues dual class shares or if the largest shareholder shows a divergence of his cashflow and voting rights
	Leverage	Total liabilities / (Book value of equity + total liabilities)
	Firm Specific Risk	Residuals' sum of squares from a regression of the individual stock returns on the returns of the market (CDAX)
	Firm Age [Ln]	Ln of the number of years since the firm's incorporation
	Market-to-Book	Market value of the firm / book value of the firm
	HGB Accounting [Dummy]	Dummy which is 1 if the firm uses HGB accounting and zero if it applies IFRS or US-GAAP accounting
	Mean Industry Level	Mean level of the dependent variable in the firm's industry for each year
Robustness Test Variables	Family Firm Broad [Dummy]	Dummy which is one if (a) the cumulative ownership stake of the founding family is at least 25% and/or (b) a member of the founding family is represented in either the management or supervisory board
	High-Tech Firm [Dummy]	Equals 1 if the firm went public during 1998 and 2000
	Insider Ownership [Floating]	Cumulative ownership of firm insiders (either representatives of the firm's management or supervisory board)
	DPR / Net income	Total dividends / net income; Equals 1 if calculated payout ratio is below 0 or above 1.
	DPR / Cashflow	Total dividends / (Zero distribution profit + depreciations + changes in pension provisions); Equals 1 if calculated payout ratio is below 0 or above 1.
Blockholder Variables	Government Blockholder [Dummy]	Dummy which equals 1 if public authorities own at least 25% of the firm's voting rights and zero otherwise
	Financial Blockholder [Dummy]	Dummy which equals 1 if a financial investor owns at least 25% of the firm's voting rights and zero otherwise
	Private Blockholder [Dummy]	Dummy which equals 1 if a private outside investor owns at least 25% of the firm's voting rights and zero otherwise
	Strategic Blockholder [Dummy]	Dummy which equals 1 if a strategic investor owns at least 25% of the firm's voting rights and zero otherwise
	Uncontrolled Outside Blockholder [Dummy]	Dummy which equals 1 if (a) an outside investor owns at least 25% of the firm's voting rights and (b) no second outside blockholder with more than 5% of the firm's voting rights is present and zero otherwise
	Controlled Outside Blockholder [Dummy]	Dummy which equals 1 if (a) an outside investor owns at least 25% of the firm's voting rights and (b) at least one further outside blockholder with more than 5% of the firm's voting rights is present and zero otherwise
	Controlled Family Blockholder [Dummy]	Dummy which equals 1 if (a) the founding family owns at least 25% of the firm's voting rights and (b) no outside blockholder with more than 5% of the firm's voting rights is present and zero otherwise
	Uncontrolled Family Blockholder [Dummy]	Dummy which equals 1 if (a) the founding family owns at least 25% of the firm's voting rights and (b) at least one outside blockholder with more than 5% of the firm's voting rights is present and zero otherwise
Payout Variables	Dividend	Dummy which equals 1 if the firm pay a dividend
	Repurchase	Dummy which equals 1 if the firm repurchases own shares
	Payout	Dummy which equals 1 if the firm pays a dividend or repurchases own shares
	Dividend Payout Ratio (DPR)	Total dividends / zero dividend profits; Equals 1 if calculated payout ratio is below 0 or above 1.
	Share Repurchase Payout Ratio (SPR)	Share repurchase volume / zero dividend profits; Equals 1 if calculated payout ratio is below 0 or above 1.
	Total Payout Ratio (TPR)	(Total dividends plus share repurchase volume) / zero dividend profits; Equals 1 if calculated payout ratio is below 0 or above 1.

Table 3: Descriptive Statistics 1

	All Firms		Family Firms		Non-Family Firms		t-test
	Mean	Median	Mean	Median	Mean	Median	
Corporate Governance Aspects							
Founding Family Ownership [%]	17,9	0,0	45,0	0,5	0,0	0,0	38,88
Outside Blockholder [%]	33,7	20,3	12,0	0,0	48,0	50,0	-19,22
Size Management Board	3,2	3,0	3,0	3,0	3,3	3,0	-2,48
Size Supervisory Board	7,6	6,0	5,3	3,0	9,0	6,0	-10,54
Firm Size and age							
Assets (in million €)	2988	143	1042	77	4252	229	-2,99
Sales (in million €)	2501	167	1184	81	3362	278	-2,65
Employees	11380	1023	6739	450	14394	1646	-1,95
Firm Age	53	28	31	15	67	61	-9,42
IPO Age	15	6	6	4	20	9	-11,73
Accounting figures							
Profitability	0,0	0,0	0,0	0,0	0,0	0,0	-4,96
Market-to-Book	2,9	1,7	3,0	1,7	2,7	1,7	0,55
Leverage	0,6	0,6	0,5	0,5	0,6	0,7	-6,94
Dependent variables							
Dividend Propensity	0,51	1,00	0,43	0,00	0,56	1,00	-4,11
Share Repurchase Propensity	0,11	0,00	0,14	0,00	0,09	0,00	3,08
Payout Propensity	0,63	1,00	0,57	1,00	0,66	1,00	-2,76
Adjusted Dividend Payout Ratio	0,31	0,06	0,26	0,00	0,34	0,17	-4,11
Adjusted Share Repurchase Payout Ratio	0,05	0,00	0,07	0,00	0,04	0,00	3,51
Adjusted Total Payout Ratio	0,36	0,20	0,33	0,10	0,38	0,25	-2,42

Note: A detailed description of the variables can be found in table 2. ***, ** and * indicate significance on the 1%-, 5%- and 10%-level respectively. The t-statistics are corrected for serial correlation.

Table 4: Descriptive Statistics 2

	Real Family Firms		Founder-controlled Firm		Non-Family Firms		t-test (RFF vs NFF)	t-test (FCF vs NFF)
	Mean	Median	Mean	Median	Mean	Median		
Corporate Governance Aspects								
Non-Founder Founding Family Ownership [%]	52,5	54,0	2,6	0,0	0,0	0,0	26,84	0,67
Founder Ownership [%]	3,1	0,0	35,6	35,5	0,0	0,0	3,21	25,97
Outside Blockholder [%]	0,1	0,0	0,1	0,1	0,5	0,5	-14,49	-19,13
Size Management Board	3,1	3,0	2,9	3,0	3,3	3,0	-0,90	-2,82
Size Supervisory Board	6,6	6,0	4,5	3,0	9,0	6,0	-5,16	-12,64
Firm Size and age								
Assets (in million €)	1139	185	979	57	4252	229	-3,11	-2,62
Sales (in million €)	1554	205	943	50	3362	278	-1,93	-2,45
Employees	8124	1255	5824	298	14394	1646	-1,48	-1,63
Firm Age	55	39	17	11	67	61	-2,10	-15,22
IPO Age	8	5	4	3	20	9	-8,03	-12,85
Accounting figures								
Profitability	0,0	0,0	-0,1	0,0	0,0	0,0	-1,40	-5,37
Market-to-Book	3,2	1,7	2,9	1,7	2,7	1,7	0,68	0,34
Leverage	0,6	0,6	0,5	0,4	0,6	0,7	-3,04	-7,59
Dependent variables								
Dividend Propensity	0,63	1,00	0,29	0,00	0,56	1,00	1,46	-7,73
Share Repurchase Propensity	0,11	0,00	0,16	0,00	0,09	0,00	0,88	3,59
Payout Propensity	0,75	1,00	0,45	0,00	0,66	1,00	2,30	-5,87
Adjusted Dividend Payout Ratio	0,37	0,26	0,18	0,00	0,34	0,17	0,98	-7,53
Adjusted Share Repurchase Payout Ratio	0,06	0,00	0,08	0,00	0,04	0,00	1,48	3,70
Adjusted Total Payout Ratio	0,43	0,33	0,26	0,00	0,38	0,25	1,48	-4,76

Note: A detailed description of the variables can be found in table 2. ***, ** and * indicate significance on the 1%-, 5%- and 10%-level respectively. The t-statistics are corrected for serial correlation. RFF stands for real family firm, FCF indicates a founder-controlled firm and NFF a non-family firm.

Table 5: Propensity for Payout - Family Influence

Model	I a	I b	I c	II a	II b	II c	III a	III b	III c	V a	V b	V c
	Dividend	Repurchase	Payout	Dividend	Repurchase	Payout	Dividend	Repurchase	Payout	Dividend	Repurchase	Payout
Family Firm [Dummy]	0.31*** (3.25)	0.15 (1.62)	0.28*** (3.16)									
Family Ownership [Dummy]				0.30*** (2.60)	0.14 (1.29)	0.35*** (3.44)						
Family Management [Dummy]				0.095 (0.72)	-0.026 (-0.21)	0.0014 (0.012)						
Family Ownership [Floating]							0.56** (2.39)	0.26 (1.27)	0.73*** (3.52)			
Family Management [Dummy]							0.085 (0.63)	-0.028 (-0.23)	-0.031 (-0.27)			
Founder-controlled Firm [Dummy]										0.26** (2.39)	0.22** (2.04)	0.23** (2.27)
Real Family Firm [Dummy]										0.37*** (2.89)	0.058 (0.44)	0.34*** (2.92)
Outside Blockholder [Dummy]	-0.32*** (-3.11)	-0.16 (-1.60)	-0.25*** (-2.64)	-0.30*** (-2.83)	-0.18* (-1.77)	-0.23** (-2.45)	-0.29*** (-2.78)	-0.18* (-1.72)	-0.22** (-2.29)	-0.31*** (-3.08)	-0.16 (-1.61)	-0.24*** (-2.59)
Firm Size [Ln]	0.30*** (8.02)	0.11*** (3.39)	0.24*** (7.20)	0.30*** (8.09)	0.11*** (3.30)	0.24*** (7.19)	0.30*** (8.07)	0.11*** (3.30)	0.24*** (7.17)	0.30*** (7.98)	0.11*** (3.45)	0.24*** (7.16)
Profitability	0.57*** (3.34)	0.087 (0.66)	0.23 (1.51)	0.56*** (3.26)	0.076 (0.57)	0.21 (1.39)	0.56*** (3.28)	0.077 (0.58)	0.21 (1.39)	0.57*** (3.32)	0.092 (0.70)	0.23 (1.48)
Divergence Cashflow Rights [Dummy]	0.45*** (2.73)	-0.040 (-0.26)	0.34** (2.11)	0.45*** (2.72)	-0.045 (-0.30)	0.33** (2.04)	0.44*** (2.67)	-0.053 (-0.35)	0.31* (1.95)	0.44*** (2.70)	-0.020 (-0.13)	0.34** (2.07)
Leverage	-0.90*** (-4.52)	-0.90*** (-4.58)	-1.15*** (-6.12)	-0.91*** (-4.51)	-0.90*** (-4.61)	-1.16*** (-6.14)	-0.89*** (-4.43)	-0.90*** (-4.60)	-1.16*** (-6.12)	-0.91*** (-4.54)	-0.89*** (-4.53)	-1.16*** (-6.15)
Firm Specific Risk	-2.67*** (-12.0)	-0.48*** (-2.75)	-2.20*** (-11.3)	-2.66*** (-11.9)	-0.47*** (-2.72)	-2.20*** (-11.3)	-2.67*** (-12.0)	-0.47*** (-2.71)	-2.21*** (-11.4)	-2.66*** (-12.0)	-0.49*** (-2.80)	-2.19*** (-11.3)
Firm Age [Ln]	0.11** (2.31)	-0.066 (-1.61)	0.12*** (2.90)	0.10** (2.23)	-0.071* (-1.75)	0.11*** (2.72)	0.10** (2.20)	-0.070* (-1.72)	0.11*** (2.68)	0.10** (2.18)	-0.060 (-1.45)	0.11*** (2.74)
Market-to-Book	0.00090 (0.78)	-0.0015 (-0.24)	0.00039 (0.29)	0.00085 (0.75)	-0.0015 (-0.24)	0.00035 (0.26)	0.00093 (0.82)	-0.0013 (-0.22)	0.00042 (0.31)	0.00085 (0.74)	-0.0014 (-0.22)	0.00036 (0.27)
Mean Industry Level	3.09*** (6.19)	5.92*** (6.20)	3.08*** (5.70)	3.12*** (6.23)	5.93*** (6.18)	3.08*** (5.69)	3.10*** (6.17)	5.91*** (6.15)	3.10*** (5.65)	3.09*** (6.19)	5.88*** (6.16)	3.07*** (5.68)
Constant	-4.98*** (-6.62)	-3.38*** (-5.02)	-4.00*** (-5.32)	-4.90*** (-6.51)	-3.33*** (-4.84)	-4.15*** (-5.42)	-4.89*** (-6.49)	-3.35*** (-4.84)	-4.16*** (-5.41)	-4.80*** (-6.39)	-3.33*** (-4.67)	-3.97*** (-5.29)
Observations	3894	3125	3536	3894	3125	3536	3894	3125	3536	3894	3125	3536
Number of clusters	589	546	567	589	546	567	589	546	567	589	546	567
Pseudo R-squared	0.41	0.12	0.33	0.41	0.12	0.33	0.41	0.12	0.33	0.41	0.12	0.33
Model	Probit	Probit	Probit	Probit	Probit	Probit	Probit	Probit	Probit	Probit	Probit	Probit

Note: A detailed description of the variables can be found in table 2. All models are pooled probit regressions. Time and industry dummies are included. The standard errors of the coefficients are corrected for serial correlation on a firm level and for heteroscedasticity using the Huber-White-Sandwich estimator based on White (1980). T-statistics are presented in parentheses. ***, ** and * indicate significance on the 1%-, 5%- and 10%-level respectively.

Table 6: Dividend Payout Ratio (DPR) - Family Influence

Model	I a	I b	I c	II a	II b	II c	III a	III b	III c	V a	V b	V c
Dummy Family Firm	0.043** (2.34)	0.048* (1.79)	0.045*** (2.73)									
Family Ownership [Dummy]				0.057*** (2.71)	0.067** (2.46)	0.056*** (2.96)						
Family Management [Dummy]				0.0011 (0.048)	0.024 (0.71)	0.0078 (0.38)						
Family Ownership [Floating]							0.10** (2.49)	0.13** (2.01)	0.11*** (2.71)			
Family Management [Dummy]							-0.00061 (-0.027)	0.023 (0.69)	0.0061 (0.29)			
Founder-controlled Firm [Dummy]										0.032 (1.52)	0.034 (1.19)	0.033* (1.78)
Real Family Firm [Dummy]										0.056** (2.22)	0.076* (1.93)	0.062*** (2.59)
Outside Blockholder [Dummy]	-0.0099 (-0.55)	0.015 (0.64)	-0.0032 (-0.19)	-0.0070 (-0.38)	0.019 (0.81)	0.00040 (0.023)	-0.0060 (-0.33)	0.020 (0.85)	0.0014 (0.082)	-0.0091 (-0.51)	0.016 (0.67)	-0.0022 (-0.13)
Firm Size [Ln]	0.032*** (5.65)	0.077*** (5.08)	0.039*** (7.67)	0.032*** (5.75)	0.075*** (5.01)	0.040*** (7.77)	0.032*** (5.71)	0.076*** (5.07)	0.040*** (7.75)	0.032*** (5.65)	0.075*** (5.04)	0.039*** (7.69)
Divergence Cashflow Rights [Dummy]	0.047* (1.72)	-0.012 (-0.37)	0.018 (0.72)	0.045 (1.63)	-0.013 (-0.39)	0.017 (0.66)	0.043 (1.53)	-0.012 (-0.37)	0.016 (0.61)	0.045 (1.64)	-0.012 (-0.35)	0.017 (0.68)
Leverage	-0.058* (-1.93)	-0.044 (-1.16)	-0.056* (-1.93)	-0.059* (-1.95)	-0.042 (-1.14)	-0.055* (-1.93)	-0.057* (-1.87)	-0.041 (-1.11)	-0.053* (-1.87)	-0.058* (-1.94)	-0.043 (-1.16)	-0.055* (-1.93)
Firm Specific Risk	-0.22*** (-4.26)	-0.12*** (-4.72)	-0.17*** (-4.46)	-0.22*** (-4.27)	-0.12*** (-4.74)	-0.17*** (-4.49)	-0.22*** (-4.27)	-0.12*** (-4.74)	-0.17*** (-4.49)	-0.22*** (-4.27)	-0.12*** (-4.76)	-0.17*** (-4.48)
Firm Age [Ln]	0.014* (1.65)	-0.013 (-0.47)	0.018** (2.24)	0.014 (1.59)	-0.0083 (-0.31)	0.018** (2.21)	0.014 (1.59)	-0.0088 (-0.32)	0.018** (2.21)	0.013 (1.56)	-0.014 (-0.52)	0.017** (2.12)
Market-to-Book	-0.000047 (-0.22)	0.00023 (1.61)	0.00011 (0.77)	-0.000057 (-0.28)	0.00022 (1.56)	0.000099 (0.74)	-0.000041 (-0.19)	0.00023 (1.64)	0.00011 (0.81)	-0.000054 (-0.26)	0.00022 (1.56)	0.000099 (0.74)
HGB Accounting [Dummy]	0.078*** (3.75)	0.061*** (2.68)	0.066*** (3.49)	0.077*** (3.71)	0.061*** (2.66)	0.066*** (3.46)	0.075*** (3.60)	0.062*** (2.68)	0.065*** (3.40)	0.075*** (3.65)	0.060*** (2.62)	0.064*** (3.39)
Mean Industry Level	0.80*** (7.67)	0.91*** (7.33)	0.82*** (7.60)	0.80*** (7.66)	0.90*** (7.32)	0.82*** (7.60)	0.80*** (7.65)	0.90*** (7.30)	0.82*** (7.57)	0.80*** (7.67)	0.91*** (7.33)	0.82*** (7.60)
Constant	-0.41*** (-3.12)	-0.89*** (-4.03)	-0.54*** (-4.42)	-0.42*** (-3.15)	-0.90*** (-4.10)	-0.55*** (-4.45)	-0.41*** (-3.12)	-0.91*** (-4.14)	-0.55*** (-4.43)	-0.40*** (-3.09)	-0.87*** (-3.98)	-0.53*** (-4.47)
Observations	3833	3833	3833	3833	3833	3833	3833	3833	3833	3833	3833	3833
Number of clusters	588	588	588	588	588	588	588	588	588	588	588	588
Adj. R-squared	0.25	0.5	0.25	0.25	0.5	0.25	0.25	0.5	0.25	0.25	0.5	0.25
Model	OLS	FE	RE	OLS	FE	RE	OLS	FE	RE	OLS	FE	RE

Note: A detailed description of the variables can be found in table 2. Time and industry dummies are included. Models are OLS, random-effects or firm-fixed effects regressions. The standard errors of the coefficients are corrected for serial correlation on a firm level and for heteroscedasticity using the Huber-White-Sandwich estimator based on White (1980). T-statistics are presented in parentheses. ***, ** and * indicate significance on the 1%-, 5%- and 10%-level respectively.

Table 7: Propensity for Dividend - Blockholder Influence

Model	Controlled vs. Uncontrolled Blockholder		Number of Outside Blockholder		Power of Family	Identity of Blockholder	
	I a	I b	II a	II b	III	IV a	IV b
	All firms	Only non-profitable firms	All firms	Only firms with blockholder	Relation of voting rights	All firms	Only non-profitable firms
<i>Uncontrolled Outside Blockholder [Dummy]</i>	-0.38*** (-3.10)	-0.18 (-1.15)					
<i>Controlled Outside Blockholder [Dummy]</i>	-0.20* (-1.66)	-0.15 (-0.87)					
<i>Controlled Family Blockholder [Dummy]</i>	0.31*** (2.80)	0.22 (1.36)					
<i>Uncontrolled Family Blockholder [Dummy]</i>	0.39*** (3.14)	0.49*** (2.92)					
<i>Number of Outside Blockholder</i>			-0.11*** (-3.38)	0.14** (2.14)			
<i>Family Power</i>					0.51*** (4.59)		
<i>Family Firm [Dummy]</i>						0.27*** (2.78)	0.38*** (2.97)
<i>Government Blockholder [Dummy]</i>						-0.32 (-1.25)	-0.40 (-1.02)
<i>Financial Blockholder [Dummy]</i>						-0.24* (-1.77)	-0.19 (-1.03)
<i>Private Blockholder [Dummy]</i>						0.22 (1.16)	0.021 (0.073)
<i>Strategic Blockholder [Dummy]</i>						-0.44*** (-3.37)	-0.15 (-0.97)
<i>Firm Size [Ln]</i>	0.30*** (7.89)	0.31*** (6.61)	0.29*** (7.33)	0.26*** (4.78)	0.29*** (7.63)	0.30*** (7.88)	0.31*** (6.73)
<i>Divergence Cashflow Rights [Dummy]</i>	0.45*** (2.73)	0.18 (0.81)	0.40** (2.36)	0.51** (2.08)	0.57*** (3.44)	0.40** (2.48)	0.18 (0.79)
<i>Profitability</i>	0.54*** (3.23)	-0.079 (-0.22)	0.55*** (3.36)	0.33 (1.08)	0.43*** (2.63)	0.57*** (3.35)	-0.071 (-0.20)
<i>Leverage</i>	-0.92*** (-4.57)	-0.53** (-2.16)	-0.97*** (-4.74)	-1.45*** (-4.18)	-0.94*** (-4.59)	-0.93*** (-4.68)	-0.51** (-2.07)
<i>Firm Specific Risk</i>	-2.65*** (-11.9)	-2.09*** (-7.01)	-2.50*** (-11.1)	-2.12*** (-6.50)	-2.60*** (-11.6)	-2.69*** (-12.2)	-2.16*** (-7.25)
<i>Firm Age [Ln]</i>	0.096** (2.15)	0.050 (0.86)	0.082* (1.84)	0.081 (1.22)	0.099** (2.20)	0.11** (2.36)	0.063 (1.08)
<i>Market-to-Book</i>	0.00086 (0.75)	0.00070 (0.62)	0.00071 (0.60)	0.000012 (0.011)	0.00081 (0.69)	0.00100 (0.87)	0.00073 (0.64)
<i>Mean Industry Level</i>	3.10*** (6.10)	5.41*** (5.16)	3.12*** (6.59)	3.22*** (3.92)	3.15*** (6.29)	3.15*** (6.27)	5.49*** (5.24)
<i>Constant</i>	-4.92*** (-6.49)	-7.97*** (-6.28)	-4.63*** (-6.27)	-4.89*** (-4.20)	-4.93*** (-6.52)	-4.81*** (-6.33)	-7.83*** (-6.15)
<i>Observations</i>	3894	1257	3894	1514	3894	3894	1257
<i>Number of clusters</i>	589	463	589	317	589	589	463
<i>Pseudo / adjusted R-squared</i>	0.41	0.39	0.39	0.35	0.40	0.41	0.39
<i>Model</i>	Probit	Probit	Probit	Probit	Probit	Probit	Probit

Note: A detailed description of the variables can be found in table 2. All models are pooled probit regressions. Time and industry dummies are included. The standard errors of the coefficients are corrected for serial correlation on a firm level and for heteroscedasticity using the Huber-White-Sandwich estimator based on White (1980). T-statistics are presented in parentheses. ***, ** and * indicate significance on the 1%-, 5%- and 10%-level respectively.

Table 8: Dividend Propensity Robustness Tests

Model	Definition	Size effects		Alternative Payout Measures		Lagged variables		Sample composition effects			Tax regime effects		Insider ownership (IO)	
	I	II a	II b	III a	III b	IV a	IV b	V a	V b	V c	VI a	VI b	VII a	VII b
	Broad definition	Small firms	Large firms	DPR / Net income	DPR / Cashflow	Only Control	All	IPO 98 - 00	IPO before / after	Dummy IPO	95 - 00	01 - 06	No IO	IO as control
Family Firm [Dummy]		0.056 (0.39)	0.54*** (3.88)	0.040** (2.17)	0.036** (2.06)	0.26** (2.48)	0.21** (1.97)	0.25* (1.78)	0.49*** (3.54)	0.32*** (3.39)	0.36** (2.36)	0.29*** (2.58)	0.91** (2.38)	0.18* (1.78)
Family Firm Broad [Dummy]	0.32*** (2.96)													
High-Tech Firm [Dummy]										-0.13 (-0.93)				
Insider Ownership [Floating]														0.66*** (2.99)
Outside Blockholder [Dummy]	-0.33*** (-3.12)	-0.32* (-1.94)	-0.37*** (-2.89)	-0.0074 (-0.42)	-0.0020 (-0.12)	-0.35*** (-3.21)	-0.37*** (-3.35)	-0.057 (-0.35)	-0.40*** (-3.06)	-0.32*** (-3.12)	-0.28** (-2.13)	-0.33*** (-2.64)	-0.19 (-1.13)	-0.13 (-1.10)
Firm Size [Ln]	0.30*** (8.18)	0.31*** (3.02)	0.24*** (4.88)	0.025*** (4.64)	0.0067 (1.41)	0.31*** (7.78)	0.31*** (7.78)	0.32*** (5.39)	0.31*** (6.12)	0.30*** (7.93)	0.23*** (4.80)	0.34*** (7.91)	0.27*** (5.21)	0.32*** (8.08)
Divergence Cashflow Rights [Dummy]	0.46*** (2.79)	-0.026 (-0.084)	0.54*** (2.66)	0.049* (1.75)	-0.0023 (-0.11)	1.27*** (7.50)	1.28*** (7.53)	0.068 (0.27)	0.50** (2.17)	0.43*** (2.62)	0.72*** (2.77)	0.37* (1.96)	0.56** (2.26)	0.40** (2.39)
Profitability	0.59*** (3.43)	0.46** (2.36)	0.98** (1.99)			0.39** (2.21)	0.39** (2.19)	0.62*** (3.05)	0.39 (1.13)	0.57*** (3.33)	0.70* (1.74)	0.58*** (3.21)	0.41 (1.05)	0.53*** (3.13)
Leverage	-0.88*** (-4.40)	-0.65** (-2.31)	-1.28*** (-4.13)	-0.035 (-1.40)	-0.19*** (-4.65)	-1.27*** (-5.56)	-1.27*** (-5.59)	-0.11 (-0.40)	-1.98*** (-5.65)	-0.94*** (-4.60)	-1.91*** (-5.61)	-0.51** (-2.27)	-1.56*** (-3.95)	-0.95*** (-4.73)
Firm Specific Risk	-2.68*** (-11.9)	-2.35*** (-8.12)	-2.84*** (-8.76)	-0.21*** (-4.36)	-0.13** (-2.41)	-2.46*** (-9.68)	-2.47*** (-9.72)	-2.66*** (-8.70)	-2.58*** (-7.86)	-2.63*** (-11.9)	-2.63*** (-8.38)	-2.68*** (-9.50)	-2.29*** (-6.42)	-2.68*** (-12.2)
Firm Age [Ln]	0.11** (2.40)	0.12 (1.44)	0.098* (1.80)	0.015* (1.83)	0.0033 (0.46)	0.12** (2.51)	0.12** (2.48)	0.10 (1.40)	0.11* (1.65)	0.092* (1.85)	-0.011 (-0.19)	0.16*** (3.01)	0.16** (2.40)	0.096** (2.10)
Market-to-Book	0.00087 (0.78)	0.0013 (0.61)	0.00057 (0.43)	-0.00097 (-0.52)	0.00024 (0.92)	-0.00031 (-0.24)	-0.00034 (-0.27)	0.0019 (0.96)	0.00078 (0.62)	0.00087 (0.76)	-0.0015 (-0.76)	0.0045** (2.49)	0.00051 (0.43)	0.00099 (0.86)
HGB Accounting [Dummy]				0.042** (2.05)	0.028 (1.51)									
Mean Industry Level	3.09*** (6.17)	2.24*** (2.86)	3.82*** (5.11)	0.81*** (6.42)	0.95*** (7.95)	1.94*** (3.93)	1.91*** (3.87)	1.41 (1.50)	4.10*** (5.50)	3.05*** (6.06)	4.39*** (4.28)	2.42*** (3.01)	3.73*** (4.67)	3.10*** (6.11)
Constant	-5.08*** (-6.71)	-2.89* (-1.92)	-4.67*** (-4.59)	-0.31** (-2.37)	0.059 (0.62)	-3.96*** (-4.98)	-3.97*** (-5.04)	-3.71*** (-3.11)	-5.01*** (-5.41)	-4.70*** (-6.06)	-3.57*** (-3.07)	-5.60*** (-5.69)	-5.30*** (-4.68)	-5.35*** (-6.83)
Observations	3894	1663	2231	3922	2506	3315	3315	1692	2198	3890	1404	2490	1617	3894
Number of clusters	589	286	303	596	386	544	544	303	284	587	410	525	307	589
Pseudo / adjusted R-squared	0.41	0.32	0.30	0.22	0.097	0.41	0.41	0.35	0.35	0.41	0.33	0.42	0.36	0.41
Model	Probit	Probit	Probit	OLS	OLS	Probit	Probit	Probit	Probit	Probit	Probit	Probit	Probit	Probit

Note: A detailed description of the variables can be found in table 2. Models are pooled probit or OLS regressions. Time and industry dummies are included. The standard errors of the coefficients are corrected for serial correlation on a firm level and for heteroscedasticity using the Huber-White-Sandwich estimator based on White (1980). T-statistics are presented in parentheses. ***, ** and * indicate significance on the 1%, 5% and 10% level respectively.

Table 9: Share Repurchase Payout Ratio (SPR) - Family Influence

Model	I a	I b	I c	II a	II b	II c	III a	III b	III c	V a	V b	V c
Dummy Family Firm	0.0086 (0.89)	-0.0037 (-0.16)	0.0080 (0.68)									
Family Ownership [Dummy]				0.019 (1.40)	0.0055 (0.22)	0.016 (1.09)						
Family Management [Dummy]				-0.010 (-0.74)	-0.0053 (-0.19)	-0.0084 (-0.54)						
Family Ownership [Floating]							0.031 (1.33)	0.033 (0.82)	0.037 (1.47)			
Family Management [Dummy]							-0.0098 (-0.69)	-0.0086 (-0.31)	-0.011 (-0.66)			
Founder-controlled Firm [Dummy]										0.0088 (0.71)	-0.015 (-0.59)	0.0031 (0.23)
Real Family Firm [Dummy]										0.0084 (0.62)	0.017 (0.61)	0.015 (0.96)
Outside Blockholder [Dummy]	-0.019** (-2.33)	-0.022 (-1.31)	-0.021** (-2.14)	-0.020** (-2.27)	-0.021 (-1.28)	-0.022** (-2.10)	-0.020** (-2.24)	-0.020 (-1.17)	-0.021** (-1.99)	-0.020** (-2.32)	-0.021 (-1.26)	-0.021** (-2.09)
Firm Size [Ln]	0.0044 (1.31)	0.0083 (0.78)	0.0032 (1.08)	0.0042 (1.26)	0.0081 (0.76)	0.0030 (1.00)	0.0042 (1.24)	0.0081 (0.76)	0.0030 (0.99)	0.0045 (1.29)	0.0078 (0.73)	0.0031 (1.01)
Divergence Cashflow Rights [Dummy]	-0.020 (-1.51)	-0.023 (-1.41)	-0.018 (-1.35)	-0.022 (-1.59)	-0.023 (-1.38)	-0.019 (-1.40)	-0.022 (-1.64)	-0.023 (-1.38)	-0.020 (-1.45)	-0.020 (-1.52)	-0.022 (-1.33)	-0.018 (-1.38)
Leverage	-0.055*** (-2.71)	-0.022 (-0.74)	-0.049*** (-2.97)	-0.056*** (-2.69)	-0.022 (-0.74)	-0.050*** (-2.97)	-0.055*** (-2.68)	-0.022 (-0.71)	-0.049*** (-2.94)	-0.055*** (-2.71)	-0.022 (-0.74)	-0.049*** (-2.97)
Firm Specific Risk	-0.013 (-0.74)	0.0015 (0.077)	-0.010 (-0.63)	-0.012 (-0.69)	0.0013 (0.067)	-0.0098 (-0.60)	-0.012 (-0.71)	0.0011 (0.056)	-0.0100 (-0.61)	-0.013 (-0.75)	0.0030 (0.16)	-0.0098 (-0.59)
Firm Age [Ln]	-0.0046 (-1.13)	0.048** (2.02)	-0.0037 (-0.83)	-0.0051 (-1.23)	0.048** (2.01)	-0.0042 (-0.91)	-0.0051 (-1.22)	0.049** (2.05)	-0.0042 (-0.91)	-0.0046 (-1.12)	0.046** (1.97)	-0.0041 (-0.92)
Market-to-Book	-9.6e-07 (-0.013)	0.00020*** (2.87)	0.000080 (1.55)	9.7e-07 (0.014)	0.00020*** (2.87)	0.000081 (1.57)	2.4e-06 (0.034)	0.00020*** (2.89)	0.000083 (1.61)	-9.1e-07 (-0.013)	0.00020*** (2.87)	0.000079 (1.54)
HGB Accounting [Dummy]	-0.019 (-1.45)	-0.012 (-1.11)	-0.015 (-1.36)	-0.020 (-1.53)	-0.013 (-1.11)	-0.016 (-1.42)	-0.020 (-1.57)	-0.012 (-1.09)	-0.016 (-1.45)	-0.019 (-1.42)	-0.013 (-1.15)	-0.016 (-1.41)
Mean Industry Level	0.97*** (4.48)	1.14*** (4.88)	1.04*** (4.66)	0.96*** (4.47)	1.14*** (4.88)	1.04*** (4.65)	0.96*** (4.47)	1.14*** (4.89)	1.04*** (4.65)	0.97*** (4.48)	1.14*** (4.89)	1.04*** (4.66)
Constant	0.031 (0.55)	-0.22 (-1.34)	0.037 (0.70)	0.038 (0.66)	-0.22 (-1.33)	0.045 (0.81)	0.038 (0.67)	-0.23 (-1.37)	0.042 (0.75)	0.031 (0.54)	-0.21 (-1.28)	0.040 (0.75)
Observations	3246	3246	3246	3246	3246	3246	3246	3246	3246	3246	3246	3246
Number of clusters	544	544	544	544	544	544	544	544	544	544	544	544
Adj. R-squared	0.048	0.31	0.055	0.049	0.31	0.056	0.048	0.31	0.056	0.048	0.31	0.055
Model	OLS	FE	RE	OLS	FE	RE	OLS	FE	RE	OLS	FE	RE

Note: A detailed description of the variables can be found in table 2. Time and industry dummies are included. Models are OLS, random-effects or firm-fixed effects regressions. The standard errors of the coefficients are corrected for serial correlation on a firm level and for heteroscedasticity using the Huber-White-Sandwich estimator based on White (1980). T-statistics are presented in parentheses. ***, ** and * indicate significance on the 1%-, 5%- and 10%-level respectively.

Table 10: Total Payout Ratio (TPR) - Family Influence

Model	I a	I b	I c	II a	II b	II c	III a	III b	III c	V a	V b	V c
Dummy Family Firm	0.045** (2.27)	0.041 (1.23)	0.046** (2.46)									
Family Ownership [Dummy]				0.071*** (3.04)	0.049 (1.50)	0.060*** (2.75)						
Family Management [Dummy]				-0.017 (-0.67)	0.017 (0.37)	-0.0033 (-0.13)						
Family Ownership [Floating]							0.13*** (2.88)	0.13* (1.75)	0.12*** (2.76)			
Family Management [Dummy]							-0.020 (-0.76)	0.012 (0.27)	-0.0070 (-0.27)			
Founder-controlled Firm [Dummy]										0.040* (1.69)	0.016 (0.46)	0.036* (1.65)
Real Family Firm [Dummy]										0.052* (1.96)	0.087* (1.86)	0.061** (2.31)
Outside Blockholder [Dummy]	-0.028 (-1.40)	-0.0032 (-0.12)	-0.021 (-1.11)	-0.028 (-1.38)	-0.00085 (-0.031)	-0.019 (-1.02)	-0.026 (-1.28)	0.0025 (0.091)	-0.017 (-0.89)	-0.027 (-1.38)	-0.0012 (-0.043)	-0.020 (-1.05)
Firm Size [Ln]	0.027*** (4.61)	0.080*** (4.05)	0.036*** (6.51)	0.027*** (4.64)	0.080*** (4.02)	0.036*** (6.51)	0.026*** (4.60)	0.080*** (4.07)	0.036*** (6.51)	0.027*** (4.60)	0.079*** (4.01)	0.035*** (6.49)
Divergence Cashflow Rights [Dummy]	0.035 (1.21)	-0.010 (-0.29)	0.014 (0.51)	0.031 (1.07)	-0.011 (-0.30)	0.012 (0.43)	0.028 (0.95)	-0.011 (-0.30)	0.010 (0.36)	0.034 (1.17)	-0.0087 (-0.24)	0.013 (0.48)
Leverage	-0.11*** (-2.92)	-0.054 (-1.22)	-0.10*** (-3.09)	-0.11*** (-2.91)	-0.052 (-1.19)	-0.10*** (-3.08)	-0.11*** (-2.88)	-0.051 (-1.15)	-0.10*** (-3.04)	-0.11*** (-2.94)	-0.053 (-1.22)	-0.10*** (-3.10)
Firm Specific Risk	-0.31*** (-8.95)	-0.13*** (-4.18)	-0.23*** (-7.84)	-0.30*** (-8.77)	-0.13*** (-4.13)	-0.22*** (-7.71)	-0.31*** (-8.85)	-0.13*** (-4.15)	-0.22*** (-7.78)	-0.31*** (-8.91)	-0.13*** (-4.04)	-0.23*** (-7.74)
Firm Age [Ln]	0.0076 (0.83)	-0.0092 (-0.25)	0.010 (1.16)	0.0064 (0.71)	-0.0063 (-0.17)	0.0094 (1.06)	0.0064 (0.71)	-0.0059 (-0.16)	0.0095 (1.07)	0.0072 (0.79)	-0.012 (-0.33)	0.0093 (1.05)
Market-to-Book	-0.00012 (-0.53)	0.00041** (2.18)	0.00013 (0.68)	-0.00012 (-0.51)	0.00042** (2.18)	0.00013 (0.69)	-0.00011 (-0.48)	0.00042** (2.18)	0.00013 (0.71)	-0.00012 (-0.54)	0.00041** (2.17)	0.00013 (0.68)
HGB Accounting [Dummy]	0.048** (2.08)	0.057** (2.18)	0.043** (2.01)	0.046** (1.97)	0.058** (2.18)	0.042* (1.95)	0.043* (1.85)	0.058** (2.20)	0.041* (1.90)	0.047** (2.01)	0.056** (2.13)	0.041* (1.92)
Mean Industry Level	0.85*** (7.22)	0.90*** (7.05)	0.87*** (7.36)	0.86*** (7.28)	0.89*** (7.06)	0.87*** (7.40)	0.85*** (7.23)	0.89*** (7.05)	0.86*** (7.35)	0.85*** (7.23)	0.90*** (7.08)	0.87*** (7.37)
Constant	-0.22* (-1.65)	-0.90*** (-2.95)	-0.39*** (-2.97)	-0.22 (-1.61)	-0.91*** (-2.98)	-0.39*** (-2.78)	-0.21 (-1.58)	-0.93*** (-3.04)	-0.39*** (-2.93)	-0.22 (-1.63)	-0.88*** (-2.89)	-0.38*** (-2.93)
Observations	3246	3246	3246	3246	3246	3246	3246	3246	3246	3246	3246	3246
Number of clusters	544	544	544	544	544	544	544	544	544	544	544	544
Adj. R-squared	0.19	0.45	0.19	0.19	0.45	0.19	0.19	0.45	0.19	0.19	0.45	0.19
Model	OLS	FE	RE	OLS	FE	RE	OLS	FE	RE	OLS	FE	RE

Note: A detailed description of the variables can be found in table 2. Time and industry dummies are included. Models are OLS, random-effects or firm-fixed effects regressions. The standard errors of the coefficients are corrected for serial correlation on a firm level and for heteroscedasticity using the Huber-White-Sandwich estimator based on White (1980). T-statistics are presented in parentheses. ***, ** and * indicate significance on the 1%-, 5%- and 10%-level respectively.

Figure 1: Dividend, Share Repurchase and Payout Propensity

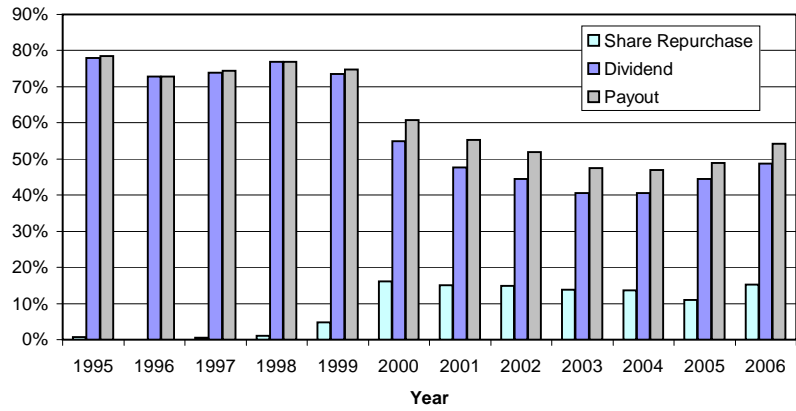


Figure 2: Mean Dividend and Share Repurchase Payout Ratio

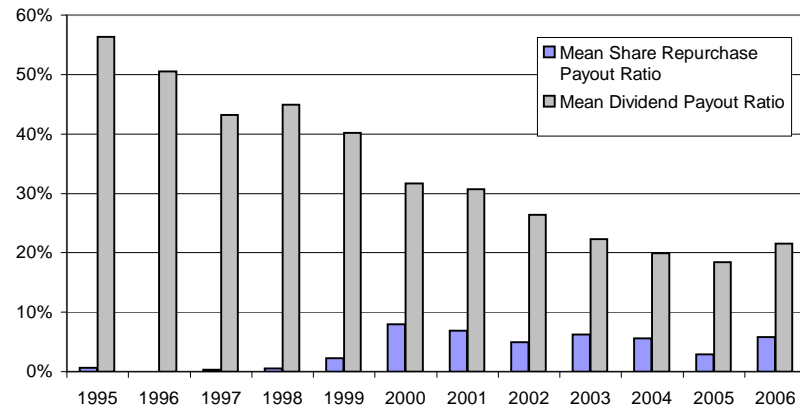


Figure 3: Mean Dividend Payout Ratio (only Dividend Paying Firms)

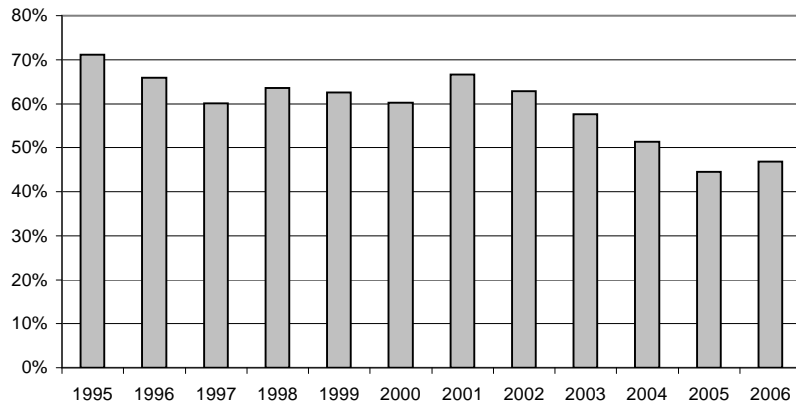


Figure 4: Share Repurchase Volume as Fraction of Total Payout

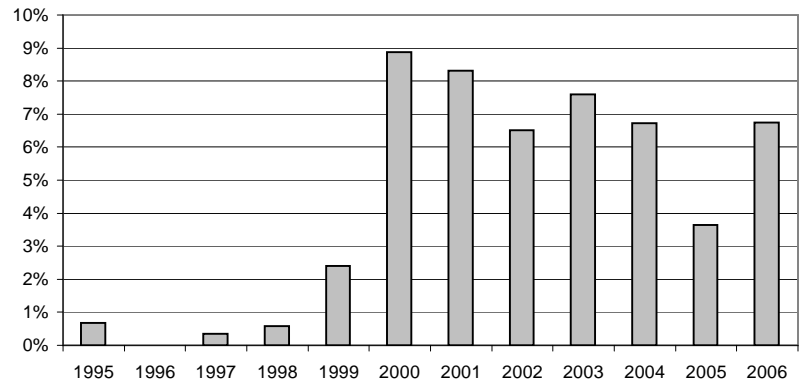


Figure 5 : Payout Methods

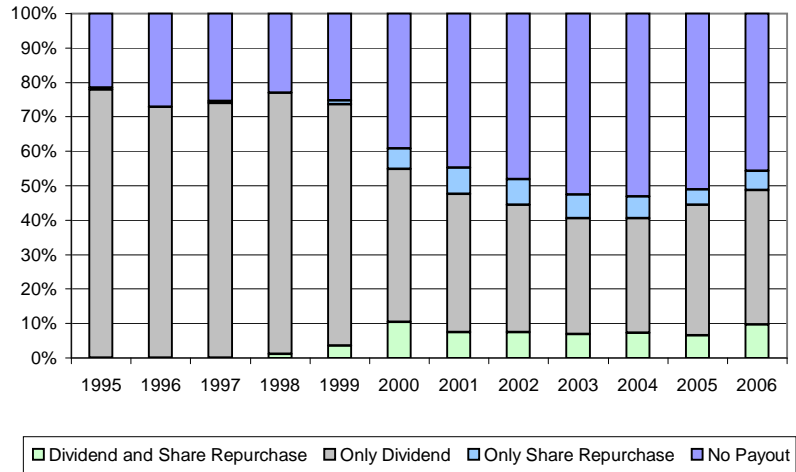


Figure 6: Mean Dividend

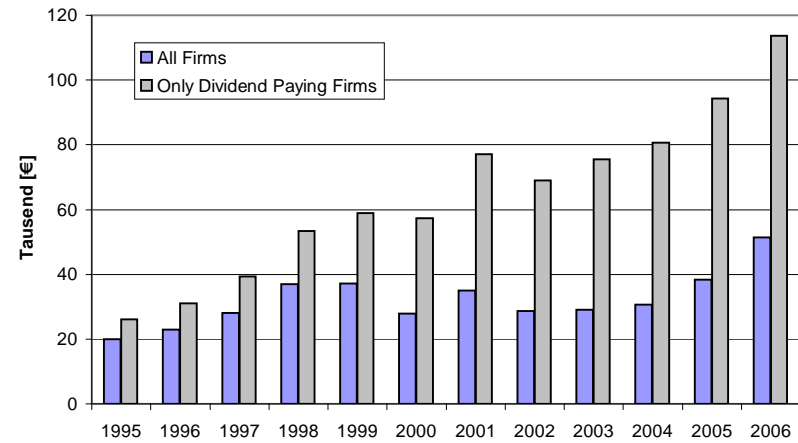


Figure 7: Fracton of Dividends Paid by Largest / Most Profitable Firms

