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DO SHAREHOLDER COALITIONS MODIFY DOMINANT OWNER'S CONTROL? THE IMPACT ON DIVIDEND POLICY*

We examine the effect of shareholder coalitions on the corporate payout policy in Spain, a context characterized by the presence of dominant shareholders. Our results show that shareholder coalitions affect payout policy negatively (both for dividends and shares repurchases). This finding suggests that shareholder coalitions serve as an instrument for the dominant shareholder's to extract private benefits. We also find that the relation between the voting rights involved in the coalition and the dominant owner´s voting rights is negatively related to dividends. This result means that the dominant owner uses the coalition as a mechanism to amplify his or her control over the firm and reduce the cost of expropriation. The results provide new evidence on the effects of corporate control mechanisms on shareholders wealth; this evidence is complementary to the US or UK centered research, where dominant ownership is not as prevalent and, thus, it is more difficult to capture these effects.

Keywords: shareholder coalitions; dividends; repurchases; dominant owner; ownership structure; payout.

JEL classification codes: G32; G34

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INTRODUCTION

Recent research shows that corporate ownership is more concentrated than previously thought in most countries around the world (Bennedsen and Nielsen, 2010; Holderness, 2009; La Porta, et al., 1999; Villalonga and Amit, 2006). Thus, unlike the Anglo-Saxon context, in countries with large shareholders, weak legal protections for minority investors, and relatively illiquid financial markets, dominant owners have the incentives and the ability to control managers' actions. In such a concentrated ownership environment, the main conflict of interest is no longer between managers and shareholders but between the dominant owner and the minority shareholders (Burkhart, et al., 2003; La Porta, et al., 2000a; Renders and Gaeremynck, 2012).

This set of relations is decisively shaped by shareholder coalitions, which can be effective instruments for maintaining or increasing the dominant owners' control (Claessens, et al., 2002; Faccio and Lang, 2002; Laeven and Levine, 2008). Shareholder coalitions are generally considered to be at the core of the freedom of contract or the inherent right to self-organization principle. Thus, the mechanism is legally available in almost all European countries.[3] Indeed, Belot (2010) notes that the use of shareholder coalitions is far from anecdotal in Europe. Roosenboom and Schramade (2006) find that more than one out of four French initial public offerings features a shareholder coalition; Boubaker (2007), Volpin (2002), and Santana Martín (2010), respectively, show that approximately 33% of French listed firms, 15% of Italian listed firms, and 27% of Spanish listed firms featured a coalition in 2009. Accordingly, shareholder coalitions are, after pyramidal structures, the most commonly used control-enhancing mechanisms, especially in non-Anglo-Saxon countries.

At the same time, the financial and institutional crisis affecting European countries in recent years has led scholars, policy makers and investors to pay increased attention to the distribution of corporate profits, be it by way of dividends, stock buybacks, or other techniques. As the European Commission (2011) explicitly acknowledges, the corporate earnings distribution policy is a crucial touchstone in the relationship between companies and their shareholders. According to the European Commission, a proper balance between

[3] The Institutional Shareholder Services (2007) conducted a survey and found that all 16 countries participating in the study allowed shareholders' coalitions, including Belgium, Denmark, Germany, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Luxembourg, Holland, Poland, Spain, Sweden, and the United Kingdom.

dividends and reserves has to be struck, which necessitates going deeper into the factors concerning the relations among shareholders that could affect the distribution policy.

In spite of being one of the most important corporate finance decisions, the dividend policy puzzle is unsolved (Brav, et al., 2005). Furthermore, there is a close but still unclear connection between the institutional environment, the corporate control structure and the dividend policy. In some cases like the Anglo-Saxon countries, the presence of block holders may mitigate the conflict between shareholders and managers, and as a result, dividend payouts are lower (Renneboog and Trojanowski, 2007). On the contrary, in countries with weak legal protections, the dividend policy has twofold implications (La Porta, et al., 2000b). On the one hand, dominant owners can extract private benefits by reducing dividends and increasing the funds under their discretionary control (Brockman and Unlu, 2009; Faccio, et al., 2001). On the other hand, dividends can be a substitute for legal protections and reduce the risk of expropriation by being an instrument of reputation (Pindado, et al., 2012).

Despite the link between corporate control and the dividend policy, and the widespread presence of shareholder coalitions, the research on the relation between dividends and such coalitions remains an unexplored topic. Only Mancinelli and Ozkan (2006) explicitly address this issue. We fill this gap in the literature by analyzing the effect of shareholder coalitions on dividend policy using a sample of Spanish listed firms for the period from 2003 to 2012.

Shareholder coalitions play a dual role (Carvalhal, 2012). On the one hand, Jiang and Peng (2010) find that when the external governance mechanisms are ineffective, coalitions of large shareholders become an effective internal mechanism to limit the conflicts between dominant owners and minority shareholders (the control-enhancing role of shareholder coalitions). These shareholder coalitions will increase the payments of dividends to align the interests of the dominant owner with other shareholders. On the other hand, the dominant owner can use shareholder coalitions as a tool to amplify his or her power to extract private benefits—i.e., the self-dealing role of shareholder coalitions—which results in lower payout policies. As a consequence, the impact of coalitions of large shareholders on dividend policy in a dominant-owner context is an empirical issue.

Our results show that shareholder coalitions negatively affect dividend payouts. This finding suggests that such coalitions serve as a tool to amplify the dominant shareholder's power to extract private benefits (self-dealing shareholder coalitions). Moreover, we find that

the relation between the voting rights involved in the coalition and the voting rights of the dominant owner (i.e., the empowerment effect) is negatively related to dividends. This result means that the dominant owner uses the coalition as a mechanism to amplify his or her control over the firm. All of these results are robust to different sensitivity analyses.

This study contributes to the literature in three ways. First, we provide new evidence on the effects of corporate control mechanisms on dividends in a way that is difficult to capture in the US or UK context, where dominant ownership is not as prevalent (La Porta, et al., 1999; Thomsen, et al., 2006). Furthermore, shareholder coalitions are significantly different from other control enhancing mechanisms that have been previously analyzed, such as the voting agreements of the US market or ownership pyramids.

Second, most previous research on shareholder coalitions identifies the controlling group in terms of likelihood, i.e., the group of shareholders most likely to form a coalition (Crespí and Renneboog, 2003; Gutiérrez and Tribó Giné, 2004; Maury and Pajuste, 2005; Renneboog and Trojanowski, 2007). Indeed, Crespí and Renneboog (2010) recently acknowledged that testing the impact of shareholder coalitions directly was not possible because their existence is usually not disclosed. Spain provides a special environment to fill this gap because certain information on shareholder coalitions is made publicly available. Thus, we can analyze actual coalitions between the dominant owner and others large shareholders. As far as we are aware, only Mancinelli and Ozkan (2006) explicitly analyze shareholder coalitions, but their research suffers from some limitations in terms of time horizon and scarce institutional development of coalitions.

Finally, to some extent, our research sheds new light and provides complementary evidence on the decline of dividends, as documented internationally (Baker and Wurgler, 2004; Fatemi and Bildik, 2012; Hoberg and Prabhala, 2009). Ferris, et al. (2009) suggest that the legal environment and the protection of investors affect the seeming appearance and disappearance of dividends. Thus, our research provides new evidence to explain the decline of dividends. Moreover, we take into account the increasing importance of shares repurchases as a way of distributing cash to shareholders (Eije and Megginson, 2008; Han, et al., 2014; Leary and Michaely, 2011).

The remainder of this study is structured as follows. Section 2 discusses the theoretical arguments and develops our testable hypotheses. Section 3 sets out the empirical design and

introduces the data and the empirical method. Section 4 presents the results and the robustness tests. Finally, Section 5 concludes by summarizing the most important implications and suggesting some directions for future research.

THEORETICAL BACKGROUND

Shareholders coalitions and corporate control

As shown by Mishra (2011) and van der Burg and Prinz (2006), the distribution of power and control within firms through complex ownership structures has far-reaching implications. Shareholder coalitions are one of the most widely used control mechanisms with a redistribution effect over the incentives and power among shareholders (Volpin, 2002; Roosenboom and Schramade, 2006; Boubaker, 2007; Belot, 2010; Santana Martín, 2010). One of the characteristics of these shareholder coalitions is that they do not require the transfer of shares to an involved shareholder but rather involve an explicit commitment that coalition members will vote with the dominant owner or will limit the transfer of shares outside the coalition. In addition, coalitions improve the stability of the ownership structure because they are often signed for a period not shorter than two years and can be rolled over.

Each control-enhancing mechanism may have a different impact on corporate finance (Villalonga and Amit, 2006). We note four characteristics that make corporate control through shareholder coalitions different from pyramidal ownership structures and that support the need for more research on the effect of these coalitions. First, shareholder coalitions are a more transparent type of control mechanism than pyramidal ownership structures. Whereas identifying the ultimate owner of a pyramid is laborious process, the details of shareholder coalitions, such as duration and component members, are public information and are readily available to external investors. Second, coalitions require a bargaining process to bring multiple shareholders into agreement. Conversely, a dominant owner does not need to establish long-term agreements with other shareholders to create a pyramid structure. Third, unlike pyramid structures, shareholder coalitions do not create an internal capital market that may allow financial resources to be transferred among firms or tunneling and propping practices (Cuervo García, 2002; Riyanto and Toolsema, 2008). Finally, shareholder coalitions involve not only the stability of the dominant owner but also the stability of other significant shareholders. Long-term interaction provides these large shareholders with both the incentives and the ability to control the dominant owner, internal agents, and managers..

Prior literature shows that coalitions can play a dual role. First, control-enhancing shareholder coalitions have a beneficial effect on minority shareholders' wealth by improving significant shareholders' ability and incentives for managerial control at the same time that they enable a balanced power among the dominant owner and other large shareholders. Winton (1993) argues that control in the hands of a few shareholders reduces free rider problems and other costs of cooperation. Prior studies find that this control-enhancing role for coalitions is more important in countries with less liquid capital markets, such as Continental Europe, and where legal and political factors constraint the market for corporate control relative to their US or UK counterparts (Bolton and von Thadden, 1998; Cuervo García, 2002). In addition, by enhancing the contest to the power of other large shareholders against the dominant owner's control, coalitions can also be an efficient control mechanism in countries with weak legal protections for minority shareholder (Bennedsen and Wolfenzon, 2000; Gomes and Novaes, 2001; Volpin, 2002). Jiang and Peng (2010) find that when the external governance mechanisms are ineffective, coalitions of large shareholders become an effective internal mechanism to limit the conflicts between dominant owners and minority shareholders.

Second, self-dealing shareholder coalitions empower the dominant owners to such an extent that they can become entrenched and can extract private benefits at the expense of nonparticipating shareholders (Enriques and Volpin, 2007; Hwang and Hu, 2009; Perrini, et al., 2008; Zwiebel, 1995). In this scenario, coalitions may exacerbate the conflicts of interest among shareholders by conferring too much power to a few entrenched owners (Bennedsen and Nielsen, 2010). This issue can be more important in environments that foster close ties between large shareholders and social or political key players (Gourevitch and Shinn, 2005). The concentration of power through coalitions can enable the shareholders involved in the coalition to pursue political influence and rent-seeking (Morck and Yeung, 2005; Morck, et al., 2005). Furthermore, in some legal environments of high ownership concentration, dominant owners are usually linked to managers by family, business, or other types of group ties. Thus, the entrenchment of shareholders can mean, to some extent, the entrenchment of managers.

Taken together, these arguments suggest that the effect of shareholder coalitions on corporate finance is an empirical issue, and therefore, in the next sub-section, we provide new

arguments to elucidate the extent to which dividend policy can be sensitive to such agreements.

Shareholder coalitions and dividends

The seminal paper of La Porta, et al. (2000b) inaugurates a new approach to dividend policy, in which dividends not only are affected by purely firm-level factors but are also heavily influenced by the legal protections of shareholders. Additional evidence confirms the centrality of shareholders relationships to explain dividend policy (Jog, et al., 2010; Setia Atmaja, 2009). Coherently with this view of dividends, the possible conflicts of interest among shareholders stemming from the disparity between control rights and cash flow rights can be the basis of the dividend policy (Jong, et al., 2009).

Because shareholder coalitions can alter the balance between control rights and cash flow rights, these agreements should be among the mechanisms potentially affecting the corporate payout. As stated in the previous section, shareholder coalitions can have a dual effect in shaping the relations among shareholders. Thus, they are likely to have a twofold effect on the dividend policy.

According to the control-enhancing role of shareholder coalitions, these agreements can act as a mechanism for the alignment of interests among shareholders with different incentives. This view is consistent with the outcome model of dividends (La Porta, et al., 2000b), which predicts that improvements in the rights of shareholders can lead to higher dividend payouts. This viewpoint is supported by the better managerial oversight implemented in firms with coalitions and by the benefits of the corporate control being shared among several shareholders.

Nevertheless, according to the self-dealing role of coalitions, the members of these agreements can use a lower payout policy to keep the resources that are accrued to other shareholders under their discretionary control. In addition, firms that retain profits do not need to raise external funds in capital markets and therefore avoid the scrutiny of outside investors.

Given the disparity of arguments, the effect of shareholder coalitions on dividend policy is an empirical issue, and thus, we state our first hypothesis in a dual way:

H1a: Shareholder coalitions, by reinforcing the power of incumbent shareholders relative to the dominant owner, increase dividend payouts.

H1b: Shareholder coalitions, by increasing the power of the dominant shareholder and the power of the other incumbent large shareholders, decrease dividend payouts.

Shareholder coalitions as empowerment control mechanisms

Shareholder coalitions allow for the separation between voting and cash flow rights. As such, the coalitions can have an empowerment effect similar to pyramids or dual class stocks(Levy, 2009). The divergence between voting and cash flow rights creates the incentives and the ability to seek forms of compensation other than pro-rata dividends. In shareholder coalitions, the incumbent shareholders hand over their voting rights to or vote with the dominant shareholder. In this way, the dominant shareholder expands his or her voting rights while retaining the same cash flow rights. By separating corporate control from corporate ownership, shareholder coalitions have an empowerment effect and enable the dominant owner to increase the voting power beyond his or her own financial stake (Bebchuk, 1999; Bebchuk, et al., 2000; Chung and Talaulicar, 2010; Poulsen, et al., 2010; Shleifer and Vishny, 1997).

As in the first hypothesis case, the effect of the shareholders' power enlargement through coalitions on dividend payouts is twofold and depends on the dominant shareholder's attitude toward the increase of his or her power with the votes of the other incumbent shareholders. The dominant shareholder can use this leveraged voting power either to extract private benefits from other shareholders or as an instrument of reputation that increases the dividends (Pindado, et al., 2012). Concerning the dividend payout, this dual scheme means that the dominant shareholder's enhanced power can lead to keeping more resources under discretionary control by cutting dividends or disgorging cash to shareholders by increasing payout policy. Therefore, we formulate the following hypothesis:

H2a: As the difference between the stake held by the dominant owner and the stake held by the other shareholders involved in the coalition increases, the dividend payout also increases.

H2b: As the difference between the stake held by the dominant owner and the stake held by the other shareholders involved in the coalition increases, the dividend payout decreases.

RESEARCH DESIGN

Sample

The initial sample comprises 115 non-financial listed on the Spanish Stock Exchange between 2003 and 2012. Given the smaller size of the Spanish capital markets relative to other countries, our sample accounts for more than 97 percent of the capitalization of non-financial firms and for more than 98 percent of the market trading. The sample starts in 2003, when a law designed to improve the transparency and comparability of financial information was passed. This law makes the Spanish case a unique environment to test the effect of shareholders coalitions. By combining cross-section data and time series we build an unbalanced panel of 999 firm-year observation, with 85% of the firms having five or more observations over the 2003 to 2012 period. We apply the method developed by Hadi (1994) to eliminate outliers.

We review the corporate governance annual reports for every year from 2003 to 2012. Once we detect the existence of a shareholder coalition, we identify the shareholders involved in the agreement and the proportion of voting and cash flow rights that they own. Such contracts do not require the transfer of the shares to designated trustee for a given duration. In addition, the usual content of a contract implies that the shareholders involved are obligated to vote in the same sense at the general shareholders meeting and in the board of directors. Contracts also usually add a limitation on the transfer of shares between the shareholders involved in the agreement, required their participation for a period of time, and may include articulated pre-emption rights. In these ways, the agreements analyzed here are similar to the agreements examined by Volpin (2002) and Gianfrate (2007).

Method

The shareholders coalitions affect the control of the company by altering the rule one action-one vote. Thus, omitting the voting rights and cash flow rights of the shareholders involved in the agreement could lead to fatal omission bias. Previous studies on the relationship between ownership structure and dividends have focused on the immediate ownership, that is, the ownership of the large or controlling shareholders (Jansson and Larsson-Olaison, 2010; Moh'd, et al., 1995; Setia Atmaja, 2009). However, the analyses based on immediate ownership do not reflect the ownership map given the complex ownership structures so common in Continental Europe (Bennedsen and Nielsen, 2010;

Laeven and Levine, 2008). In this context, the ownership structures of listed firms are characterized by the widespread presence of dominant owners that frequently employ control enhancing mechanisms (such as pyramidal structures) to achieve voting rights further than their cash flow rights (Faccio and Lang, 2002; La Porta, et al., 1999; Pindado, et al., 2012).

Accordingly, we follow La Porta, et al. (1999) approach and use the control chain methodology, which allows us to identify a firm's ultimate owner, that is, the shareholder who effectively controls the firm. This methodology accounts for the fact that non-specification of part of an ultimate ownership relation can lead to two types of errors: first, one can assign a shareholder a level of ownership that is far greater or lower than that in reality, and second, a firm can be identified as being controlled by an agent that does not truly occupy the ultimate ownership position in the ownership chain. The latter error can be especially significant in a context of concentrated ownership structures.

To determinate the ultimate owners´ level of voting and cash flow rights, we gather information from the Spanish Securities Exchange Commission on the direct and indirect holdings of shareholders with more than 5% of the shares, as well as the ownership in the hands of board members irrespective of the size of their holdings. Next, we complement this information with data from the Amadeus database (Bureau Van Dijk), which provides observations on the ownership structure of listed Spanish firms. This information is necessary to draw the entire control chain for each firm-year under study. In cases where a firm is not registered in Spain, we obtain the required information from the annual reports posted on the firm's website and solve any queries by e-mail.

We estimate all the regressions using the Generalized Method of Moments (GMM). The GMM procedure allows us to address potential endogeneity problems by using as instruments the lagged right-hand-side variables in the model from two to six years. The original Arellano and Bond (1991) approach can perform poorly, however, if the autoregressive parameters are too large or if the ratio of the variance of the panel-level effect to the variance of the idiosyncratic error is too large. Drawing on Arellano and Bover (1995), Blundell and Bond (1998) develop a system GMM estimator that addresses these problems

by expanding the instrument list to include instruments for the level equation. In this paper, we use the GMM system approach to estimate our models.[4]

The consistency of GMM estimates depends on both an absence of second-order serial autocorrelation in the residuals and on the validity of the instruments. To check for potential model misspecification, we use the Hansen test of over-identifying restrictions. We next examine the m_2 statistic developed by Arellano and Bond (1991) to test for the absence of second-order serial correlation in the first-difference residual. Finally, we conduct three Wald tests: a Wald test of the joint significance of the reported coefficients (Z_1), a Wald test of the joint significance of the industry dummies (Z_2) and a Wald test of the joint significance of the time dummies (Z_3).

As in prior studies on dividend policy, we employ an autoregressive model of dividend payout. In particular, we test the following model:

$$\text{Payout}_{it} = \alpha_1 + \text{Payout}_{it-1} + \sum \beta \times \text{Exploratory variables}_{it} + \sum \gamma \times \text{Control variables}_{it} + \rho_i + \mu_t + \varepsilon_{it},$$

Variables

Traditionally, the payout policy has been measured by the amount of dividends paid to shareholders. Nevertheless, in recent years, share repurchases have become a popular way of distributing cash among shareholders. We control for this trend and capture the dividend policy using a number of variables as the dependent variable. We operationalize the dividend policy as the percentage of net income that firms pay to their shareholders at the end of each year. Given the different means that firms can use to compensate their shareholders, we use dividends (DIVTA), repurchases (REPTA) and total payout, i.e., dividends plus repurchases (DIVREPTA), scaled by total assets. To check the robustness of our results, we also scale dividends and repurchases to cash flow (DIVCF, REPCF, and DIVREPCF). There are several reasons to use total assets and cash flow as denominators. First, it enhances the comparability of our results with previous research, most of which use the same procedure. Second, cash flow and assets are less volatile than other metrics, such as net income or market measures. In

[4] More precisely, we use the two-step system GMM estimation included in the *xtabond2* stata routine written by Roodman (2008). The two-step estimation method provides heteroskedasticity-robust standard errors.

addition, net income can be strongly influenced by accounting choices, and the problem of influential observations can arise when earnings are near zero (Fama and French, 2002).

To analyze the effect of shareholder coalitions on dividends (Hypothesis 1), we use COALITION, a dummy variable that equals 1 if a shareholder coalition exists in a firm and zero otherwise. We also use C.SHAPLEY, which is the Shapley value of the dominant owner when a shareholder coalition exists. This Shapley value is defined as the probability that a certain shareholder is pivotal in forming a majority coalition (a coalition that has more than 50% of the votes). To calculate the Shapley value, we treat the shareholders involved in the agreement as individual players, and we treat the remaining shareholders as an ocean, for which the Shapley value is the continuous version for oceanic games (Milnor and Shapley, 1978). If the dominant owner holds more than 50% of the votes, the Shapley value equals 1. If the dominant owner does not hold the majority vote, the power of the other large shareholders to contest increases as the Shapley value decreases.

Our second hypothesis is related to the empowerment effect of shareholder coalitions and how the relation between the voting rights of the dominant owner and the ones held by the other incumbent shareholders affects the dividend policy. Thus, we define the variable DOMINANT as the sum of the voting rights in the hands of the shareholders involved in the agreement less the voting rights of the dominant owner divided by the voting rights of the dominant owner. This variable provides information on how the coalition can be a mechanism to amplify the power of the dominant shareholder. Shareholders coalitions facilitate the accumulation of power because they allow for greater control of corporate wealth with less investment by the owner—that is, they allow dominant owners to obtain greater control rights than cash flow rights. Therefore, as an alternative measure, we define VCO-CFDO as the sum of the voting rights in the hands of the shareholders involved in the agreement minus the cash flow rights of the dominant owner.

We control for three common characteristics of dividend payers identified by previous research (Fama and French, 2001; Fuller and Goldstein, 2011): size, profitability and growth opportunities. We measure the size of the firm through the logarithm of total assets (LTA). The firm profitability (ROA) is measured as the operating income before interest and taxes divided by total assets. We use the equity market-to-book value (MTB) as a measure of growth opportunities. We also control for the firm's financial leverage (LEV), measured as the relation between a firm's total debt and total assets and form the age of the firm (AGE),

measured as the number of years since the firm began its activity. Finally, we include a set of dummy variables to control for industrial (ρ_i) and year effects (μ_t).

RESULTS

Descriptive analysis

Table 1 (Panel A) reports the percentage of Spanish companies with shareholder coalitions. As we can see, during the period under study the proportion of firms with shareholder coalitions increased from over 15.85% in 2003 to 27.55% in 2012. These results highlight the increasingly important role of shareholder coalitions. Regarding the voting rights involved in the agreement, the mean value remained stable at approximately 45% of voting rights. These results are in line with previous data on the Spanish capital market (Santana Martín, 2010). Table 1 (Panel B) presents the mean value of dividends and repurchases conditional on the existence of shareholder coalitions. The right hand column provides the *t*-test for means comparison. According to this test, neither the dividends nor the repurchases are significantly different between firms with shareholder coalitions and firms without these agreements. The results of this test reject the possibility of systematic differences in the payout policy between firms conditional on the shareholder coalitions. Consequently, we rule out any intrinsic differential characteristic between both groups of firms as an explanatory factor of the different dividend policy.

INSERT TABLE 1

Table 2 presents descriptive statistics for the variables. On average, dividends account for approximately 3% of total assets and shares repurchases account for 1.4% of total assets. The Shapley index suggests that coalitions are characterized by the strong power of the dominant owner. In 51% of the cases, the dominant shareholder must be included in a coalition to reach the majority of votes. The average excess votes of the coalition relative to the voting rights held by the dominant owner reaches 6.6%, and the divergence between voting rights in the hands of shareholder coalitions and cash flow rights of the dominant owner is, on average, 11.7%. Table 2 (Panel B) reports correlations among the variables, and suggests that multicollinearity does not affect subsequent regressions[5]. Nevertheless, we

[5] The correlation between DIVTA, REPTA and DIVREPTA is not a concern in our study because these variables are not included simultaneously in the same model.

conduct a formal test to ensure that multicollinearity does not bias our results. In particular, we calculate the Variance Inflation Factor (VIF) for each independent variable included in the model. The highest VIF for our models is well below 5, the threshold value for a concern on multicollinearity (Studenmund, 1997). We thus conclude that multicollinearity is not a problem in our sample.

INSERT TABLE 2

Baseline results

Table 3 presents the results of the models that explain the dividend policy depending on the shareholder coalitions and the other control variables. In particular, Models 1 to 3 show a negative and statistically significant effect of the presence of shareholder coalitions (COALITION) on dividend policy, irrespective of the measure of remuneration we use: dividends (model 1), shares repurchases (model 2) and the sum of dividends and repurchases (model 3). These results are consistent with Hypothesis 1b, which posits that shareholder coalitions are negatively associated with the dividend policy, in line with the self-dealing effect of such agreements. Table 3 (Models 4 to 6) reports results for Hypotheses 2. These results support a negative and statistically significant effect on dividends of the excess votes of the coalition relative to the voting rights held by the dominant owner (DOMINANT). These estimates are consistent with Hypothesis 2b, according to which the degree of divergence between the shareholder coalition's voting and the voting rights in the hands of dominant owner decreases the dividends.

Regarding the control variables, the results in Table 3 show that the level of a firm's leverage and its growth opportunities are negative and significantly related to payouts. This finding is consistent with the view that dividends are mechanisms of corporate control and compete with capital expenditures in the allocation of the firm's funds (Brav, et al., 2005). Our results also suggest that the return on assets and the size and age of the firm have a positive impact on the dividend policy (Denis and Osobov, 2008; Ferris, et al., 2009). The positive and significant effect of lagged dividends should be understood in light of the signaling role of dividends and the managerial reluctance to pay fewer dividends than in the previous year. On the contrary, share repurchase programs are much more flexible, which explains why the coefficient of the repurchases variable is negative.

Table 3 also reports a set of specification tests. According to the m_2 test, no second order serial correlation in the error exists, and the Hansen test of over-identifying restrictions supports the validity of the instrumental variables. The Z_2 and Z_3 confirm the need to control for year and industry effects.

INSERT TABLE 3

Sensitivity analysis

The results reported above are robust to different measures of the shareholder coalitions and the dividend policy. First, we check the consistency of our results to an alternative metric for the shareholder coalitions—namely, C.SHAPLEY, the Shapley value solution for the dominant owner in a shareholder voting game. If the dominant owner holds more than 50% of the votes, the Shapley value equals 1. If the dominant owner does not hold the majority vote, the power of the other large shareholders to contest increases as the Shapley value decreases.

The results are reported in Table 4 (Models 7 to 9) and are fully consistent with those reported in Table 3. The negative and statistically significant estimates for C.SHAPLEY suggest, as further evidence in support of the hypothesis 1b, how dominant shareholders take advantage of the shareholder coalitions to cut dividends and retain more funds under their control in the firm. These results corroborate the self-dealing role of coalitions.

Next, we introduce a new variable (VCO-CFDO), the sum of the voting rights in the hands of the shareholders involved in the agreement less the cash flow rights of the dominant owner. This variable provides information on how the coalition can be an empowerment mechanism for the dominant owner. The results reported in Table 4 (Models 10 to 12) are consistent with previous ones too: once again, the negative and significant coefficients of VCO-CFDO suggest that the amplifying effect of the coalitions on the power of the largest shareholder means a decrease in dividend payouts.

In the same vein, we check whether our results are sensitive to different measures of dividend policy by using DIVCF, REPCF, and DIVREPCF as dependent variables. The results are reported in Table 4 (Models 13 to 18) and are not different from those previously reported, thus providing further evidence in support of Hypotheses 1b and 2b.

INSERT TABLE 4

An emerging issue in the recent research on dividend policy is the concern about the impact of macroeconomic conditions. The financial crisis has resulted in renewed global interest on corporate governance and a regulatory shift that has put dividends under close scrutiny, especially in financial firms (van Essen, et al., 2013). To address this issue, we split our time framework into two periods depending on the occurrence of the financial crisis in Spain: before the crisis (2003-07) and during the crisis (2008-12), which continues to have an impact. The results for each scenario are reported in Table 5 (models 19 to 30) and are fully consistent with the previous results: the negative and significant estimates of COALITION support Hypothesis 1b, whereas the negative coefficients of DOMINANT confirm Hypothesis 2b. Taken together, these findings corroborate the negative impact of the shareholder coalitions on dividend policy irrespective of the occurrence of the financial crisis.

INSERT TABLE 5

Our last check has to do with the stability of the ownership structure and how the shareholder coalitions allegedly enhance such stability. Coherent with this concern, we analyze whether the influence of shareholder coalitions depends of the number of years for which the agreement has been effective (YEARS). The results, reported in Table 6 (models 31 to 33) in which we control for YEARS, provide interesting insights. We can see that the number of years since the agreement has a negative impact of the dividend policy. In other terms, the longer the dominant owner has used this control-enhancing mechanism, the more incentives there are to retain the corporate profits inside the company under his/her control by disgorging less cash as dividends or repurchases. Given the stability of the corporate control enhanced by the coalitions, this finding seems to suggest that shareholder coalitions can act as a means to perpetuate the control of the dominant shareholder and to increase the reach of such control over financial funds.

INSERT TABLE 6

CONCLUSION

The payout policy is one of the several corporate finance and governance issues that are attracting the attention of scholars and policy makers. Previous research shows that dividend policy is heavily affected by agency conflicts, the institutional environment and relations among shareholders. In this paper, we focus on the effect of the shareholder coalitions, a corporate control-enhancing mechanism widely used in a number of countries. The impact of

shareholder coalitions poses a number of challenges, especially in contexts like Spain, which have weak protections for minority shareholders' rights and the widespread presence of large dominant owners.

In such environments, the shareholder coalitions can have twofold implications. On the one hand, there is a control-enhancing role, according to which coalitions improve the managerial control and are beneficial for all shareholders. On the other hand, the self-dealing role stresses the entrenchment of the involved shareholders, which results in more salient agency conflicts among shareholders.

Our results support the self-dealing view of coalitions and show the negative incidence of such agreements on dividend policy. Consistent with our findings, lower payout policies allow to the controlling shareholders to keep under their discretionary control the financial resources that are accrued to other shareholders. The underlying rationale is to avoid the scrutiny of outside capital markets by retaining more corporate cash flows. We also detect an empowerment of the dominant owner because he or she takes advantage of the shareholders agreement to expand his or her power in the firm at the expense of nonparticipating shareholders. All our results are robust to a number of sensitivity analyses.

One of the most prominent conclusions of our research is how the shareholder coalitions enhance the divergence between the dominant owner's voting rights and cash flow rights and how this divergence is relevant for the dividend policy. In short, the shareholder coalitions can exacerbate the conflicts of interest among shareholders by conferring too much power to a few entrenched owners.

Our results have important implications both for academics, investors and regulators. Although focused on Spain, our results can be applied to similar institutional contexts, such as the prevalent ones in many Continental Europe and Asia countries. Regulators should be aware that these coalitions could become an entrenchment mechanism for dominant shareholders and result in poorer corporate governance. Thus, special attention should be paid to the double role of shareholders agreements. Our results may be useful to investors and financial analysts too, as they highlight the importance of considering this mechanism of the corporate governance system when analyzing dividend policy.

Our paper suggests several avenues for future research. The shareholder coalitions have far-reaching implications, and it would be interesting to further analyze other corporate

governance topics, such as managerial and director compensation or the interplay with the boards of directors. Another interesting field would be studying the effect of the nature of the dominant owner, i.e., family members, institutional shareholders, banks, etc. on conditional shareholder coalitions.

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Table 1. Shareholder coalitions and dividends

Panel A. Shareholders coalitions

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Firms with shareholders coalition (%)	15.85	20.69	19.57	23.00	30.36	29.49	27.78	29.52	30.69	27.55
Voting rights of shareholder coalition[a] (%)	44.96	40.66	41.09	42.17	46.89	45.61	42.65	42.01	46.01	44.18

Panel B. Dividends and repurchase (mean)

	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		t-Student
	SC	NSC	SC	NSC	SC	NSC	SC	NSC	SC	NSC	SC	NSC	SC	NSC	SC	NSC	SC	NSC	SC	NSC	
DIVTA[b]	3.1	2.4	3.4	2.2	3.9	2.1	4.1	2.1	3.3	3	2.6	3.4	3.1	3.7	1.9	3.4	3.1	3.5	1.8	3.2	-0.5218
REPTA[b]	0.16	0.3	0.28	1.05	2.9	2.9	1.7	2.01	2.05	1.2	1.87	1.4	0.49	3.3	0.38	0.6	0.76	0.7	0.3	0.4	0.4165
DIVREPTA[b]	3.2	2.5	3.6	2.6	6.1	3.4	5.3	3.2	4.5	3.5	4.2	4.1	3.3	4.1	2.1	3.7	3.6	4.2	2.1	3.5	-0.9569

DIVTA, is the dividends scaled by total assets (%). REPTA, is the repurchases scaled by total assets (%). DIVREPTA, is the dividends and repurchases scaled by total assets (%).
SC: Firms with shareholders coalitions.
NSC: Firms without shareholders coalitions.
[a] Percentages calculated on firms with shareholders coalitions.
[b] Percentages calculated on firms with dividends and repurchase.

Table 2. Descriptive statistics and correlation matrix.

Panel A. Descriptive statistics

	Mean	Median	D.T.	25th	75th
DIVTA[a]	2.9	1.6	1.5	0.7	2.8
REPTA[a]	1.4	0.3	1.9	0.8	1
DIVREPTA[a]	3.6	1.9	1.8	1.3	3.5
COALITION	0.25	0	0.43	0	1
C.SHAPLEY	0.51	0.66	0.45	0	1
DOMINANT	6.6	0	11.9	0	15.6
VCO-CFDO	11.7	9.8	15.5	0	18.7
LTA	13.9	13.7	1.9	12.4	15.1
ROA	0.03	0.3	0.12	0.003	0.07
MTB	3.2	1.7	13.7	1.01	2.9
LEV	0.63	0.63	0.25	0.5	0.76
AGE	47.3	40	28.8	25	67

Panel B. Correlation matrix

	VIF	DIVTA	REPTA	DIVREPTA	COALITION	C.SHAPLEY[b]	DOMINANT[b]	VCO-CFDO[b]	LTA	ROA	MTB	LEV
DIVTA												
REPTA		0.02										
DIVREPTA		0.71***	0.71***									
COALITION	2.31	0.02	0.001	0.01								
C.SHAPLEY[b]	2.15	0.08**	-0.004	0.05†	0.69***							
DOMINANT[b]	2.32	0.07*	-0.002	0.04	0.43***	0.27***						
VCO-CFDO[b]	2.23	0.10**	0.01	0.08	0.54***	0.43***	0.89***					
LTA	1.23	0.005	-0.02	-0.01	0.24***	0.23***	0.14***	0.17***				
ROA	1.13	0.56***	-0.04	0.36***	0.008	0.04	0.04	0.06*	0.13**			
MTB	1.03	0.13***	0.02	0.11**	0.04	-0.005	0.009	0.03	-0.02	0.10**		
LEV	1.18	-0.06*	-0.01	-0.05	0.12**	0.17**	-0.001	0.02	0.23***	-0.22***	0.02	
AGE	1.09	0.01	-0.003	0.007	0.001	-0.03	-0.03	-0.06	0.22***	0.06*	-0.03	0.12**
VIF (mean)	1.63											

DIVTA stands for the dividends scaled by total assets (%), REPTA for the stock repurchases scaled by total assets (%), DIVREPTA for the sum of dividends and repurchases scaled by total assets (%). COALITION is a dummy variable that equals 1 when a shareholder coalition exists in a firm, and zero otherwise. C.SHAPLEY is the Shapley value solution for the dominant owner in a shareholder voting game when a shareholders coalition exists. DOMINANT is the sum of voting rights in the hands of the shareholders involved in the agreement less the voting rights of the dominant owner divided by the voting rights of the dominant owner. VCO-CFDO is the sum of the voting rights in the hands of the shareholders involved in the agreement less the cash flow rights of the dominant owner. LTA is the logarithm of total asset, ROA is the operating income before interest and taxes divided by total assets, MTB is the equity market-to-

book ratio, LEV is the relation between total debt and assets. AGE is years since the beginning of the firm activity. VIF is the variance inflation factor.
[a] Figures calculated for firms with dividends, repurchase and dividends and repurchase. [b] Figures calculated for firms with shareholders coalition. ***,**, *, and † indicate statistical significance at the 0.1%, 1%, 5%, and 10% levels, respectively.

Table 3. Influence of shareholder coalitions on dividends.

	(1)	(2)	(3)	(4)	(5)	(6)
Depend variable	DIVTA	REPTA	DIVREPTA	DIVTA	REPTA	DIVREPTA
$DIVTA_{t-1}$	0.389***			0.401***		
	(9.36)			(10.24)		
$REPTA_{t-1}$		-0.085***			-0.086***	
		(-8.52)			(-5.859)	
$DIVREPTA_{t-1}$			0.005***			0.086***
			(3.43)			(8.5)
COALITION	-0.002***	-0.004***	-0.008***			
	(-5.53)	(-10.97)	(-7.97)			
DOMINANT				-0.006*	-0.022**	-0.037**
				(-2.26)	(-4.49)	(-11.88)
LTA	0.001**	-0.007	0.001***	0.009**	0.001**	0.005**
	(4.84)	(-1.4)	(2.79)	(4.21)	(2.77)	(12.04)
ROA	0.043***	-0.11***	0.103***	0.044***	-0.148***	0.084***
	(19.85)	(-13.43)	(15.8)	(38.49)	(-7.99)	(36.37)
MTB	-0.0001***	-0.0002**	-0.0001***	-0.0002***	-0.0009***	-0.0002**
	(-14.11)	(-2.47)	(-7.35)	(-10.19)	(-6.82)	(-2.44)
LEV	0.007	-0.06***	-0.046***	-0.003***	-0.062***	-0.021***
	(0.67)	(-3.83)	(-14.27)	(-4.38)	(-5.04)	(-11.67)
AGE	0.0002	0.0002†	0.0003***	0.0006	-0.0004	0.0001†
	(0.4)	(1.86)	(3.97)	(0.16)	(-1.04)	(1.96)
Industrial effect	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Year effect	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Intercept	-0.015**	0.045***	-0.002	-0.013***	0.007	0.082***
	(-3.15)	(4.28)	(-0.21)	(-4.05)	(1.11)	(8.77)
F	9959.92	5137.36	2432.37	3693.57	3597.57	2032.19
m_2	0.56	-1.17	0.13	0.59	-1.06	1.03
Z_1	180.55***	104.23***	106***	147.32***	154.82***	163.12***
Z_2	3.72**	86.49***	48.61***	13.03***	150.65***	139.16***
Z_3	103.53***	82.62***	152.08***	154.49***	163.01***	141.62***
Hansen test	91.51 (284)	66.33(263)	88.99(284)	93.52(293)	74.87(306)	83.14(224)

Estimated coefficients (*t*-statistics based on robust standard errors) from the Generalized Method of Moments (GMM) regressions. DIVTA stands for the dividends scaled by total assets (%), REPTA for the stock repurchases scaled by total assets (%), DIVREPTA for the sum of dividends and repurchases scaled by total assets (%). COALITION is a dummy variable that equals 1 when a shareholder coalition exists in a firm, and zero otherwise. DOMINANT, is the sum of voting rights in the hands of the shareholders involved in the agreement less the voting rights of the dominant owner divided by the voting rights of the dominant owner. LTA is the logarithm of total asset, ROA is the operating income before interest and taxes divided by total assets, MTB is the equity market-to-book ratio, LEV is the relation between total debt and assets. AGE is years since the beginning of the firm activity.

Hansen is a test of overidentifying restrictions, under the null hypothesis that all instruments are uncorrelated with the random disturbance. m_2 is a test for lack of second-order serial correlation in the first-difference residual. F is a test for the global significance of the model. Z_1 is a Wald test of the joint significance of the reported coefficients. Z_2 is a Wald test of the joint significance of the industries dummies. Z_3 is a Wald test of the joint significance of the time dummies. ***,**, *, and † indicate statistical significance at the 0.1%, 1%, 5%, and 10% levels, respectively.

Table 4. Influence of shareholder coalitions on dividends: Alternative measures of dividend policy and independent variables

Depend variable	(7) DIVTA	(8) REPTA	(9) DIVREPTA	(10) DIVTA	(11) REPTA	(12) DIVREPTA	(13) DIVCF	(14) REPCF	(15) DIVREPCF	(16) DIVCF	(17) REPCF	(18) DIVREPCF
$DIVTA_{t-1}$	0.409***			0.445***								
	(13.45)			(9.42)								
$DIVCF_{-1}$							0.132***			0.199***		
							(7.49)			(5.48)		
$REPTA_{t-1}$		-0.14***			-0.177***							
		(-8.68)			(-8.96)							
$REPCF_{t-1}$								-0.043***			-0.07***	
								(-12.55)			(-4.22)	
$DIVREPTA_{t-1}$			0.026***			0.088***						
			(4.60)			(8.53)						
$DIVREPCF_{t-1}$									0.097***			0.175***
									(8.98)			(7.28)
COALITION							-0.022***	-0.013***	-0.075***			
							(-6.31)	(-7.28)	(-9.88)			
DOMINANT										-0.320***	-0.064*	-0.108**
										(-6.59)	(-2.51)	(-3.21)
C.SHAPLEY	-0.003*	-0.005**	-0.006***									
	(-2.54)	(-3.49)	(-5.32)									
VCO-CFDO				-0.0001***	-0.0001**	-0.0002***						
				(-10.00)	(-2.93)	(-4.62)						
LTA	0.009***	0.001	0.001*	-0.004	0.003**	0.008***	-0.003	0.019***	0.032***	0.01***	-0.005	0.021*
	(4.68)	(1.35)	(2.53)	(-0.97)	(2.79)	(15.42)	(-1.03)	(4.52)	(5.04)	(2.89)	(-0.39)	(2.59)
ROA	0.045***	-0.133***	0.114***	0.054***	-0.104***	0.078***	0.766***	-0.305***	0.982***	0.764***	-0.476***	0.952***
	(18.89)	(-10.47)	(21.37)	(19.06)	(-7.59)	(43.3)	(30.43)	(-28.49)	(27.16)	(31.1)	(-56.85)	(36.87)
MTB	-0.0001***	-0.0003**	-0.0002***	-0.0001***	0.0009	-0.0002**	-0.0007***	-0.0002†	-0.007***	-0.0005***	-0.004***	-0.008***
	(-8.32)	(-3.15)	(-13.47)	(-8.1)	(0.99)	(-3.41)	(-11.94)	(-1.74)	(-6.95)	(-16.72)	(-23.44)	(-8.12)
LEV	-0.002**	-0.074***	-0.042***	0.001	-0.078***	-0.024***	0.017	-0.111***	-0.257***	-0.11***	-0.201***	-0.349***
	(-2.35)	(-16.42)	(-13.86)	(0.94)	(-9.16)	(-10.47)	(1.30)	(-11.39)	(-9.32)	(-9.61)	(-8.97)	(-9.37)
AGE	-0.0003	-0.0002	0.0003**	0.0001**	0.0003	0.0003***	0.0004	0.001***	0.002***	0.002***	0.001***	0.004***
	(-0.71)	(-1.27)	(3.37)	(3.76)	(0.27)	(4.12)	(0.75)	(5.23)	(4.91)	(5.32)	(3.35)	(7.39)
Industrial effect	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Year effect	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Intercept	-0.005	0.007	0.002	0.002	-0.006	0.104***	0.248***	-0.187***	0.390***	0.343***	0.131	1.039***

	(-0.87)	(0.34)	(0.17)	(0.50)	(-0.38)	(14.2)	(4.07)	(-3.12)	(4.23)	(4.72)	(5.32)	(8.18)
F	1630.77	1597.15	1868.96	1753.71	1977.43	1977.06	3277.8	1240.01	2469.35	3867.15	4960.06	1764.99
m_2	0.56	-1.13	0.03	0.44	-0.60	0.81	1.26	-1.13	1.26	1.06	-1.02	0.12
Z_1	137.53***	61.64***	104.36***	117.8***	44.66***	128.32***	118.25***	146.16***	199.41***	136.92***	170.55***	134.05***
Z_2	8.98***	130.28***	89.54***	5.28**	61.15***	111.415***	79.91***	47.30***	109.55***	62.39***	125.77***	62.72***
Z_3	188.66***	14.93***	103.75***	121.49***	22.40***	105.46***	181.71***	161.80***	111.36***	190.28***	127.22***	139.60***
Hansen test	87.07(284)	51.81(204)	97.8(284)	90.06(249)	48.15(181)	84.96(124)	84.51(157)	81.91(236)	84.05(105)	86.47(157)	79.5(163)	82.81(104)

Estimated coefficients (*t*-statistics based on robust standard errors) use the Generalized Method of Moments (GMM). DIVTA and DIVCF, is the dividends scaled by total assets and cash flows respectively. REPTA and REPCF, is the repurchases scaled by total assets and cash flows respectively. DIVREPTA and DIVRECF, is the dividends and repurchases scaled by cash flow and cash flows respectively. COALITION, is a dummy variable that equals 1 when a shareholder coalition exists in a firm, and zero otherwise. C.SHAPLEY, is the Shapley value solution for the dominant owner in a shareholder voting game when a shareholders coalition exists. DOMINANT, is the sum of voting rights in the hands of the shareholders involved in the agreement less the voting rights of the dominant owner divided by the voting rights of the dominant owner. VCO-CFDO, is the sum of the voting rights in the hands of the shareholders involved in the agreement less the cash flow rights of the dominant owner. LTA, is logarithm of total asset, measured as the natural logarithm of total asset. ROA, is return on assets, measured as operating income before interest and taxes divided by total asset MTB, is market-to-book ratio, measured as the market value of equity divided by the book value of shareholder. LEV, is measured as the relation between firm i's total debt and asset in year t. AGE is years since the beginning of the firm activity. Hansen is a test of overidentifying restrictions, under the null hypothesis that all instruments are uncorrelated with the disturbance process. F is a test for the global significance of the model. m_2 is a statistic test for lack of second-order serial correlation in the first-difference residual. F is a test for the joint significance of the model. Z_1 is a Wald test of the joint significance of the reported coefficients. Z_2 is a Wald test of the joint significance of the industries dummies. Z_3 is a Wald test of the joint significance of the time dummies. ***,**, *, and † indicate statistical significance at the 0.1%, 1%, 5%, and 10% levels, respectively.

Table 5. Influence of shareholder coalitions on dividends. Shareholders coalitions and financial crisis

	Before the financial crisis: 2003-2007						During the financial crisis: 2008-2012					
Dependent variable	(19) DIVTA	(20) REPTA	(21) DIVREPTA	(22) DIVTA	(23) REPTA	(24) DIVREPTA	(25) DIVTA	(26) REPTA	(27) DIVREPTA	(28) DIVTA	(29) REPTA	(30) DIVREPTA
$DIVTA_{t-1}$	0.096***			0.075***			0.464***			0.475***		
	(6.57)			(6.00)			(9.15)			(7.05)		
$REPTA_{t-1}$		-0.21***			-0.137***			-0.151***			-0.088***	
		(-3.90)			(-8.40)			(-6.63)			(-12.27)	
$DIVREPTA_{t-1}$			0.268***			0.109***			0.052***			0.042***
			(2.73)			(11.02)			(7.35)			(6.33)
COALITION	-0.004***	-0.008***	-0.002***				-0.001***	-0.008***	-0.005*			
	(-8.39)	(-4.78)	(-2.89)				(-6.27)	(-5.23)	(-2.18)			
DOMINANT				-0.023***	-0.003***	-0.052***				-0.007***	-0.101***	-0.065***
				(-8.18)	(-6.40)	(-3.97)				(-3.89)	(-4.29)	(-6.14)
LTA	0.0003	0.0002**	0.001**	0.0004	-0.0003	0.001***	0.001***	0.002**	0.009***	0.0006***	-0.001	0.006***
	(0.92)	(2.71)	(2.19)	(1.26)	(-0.63)	(3.06)	(5.24)	(3.73)	(7.76)	(2.73)	(-1.39)	(9.16)
ROA	0.022***	-0.001***	0.002	0.028***	-0.001***	0.006†	0.028***	-0.112***	0.078***	0.025***	-0.083***	0.078***
	(9.56)	(-6.76)	(1.54)	(10.57)	(-4.84)	(1.74)	(11.62)	(-9.33)	(9.30)	(10.41)	(-6.05)	(9.96)
MTB	-0.0002***	-0.0007***	-0.0002***	-0.0002***	-0.0001***	-0.0009*	-0.0001***	-0.0007*	-0.0002***	-0.0001***	-0.0001*	-0.0003***
	(-4.41)	(-3.72)	(-5.77)	(-3.45)	(-7.01)	(-2.47)	(-9.97)	(-2.05)	(-11.50)	(-12.59)	(-2.27)	(-6.86)
LEV	-0.0003	0.0001	-0.004	-0.003*	-0.0006***	-0.005**	-0.007***	-0.056***	-0.051***	-0.006***	-0.022***	-0.049***
	(-0.25)	(0.61)	(-1.44)	(-2.66)	(-5.11)	(-2.72)	(-7.74)	(-6.20)	(-9.13)	(-6.22)	(-3.14)	(-8.13)
AGE	0.0001***	0.0004	0.0001*	0.0001***	0.0001†	0.0003*	0.0005**	0.0008	0.0001†	0.0005***	0.0001*	0.0001***
	(3.11)	(0.34)	(1.84)	(4.30)	(1.82)	(2.46)	(4.42)	(0.69)	(1.80)	(3.65)	(2.31)	(4.18)
Industrial effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	-0.003	-0.001*	-0.1	-0.01*	0.0002	0.001	-0.008***	0.052***	-0.079***	-0.003	0.010	-0.048***
	(-0.73)	(-2.42)	(-1.13)	(-1.82)	(0.24)	(0.2)	(-3.21)	(6.27)	(-5.58)	(-1.32)	(0.89)	(-4.80)
F	1702.72	4937.14	649.66	734.94	1431.07	2057.92	9046.28	4320.61	1051.11	4937.10	848.68	1390.84
m_2	1.55	-1.19	1.39	1.21	-1.27	0.8	0.57	-1.45	1.16	0.55	-1.30	1.02
Z_1	117.36***	9.66***	8.95***	49.12***	51.79***	11.87***	72.9***	35.18***	145.62***	63.23***	12.53***	16.33***
Z_2	88.19***	13.91***	81.85***	117.82***	45.71***	17.58***	18.99***	33.62***	21.95***	14.40***	25.11***	43.82***
Z_3	62.15***	20.7***	7.92***	71.18***	24.81***	17.57***	122.09***	29.33***	116.42***	130.09***	25.88***	24.25***
Hansen test	72.02(66)	45.81(65)	69.66(67)	63.22(61)	51.73(48)	46.78(61)	87.06(144)	49.71(136)	88.02(148)	89.43(144)	42.41(109)	84.03(148)

Estimated coefficients (*t*-statistics based on robust standard errors) use the Generalized Method of Moments (GMM). DIVTA, is the dividends scaled by total assets. REPTA, is the repurchases scaled by total assets. DIVREPTA, is the dividends and repurchases scaled by total assets. DIVCF, is the dividends scaled by cash flows. REPCF, is the repurchases scaled by cash flows. DIVREPTA, is the

dividends and repurchases scaled by cash flow. COALITION, is a dummy variable that equals 1 when a shareholder coalition exists in a firm, and zero otherwise. DOMINANT, is the sum of voting rights in the hands of the shareholders involved in the agreement less the voting rights of the dominant owner divided by the voting rights of the dominant owner. LTA, is logarithm of total asset, measured as the natural logarithm of total asset. ROA, is return on assets, measured as operating income before interest and taxes divided by total asset MTB, is market-to-book ratio, measured as the market value of equity divided by the book value of shareholder. LEV, is measured as the relation between firm i's total debt and asset in year t. Age, is years since the beginning of the firm activity. Hansen is a test of overidentifying restrictions, under the null hypothesis that all instruments are uncorrelated with the disturbance process. F is a test for the global significance of the model. m_2 is a statistic test for lack of second-order serial correlation in the first-difference residual. F is a test for the joint significance of the model. Z_1 is a Wald test of the joint significance of the reported coefficients. Z_2 is a Wald test of the joint significance of the industries dummies. Z_3 is a Wald test of the joint significance of the time dummies. ***,**, *, and † indicate statistical significance at the 0.1%, 1%, 5%, and 10% levels, respectively.

Table 6. Influence of shareholder coalitions on dividends: Years of the agreement

Depend variable	(31) DIVTA	(32) REPTA	(33) DIVREPTA
$DIVTA_{t-1}$	0.378**		
	(3.82)		
$REPTA_{t-1}$		-0.09***	
		(-6.12)	
$DIVREPTA_{t-1}$			0.047***
			(4.63)
YEARS	-0.0004***	-0.0006***	-0.0002†
	(-4.31)	(-4.92)	(-1.94)
LTA	0.001***	-0.009	0.003
	(2.87)	(-1.54)	(0.37)
ROA	0.043***	-0.104***	0.084***
	(11.19)	(-11.88)	(6.44)
MTB	-0.0008**	-0.0006***	-0.0006*
	(-2.89)	(-3.04)	(-2.28)
LEV	-0.001	-0.055***	-0.055***
	(-0.82)	(-7.71)	(-9.83)
AGE	0.0001	0.0006	0.0003***
	(0.93)	(0.96)	(5.64)
Industrial effect	*Yes*	*Yes*	*Yes*
Year effect	*Yes*	*Yes*	*Yes*
Intercept	-0.008**	0.043***	0.040***
	(-1.94)	(5.94)	(3.04)
F	917.26	6615.2	5077.04
M_2	0.62	-0.9	0.17
Z_1	46.97***	221.38***	47.84***
Z_2	6.58**	100.25***	38.34***
Z_3	90.56***	50.56***	111.44***
Hansen test	79.25(134)	58.8(263)	72.05(209)

Estimated coefficients (*t*-statistics based on robust standard errors) use the Generalized Method of Moments (GMM). DIVTA, is the dividends scaled by total assets. REPTA, is the repurchases scaled by total assets. DIVREPTA, is the dividends and repurchases scaled by total assets. DIVCF, is the dividends scaled by cash flows. REPCF, is the repurchases scaled by cash flows. DIVREPTA, is the dividends and repurchases scaled by cash flow. YEARS OF COALITION, years in which the shareholders coalitions is in effect. LTA, is logarithm of total asset, measured as the natural logarithm of total asset. ROA, is return on assets, measured as operating income before interest and taxes divided by total asset MTB, is market-to-book ratio, measured as the market value of equity divided by the book value of shareholder. LEV, is measured as the relation between firm i's total debt and asset in year t. Age, is years since the beginning of the firm activity. Hansen is a test of overidentifying restrictions, under the null hypothesis that all instruments are uncorrelated with the disturbance process. m_2 is a statistic test for lack of second-order serial correlation in the first-difference residual. F is a test for the joint significance of the model. Z_1 is a Wald test of the joint significance of the reported coefficients. Z_2 is a Wald test of the joint significance of the industries dummies. Z_3 is a Wald test of the joint significance of the time dummies. ***,**, *, and † indicate statistical significance at the 0.1%, 1%, 5%, and 10% levels, respectively.

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