Expropriation of minority shareholders and payout policy

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Abstract

Drawing on the agency cost explanation of payout policy, I hypothesize that controlled firms with weak corporate governance set-ups, in which controlling shareholders have strong incentives to expropriate minority shareholders, pay out more and/or tend to prefer dividends over repurchases when disgorging cash. I study a sample of Italian controlled firms and find strong evidence in support of my hypotheses. A firm's share of dividends in total payout (dividends plus repurchases) is negatively related to the size of the cash flow stake of the firm's controlling shareholder and positively associated with the wedge between the controlling shareholder's control rights and cash flow rights. Furthermore, family-controlled firms, which are less severely affected by agency problems than other Italian controlled firms, choose lower payouts and are characterized by smaller fractions of dividends in total payout.

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The agency conflicts between corporate insiders and corporate outsiders are the main focus of corporate governance research. In firms with highly dispersed ownership structures (widely held firms), these conflicts are between the firms' managers and the firms' shareholders (Berle and Means, 1932; Jensen and Meckling, 1976). In firms controlled by one or more shareholders with large stakes (controlled firms), the interests of the firms' controlling shareholders often collide with those of the firms' minority shareholders. In both widely held and controlled firms, agency conflicts arise because corporate insiders have an incentive to pursue private benefits at the expense of corporate outsiders.

In this paper, I investigate whether firms determine the level of their payouts and the mix between dividend payments and stock repurchases in order to mitigate agency conflicts and boost firm value. I focus on a sample of Italian non-financial controlled firms listed on the Milan stock market in the period 1999-2004. Italy is a country characterized by firms with concentrated ownership structures, significant private benefits accruing to controlling shareholders, and the usage of control-enhancing devices to magnify control rights relative to cash flow rights; also, family-controlled firms are prevalent in Italy (see, e.g., Bianchi, Bianco, and Enriques, 2001; Faccio and Lang, 2002; Nenova, 2003). In the Italian corporate governance system, the primary agency conflict is between large controlling shareholders and minority shareholders.

It is commonly argued that firms pay out cash to constrain corporate insiders' ability to expropriate corporate outsiders, mitigate agency problems, and increase firm value. When a payout takes place, cash reserves fall, and corporate insiders can use a lower amount of freely available cash to pursue private interests (Jensen, 1986). Also, payouts may force firms to raise new external finance and improve their governance to obtain the external funding at better terms (Easterbrook, 1984). John and Knyazeva (2006) suggest that, besides the level of payout, the composition of total payout also has an influence on agency costs. They argue that dividend payouts, unlike stock repurchases, carry implicit commitments to similar or larger payouts in future periods. This argument is supported by the existing evidence showing that firms tend to distribute stable and increasing dividends (Lintner, 1956; Brav, Graham, Harvey, and Michaely, 2005) and that markets react negatively to dividend cuts (see, e.g., Aharony and Swary, 1980). Further,

firms believe that a stock repurchase is a more flexible payout method than a dividend payment (see, e.g., Brav, Graham, Harvey, and Michaely, 2005). John and Knyazeva (2006) conclude that dividend payments, owing to the conveyed pre-commitment signal to future cash distributions, are more powerful mechanisms than repurchases to attenuate agency conflicts. To summarize, the agency cost explanation of payout policy implies that weakly governed firms choose larger payouts and/or tend to prefer dividends over repurchases.

I hypothesize that weakly governed Italian controlled firms have three main features. First, their controlling shareholders hold a small fraction of cash flow rights. A controlling shareholder with a small cash flow stake receives a small part of the cash paid out by its firm to shareholders. She, therefore, has a strong incentive to divert firm resources. Second, the difference between the control rights and the cash flow rights held by their controlling shareholders is large. When the wedge between a controlling shareholder's control and cash flow stakes is large, the controlling shareholder has the power to expropriate minority shareholders owing to her significant control stake. At the same time, her small cash flow stake does not curb her tendency to indulge in self-serving behaviours. Finally, their controlling shareholders are not families. In an Italian non-financial firm that is not controlled by a family, there is an additional layer of agency conflicts. In particular, the firm's controlling shareholder, which is normally either the state or a widely held firm, is a complex organization with its own agency problems. For example, in a state-controlled firm there is a discrepancy between the objectives of the politicians, who control the firm through appointed managers, and the citizens who, as tax payers, own the firm.

Using a sample of observations for Italian non-financial controlled firms listed on the Milan stock exchange (sample period 1999-2004), I test whether firms with weak corporate governance pay out more and/or tend to prefer dividends over repurchases when paying out cash. On the whole, I find evidence in favour of the notion that a firm's payout policy is designed to reduce agency conflicts and costs. A crucial conclusion arising from my findings is that firms seem to place far more weight on the composition of total payout (the dividend-repurchase mix) rather than on the level of total payout. More specifically, I show that both the odds that a firm uses dividends rather than repurchases and the fraction of the firm's

dividend payout in total payout are negatively associated with the cash flow stake of the firm's controlling shareholder and positively related to the wedge between the control rights and the cash flow rights of the controlling shareholder. I also find that family-controlled firms tend to pay out less than non-family-controlled firms. In addition, family-controlled firms are more likely to disburse cash by repurchasing stock rather than paying dividends. They are also characterized by a larger fraction of total payout that is represented by stock repurchases.

In most cases, the main findings of this study are robust to the presence of outliers, variations in the specifications of the regressions used, changes in sample compositions, and variations in the definitions of some crucial variables.

Some of the findings reported in this study are completely novel. To the best of my knowledge, there are no previously published studies documenting that firms with controlling shareholders with small cash flow stakes and large differences between their control and cash flow rights are characterized by larger fractions of dividend payout in total payout. Moreover, this study offers some insights on the payout policy of family-controlled firms, which is a scarcely developed strand of finance research. In terms of previous evidence, Gugler (2003) shows that Austrian family-controlled firms have lower dividend payouts than Austrian counterparts that are controlled by the state. Hu, Wang, and Zhang (2007) find that U.S. family-controlled firms are less likely to have a positive dividend payout, pay out lower dividends, and tend to prefer repurchases over dividends. Overall, the main findings of this paper carry implications that stretch well beyond the Italian context given that the typical features of Italian firms, which are concentrated ownership and family control, are commonly found in many firms, not only outside the U.S.A. (see, e.g., La Porta, Lopez-de-Silanes, and Shleifer, 1999; Villalong and Amit, 2006; Holderness, 2009).

The paper is structured as follows. In Section I, I revise the previous related literature and formulate several testable hypotheses. Section II contains a description of the data collection process and of the variables used in the study. The empirical findings are presented and described in Section III. In Section

IV, I summarize the results of a series of robustness tests. Finally, Section V contains some concluding remarks.

I. Literature review and testable hypotheses

A. Agency problems and payout policy

In modern corporations, agency problems arise from the conflicts between corporate insiders and corporate outsiders. In widely held firms, characterized by a highly dispersed ownership structure, the firms' managers are the only corporate insiders, and the firms' shareholders can be defined as the corporate outsiders. In controlled firms, i.e. firms that are not widely held, the controlling shareholders are the firms' corporate insiders together with the managers under their control. In contrast, the firms' minority shareholders can be defined as the corporate outsiders.

It is often argued that distributions of cash to shareholders can be used to mitigate agency costs. Cash distributions are beneficial because they reduce the stock of cash that corporate insiders can divert to pursue private interests (Jensen, 1986). Moreover, payouts lead to a decrease in the retained earnings available for investments. This decrease may force firms to resort to external capital and improve their governance in order to raise it at better terms (Easterbrook, 1984). An implication of these arguments is that firms in which corporate outsiders are more likely to be expropriated pay out more cash. In this framework, payout policy is seen as a governance control mechanism that limits corporate insiders' self-serving actions.

Why should corporate insiders pass up opportunities to expropriate corporate outsiders by paying out cash? A possible answer is provided by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000). They suggest that firms affected by serious governance problems need to establish a reputation of fair treatment of corporate outsiders in order to raise external capital at favourable terms. These firms can use large distributions of cash to shareholders to boost their reputation. Similarly, Faccio, Lang, and Young (2001) contend that investors are likely to heavily discount the market values of firms with low payouts and weak

corporate governance set-ups. Investors are also less likely to supply capital to these firms. Hence, firms with weak governance may use dividend payments and share repurchases to boost their market valuations and facilitate their access to the capital market.

There is no lack of empirical evidence confirming that a firm's payout policy is designed to attenuate agency problems.[1] The existing literature supports the notion that firms with larger cash flows and fewer growth opportunities have larger dividend payouts (see, e.g., Fama and French, 2001; Fenn and Liang, 2001) and repurchase payouts (see, e.g., Dittmar, 2000; Fenn and Liang, 2001). Since cash-rich firms with few investment opportunities are likely targets of corporate outsiders' expropriation, this evidence is consistent with an agency cost-based explanation of payout policy.[2] Both Rozeff (1982) and Jensen, Solberg, and Zorn (1992) report a negative relation between dividend payout and insider ownership. This finding shows that firms in which the insiders' incentives are better aligned with those of the outsiders are less in need of high payouts to alleviate agency problems. Noronha, Shome, and Morgan (1996) present similar results for a sample of firms with low growth opportunities and weak non-dividend corporate governance control mechanisms.[3] Dewenter and Warther (1996) compare the dividend policy of U.S. firms with that of Japanese firms, arguing that dividend policy is a less relevant control mechanism in Japan. In support of their argument, they find that in Japan both firms' managers and investors are less averse to dividend cuts and omissions. Hu and Kumar (2004) analyze the impact of managerial entrenchment on firms' dividend and total payout, i.e. the sum of dividends and repurchases. On the whole, they present evidence that payouts are larger in firms managed by more entrenched executives.[4]

[1] A few studies reject the notion that firms pay out cash to mitigate agency conflicts. For instance, La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000) find that firms from countries with better legal protection of minority shareholders pay out larger dividends. Fenn and Liang (2001) show that, in most cases, the fraction of a firm's stock owned by its executives does not affect the firm's propensity to pay dividends and repurchase shares. Grinstein and Michaely (2005) reject the hypothesis that the monitoring activity of institutional investors has a significant influence on firms' dividend, repurchase, and total payout policy.

[2] The existence of asymmetric information costs (Myers and Majluf, 1984; Myers, 1984) and other financing costs (e.g., flotation costs) can also explain why firms with a lot of investment opportunities and little cash are reluctant to choose high payouts.

[3] Noronha, Shome, and Morgan (1996) consider two non-dividend control mechanisms: The presence of large shareholders and the incentive component of managerial compensation.

[4] As proxies of managerial entrenchment, Hu and Kumar (2004) consider the following factors in their baseline regressions: CEO compensation package, CEO tenure, CEO ownership, presence of large outside shareholders, and

Finally, John and Knyazeva (2006) investigate whether a firm's dividend payout, repurchase payout, and total payout are functions of two indices of corporate governance: One measuring the strength of the firm's internal control mechanisms and one reflecting the effectiveness of the firm's external control mechanisms. They report that firms with weak governance mechanisms tend to pay out more.

John and Knyazeva (2006) postulate that, besides the level of cash distributions, the type of cash distributions has a bearing on agency costs. They expect the fraction of total payout represented by dividend payments to be a decreasing function of the strength of corporate governance. John and Knyazeva (2006) argue that dividend payments are more effective than repurchases to address agency conflicts because current dividends are associated with an implicit pre-commitment to future dividends. This argument derives from the fact that dividend cuts are greeted negatively by the market (see, e.g., Aharony and Swary, 1980). Also, firms are reluctant to increase dividends to levels that cannot be sustained in the future (Lintner, 1956; Brav, Graham, Harvey, and Michaely, 2005). A firm that provides dividends today is, therefore, implicitly pre-committing itself to paying similar or larger dividends tomorrow. In contrast, repurchases are a more flexible way to distribute cash than dividends (Jagannathan, Stephens, and Weisbach, 2000; Guay and Harford, 2000; Brav, Graham, Harvey, and Michaely, 2005). The completion rates of announced repurchase programs are in many cases low (Stephens and Weisbach, 1998), and there is no evidence that failure to complete repurchase programs triggers negative reactions from the market. On the whole, the market sees repurchases as far weaker pre-commitment signals of future cash distributions than dividend payments. John and Knyazeva (2006) find empirical support for their argument and show that weakly governed firms are more likely to prefer dividends over repurchases when paying out cash.

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board independence. In contrast with agency cost-based explanations of payout policy, they find that a more independent board is associated with larger payouts.

B. Testable hypotheses

The agency-based explanations of payout policy outlined in the previous section have two main implications. First, firms that are highly affected by agency problems choose larger payouts than better governed counterparts. Second, firms characterised by weak governance tend to mitigate agency problems by increasing the fraction of total payout that is distributed through dividend payments. I take advantage of these implications to formulate several testable hypotheses.

1. Cash flow rights and control rights of controlling shareholders

The cash flow rights or ownership rights of a firm's controlling shareholder are the fraction of the cash distributed by the firm to shareholders that accrues to the controlling shareholder. For instance, if a shareholder owns 30% of the cash flow rights of a firm that pays out 100 through dividend payments, the shareholder receives 30 from the firm. If the firm distributes 100 through repurchases, the shareholder may get less or more than 30 because shareholders have the option not to tender their shares in repurchase programs. I expect an inverse relation between the size of a controlling shareholder's cash flow rights (ownership stake) and her propensity to expropriate minority shareholders. Controlling shareholders with large (small) ownership stakes have weak (strong) incentives to avoid payouts and, instead, use their firms' cash to pursue private benefits. This is the case because they receive a large (small) part of the cash that is distributed to shareholders. Hence, agency costs are decreasing in the size of the ownership stake of the controlling shareholder.[5]

Based on this relation, I formulate the following hypotheses:

H1: The level of a firm's payout is a decreasing function of the size of the cash flow rights of its controlling shareholder.

[5] Several empirical studies find a negative relation between a firm's value and performance and the cash flow rights of its controlling shareholder (see, e.g., Claessens, Djankov, Fan, and Lang, 2002; La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 2002; Mitton, 2002; Joh, 2003; Laeven and Levine, 2008; Gompers, Ishii, and Metrick, 2008). These findings support the notion that controlling shareholders pursue private interests less when they own a larger ownership stake.

H2: The share of a firm's dividend payout in total payout is a decreasing function of the size of the cash flow rights of the firm's controlling shareholder.

Gugler and Yurtoglu (2003) is the only published research that tests H1 using a methodology that, like in this paper, considers control-enhancing devices such as pyramidal group structures to precisely compute cash flow rights. They study the dividend policy of a sample of German firms and present evidence that is at odds with my expectations.[6] There is no previous research that provides tests of H2.

Another variable that is often suggested as measure of potential minority shareholders' expropriation is the wedge between a controlling shareholder's control rights and cash flow rights (see, e.g., Faccio, Lang, and Young, 2001; Claessens, Djankov, Fan, and Lang, 2002). A shareholder's control rights in a firm are defined as the fraction of the firm's voting shares that the shareholder owns. Controlling shareholders with more control rights benefit from a stronger degree of control. Non-voting shares and pyramids are control-enhancing devices that are used in Italy by controlling shareholders to gain control rights in excess of cash flow rights (see, e.g., Bianchi, Bianco, and Enriques, 2001; Faccio and Lang, 2002). Non-voting shares, which carry cash flow rights, may be sold to minority shareholders in order to allow controlling shareholders' to boost their degree of control without requiring further investments. As for pyramidal structures, a simple example can be used to explain why they are control-enhancing mechanisms. Assume that both Firm A and Firm B are controlled by an investor, Investor A and Investor B respectively, who holds 40% of her firm's control rights. Investor A has a direct stake in Firm A and there is no discrepancy between her control rights and her cash flow rights. In contrast, Investor B controls Firm B through a pyramidal control chain that is structured as follows: Investor B owns 50% of Firm C that, in turn, has a 40% direct stake in Firm B. Investor B holds 20% of the cash flow rights of Firm B (50% x 40% = 20%), and has control rights (40%) exceeding ownership rights. Is minority shareholders

[6] Gugler and Yurtoglu (2003) report a positive relation between the size of a controlling shareholder's cash flow rights and the level of her firm's dividend payout.

expropriation more likely in Firm A or in Firm B? Expropriation is more likely in Firm B because in this firm there is a deeper separation between control and ownership and the size of the controlling shareholder's cash flow stake is smaller. To generalize, agency costs are a positive function of the wedge between controlling shareholders' control rights and cash flow rights.[7]

In light of this conclusion, I propose the following hypotheses:

H3: The level of a firm's payout is an increasing function of the wedge between the control rights and the cash flow rights of its controlling shareholder.

H4: The share of a firm's dividend payout in total payout is an increasing function of the wedge between the control rights and the cash flow rights of the firm's controlling shareholder.

I am not aware of previous studies that test H4. As regards H3, supporting evidence is provided by Faccio, Lang, and Young (2001) for the dividend policy of European and Asian firms that are group-affiliated and tightly-controlled.[8] In contrast, Gugler and Yurtoglu (2003) show that in Germany larger deviations of control rights from cash flow rights are associated with lower dividend payments.

2. Family firms

Family-controlled firms make up for 80% of the observations used in my baseline regressions. The other two major groups of controlled firms are state-controlled firms (12% of the sample) and firms

[7] The positive association between agency costs and the wedge between control and cash flow rights is confirmed by several studies documenting that firms with larger differences between control and cash flow rights have worse performances and lower market valuations (see, e.g., Claessens, Djankov, Fan, and Lang, 2002; Mitton, 2002; Joh, 2003; Laeven and Levine, 2008; Gompers, Ishii, and Metrick, 2008).

[8] Faccio, Lang, and Young (2001) run regressions of several dividend payout measures on the ratio between cash flow and control rights (*O/C*). By construction, there is an inverse relation between *O/C* and the difference between control rights and cash flow rights. In regressions with Italian firms, the sign of the coefficient on *O/C* is in most cases positive. However, possibly owing to the small size of the Italian sample (only 110 observations), the coefficients on *O/C* are normally statistically insignificant.

controlled by corporations that are widely-held (7% of the sample). I expect firms controlled by families to be less affected by agency problems than other controlled firms.

As for state-controlled firms, my expectation is based on an argument similar to that put forward by Gugler (2003). Like in any controlled corporation, in a state-controlled firm minority shareholders can be expropriated by entrenched controlling shareholders. A second additional problem is that politicians are *de facto* in command of state firms, through appointed managers, even though they are not the residual claimants of the state's equity investments in the firms. Their citizens are the residual claimants. In principle, politicians have a duty to manage state-controlled firms in the best interest of their citizens. As a matter of fact, they do not have an investment in these firms and, therefore, probably lack enough incentives to serve their citizens. The situation is worsened by the absence of adequate monitoring by a large number of citizens with small personal interests in the firm. Hence, in state firms there is a further layer of principal-agent conflicts that is not found in family firms.

For similar reasons, agency problems are probably deeper in firms controlled by widely held corporations than in family-controlled firms. Conflicts between entrenched controlling shareholders and minority shareholders can be found in both types of firms. However, it is likely that additional agency costs arise when the controlling shareholder is a widely held company that is managed by executives and not directly by its shareholders. This kind of agency costs is of far smaller relevance, if any, in family firms.

Based on the arguments outlined above, I put forward the following hypotheses:

H5: Firms controlled by families pay out less than other controlled firms.

H6: The share of dividend payout in total payout is smaller in firms controlled by families than in other controlled firms.

The previous evidence is limited but, on the whole, supportive of H5 and H6. Gugler (2003) finds that Austrian family-controlled firms choose smaller dividend payouts than state-controlled firms. Hu, Wang, and Zhang (2007) report that U.S. family-controlled firms are less likely to make dividend payments and pay lower dividends than other U.S. firms. Moreover, they document that, in family-controlled firms, dividend payments make up for a smaller fraction of total payout.

II. Data collection and variable construction

I use information from the website of the Italian stock exchange (www.borsaitaliana.it) and Thomson Datastream to identify a list of 276 Italian non-financial firms listed on the Italian exchange in the sample period January 1999 – December 2004.[9] For each firm, I collect data on dividends, repurchases, and other variables for the sample period. After excluding firm-years for widely held firms and observations with missing data, the base dataset employed in the empirical tests comprises 176 firms and 630 firm-year observations. In the sub-sections that follow, I describe the data sources and the variables used in the empirical analyses.

A. Dividend and repurchase payout

For a particular firm-year, I use data from Worldscope to compute *DIV*, a measure of dividend payout. *DIV* is equal to the total cash dividends paid by the firm in the fiscal year (item 04551) multiplied by 100 and divided by the firm's market capitalization (item 08001) at the end of the previous fiscal year. I also create the dummy variable *DDIV* that takes the value one if *DIV* is larger than zero; else, *DDIV* is set to zero.

According to Article 2,428 of the Italian Civil Code, the directors of Italian listed firms must report information on repurchase transactions in their annual report. More specifically, they must disclose the number and the nominal value of own shares purchased during the fiscal year. For a particular firm-year, I

[9] Like in most previous literature, I do not consider financial firms because their payout policy is likely to be a function of industry-specific factors that are not relevant when studying the payout policy of industrial firms.

resort to the firm's annual report to collect the number of ordinary shares repurchased on the open market.[10] Firms are not required to disclose data on the prices at which they repurchase stock. Hence, based on information from annual reports, it is not possible to precisely estimate the amount of cash that firms disgorge through repurchases. To circumvent this problem, I assume that purchases of own shares are made at average market closing prices. For a certain firm-year, the value of the distributed cash through repurchases is calculated as the product between the number of the firm's shares bought back in the year and the average market price of the firm's stock over the year.[11] In order to find the repurchase payout (*REP*) for the firm-year, I first of all scale the value of the distributed cash by 1000 to make it comparable with Worldscope items that are expressed in thousands. I then divide the resulting figure by the firm's market capitalization (Worldscope item 08001) at the end of the previous year and, finally, multiply it by 100. If *REP* is larger than zero, the dummy variable *DREP* is equal to one; else, *DREP* is equal to zero.

I construct the total payout measure *PAYOUT*, which is the sum of *DIV* and *REP*, and the dummy *DPAYOUT* that takes the value one when *PAYOUT* is positive. I also build a measure of the fraction of total payout that is paid out through dividends. This measure (*%DIV*), which can be computed only for positive values of total payout, is the ratio between *DIV* and *PAYOUT*, times 100.

In this study, the payout measures *DIV*, *DDIV*, *REP*, *DREP*, *PAYOUT*, *DPAYOUT*, and *%DIV* are the dependent variables. Panel A of Table I contains some descriptive statistics for these variables. Dividend payouts are larger and more common than repurchase payouts. The average value of *DIV* is 2.17, whereas that of *REP* is only 0.35. The average of *DDIV* is 0.72. This value implies that in 72% of the firm-years in the sample there is a positive dividend payout. In contrast, firms distribute cash through repurchases only in 30% of the years. As for the total payout measures, the average value of *PAYOUT* is 2.52 and the

[10] In the sample period 1999 – 2004, repurchases on the open market were, by far, the most common type of buyback in Italy. The law (Article 132 of the Legislative Decree no. 58 of 24 February 1998) also allowed listed firms to employ self-tender offers to purchase own stock. Through a keyword search on the database Factiva, I identify the very few self-tender offers that took place in the sample period (starting and finishing dates in parentheses): Telecom Italia Spa on saving shares (17/02/2000 – 17/03/2000), Ras Spa on both ordinary and saving shares (9/12/2002 – 10/01/2003), and Roland Europe Spa on ordinary shares (26/11/2004 – 20/12/2004).

[11] The average price is adjusted for stock splits and similar transactions occurring over the year in order to make it compatible with the end-of-year number of repurchased shares.

dummy *DPAYOUT* is equal to one in 76% of the observations. Finally, the mean value of *%DIV* is 86. This finding shows that 86% of the distributed cash is paid out using cash dividends.

B. Ownership variables

The main independent variables used in the empirical analyses reflect several features of a firm's ownership structure. I collect ownership data from Consob's ("National Commission for Companies and Stock Market") website.[12] For each Italian listed firm, the website contains semi-annual reports showing all the ownership stakes that are equal or larger than 2%.[13] In these reports, a "formal" ultimate owner is associated with each ownership stake. A stake can be made up of several smaller stakes controlled either directly by the owner or indirectly through other investors.

In order to compute the control rights of the ultimate owner of the stake in a firm, I first need to identify all the links of the control chains the owner employs to control the stake. When the ultimate owner has a direct stake in the firm, the control chain is very simple and includes only one link. Control chains are far more complex when the owner uses pyramids and indirectly controls the stake through intermediate firms. For instance, if Firm A is the owner of a stake in Firm C through an intermediate stake in Firm B, I need to trace back the control stakes, within the control chain, from Firm C to Firm A. In particular, first I need to identify the control rights of Firm B in Firm C and, then, I need to focus on the control rights of Firm A in Firm B. Given that an ultimate owner's control rights in a firm are a measure of the owner's ability to control the firm, I only take into account voting ordinary shares when determining control stakes.[14] When a control chain is made up of firms listed on the Italian stock exchange, the control stakes within the chain can be easily computed retrieving information from the

[12] www.consob.it; according to the website, Consob is the "public authority responsible for regulating the Italian securities markets".
[13] The ownership data included in the Consob's reports are as of either the end of June or the end of December.
[14] In this study, I assume that both saving and privileged shares do not carry voting rights. In the sample period, holders of privileged shares enjoyed limited voting rights in Italy. More specifically, they had the right to vote in extraordinary meetings of shareholders that decide on particularly relevant but infrequent corporate actions.

Consob's website. As for unlisted firms, I attempt to retrieve the necessary data from firms' annual reports, the database Factiva, and the World Wide Web.

If a stake's "formal" ultimate owner, as indicated by the Consob's ownership reports, is an individual investor, I assume that she is the "actual" ultimate owner of the stake. If the formal ultimate owner is an Italian listed firm, I use the ownership information provided by Consob to identify its ultimate owners and enlarge the existing control chains accordingly.[15] I follow a similar procedure when the Consob's reports indicate that the stake's ultimate owner is an Italian unlisted firm and suitable information (from firms' annual reports, the database Factiva, and the World Wide Web) on the firm's owners can be found. If this information is not available, I assume that the actual ultimate owner is the Italian unlisted firm.[16] Finally, there are some infrequent cases in which according to Consob the ultimate owner of the stake is a foreign firm. In this case, it is simply assumed that the firm is also the stake's actual ultimate owner.

I follow the "weakest link" principle to estimate the degree of control of an owner over a stake in a firm.[17] According to this principle, if an ultimate owner has some voting rights in a firm through a pyramidal control chain, the owner's control rights are measured by the weakest link in the control chain, i.e. by the smallest control stake along the chain. For example, assume that Firm A holds 30% of the control rights of Firm B that, in turn, has a 40% control stake in Firm C. The control rights of Firm A in Firm C amount to 30% because the weakest link in the control chain is 30%. If an ultimate owner uses several control chains to hold a control stake in a firm, the owner's control rights in the firm are measured by the sum of the weakest links of all the control chains. In a particular fiscal year, a firm is considered as controlled if there is at least one ultimate owner that, through one or several control chains, holds a

[15] For example, assume that Firm B, which is a listed firm, is the Consob formal owner of a stake in Firm C. In this case, I utilize the Consob's ownership reports on Firm B to expand the control chains of the stake in Firm C by adding the links from Firm B to its ultimate owners.

[16] In a few cases, the stake's formal ultimate owner is a foreign firm that, according to the non-Consob sources used in this research, is owned by an Italian individual. For example, some Italian families control Italian firms through firms incorporated abroad, especially in Luxembourg and the Netherlands. In this study, these foreign firms owned by Italian individuals are assumed to be unlisted Italian firms.

[17] Applications of the weakest link principle are very frequent in the past literature (see, e.g., Claessens, Djankov, and Lang, 2000; Claessens, Djankov, Fan, and Lang, 2002; Faccio and Lang, 2002; Barontini and Caprio, 2006).

fraction of the firm's control rights that is equal to or larger than 20%.[18] I use the latest available ownership data before the start of the fiscal year to determine whether the firm is controlled over the year and to build the ownership variables of this section. Since the aim of this study is to investigate the payout policy of controlled firms, observations for firms that are widely held are excluded from the sample.

The variable *CRIGHTS* is the percentage of the control rights held by the ultimate owner with the largest control stake, i.e. the controlling shareholder. A firm that is controlled by an Italian individual investor or by an Italian unlisted firm is defined as family-controlled. The dummy *FAMILY* is equal to one for observations related to family-controlled firms; else, *FAMILY* is set to zero. When computing the ownership variables in this section, I exclude firm-year observations belonging to controlled firms whose controlling shareholder is a foreign firm. I apply this filter to the data for two reasons. First, the objective of this study is to focus on the payout policy of Italian listed firms that are controlled either by Italian firms or Italian individual investors. Second, I do not have information on the ownership structure of foreign firms that is, in terms of quality and depth, comparable to that used for Italian controlling shareholders.

For each firm-year, I compute the cash flow rights, or ownership rights, of the firm's controlling shareholder. I create the variable *ORIGHTS*, which is the percentage of cash flow rights held by the controlling shareholder. An investor with cash flow rights in a firm has the right to receive a fraction of the firm's cash distributions to shareholders. Hence, I consider holdings of both voting and non-voting shares when measuring cash flow rights. The cash flow stake of a controlling shareholder is estimated by multiplying the cash flow rights of all the links of the chain the shareholder uses to control the stake. For example, a controlling shareholder owns 15% of the cash flow rights of Firm A if the shareholder has a 50% cash flow stake in Firm B that, in turn, owns a 30% cash flow stake in Firm A (50% x 30% = 15%). If the shareholder uses several control chains, I add the cash flow rights from all of them to calculate the shareholder's overall stake. Finally, I create the variable *WEDGE* by subtracting *ORIGHTS* from

[18] The 20% control threshold has been used in several previous studies (see, e.g., La Porta, Lopez-de-Silanes, and Shleifer, 1999; Claessens, Djankov, and Lang, 2000; Faccio and Lang, 2002).

CRIGHTS. This variable is a measure of the discrepancy between the control rights and the cash flow rights held by a controlling shareholder.

Some descriptive statistics for the ownership variables of this section can be found in Panel B of Table I. As expected, the mean of *CRIGHTS* (50%) is larger than that of *ORIGHTS* (44%). Also, the average value of *WEDGE* is 6%. It is worth noticing that the minimum value of this variable is negative (-4%). For a few observations in the sample, the controlling shareholder has fewer control rights than cash flow rights. A shared feature of these observations is that a stake in the controlled firm is held through a wholly-owned subsidiary of the firm itself. Following the Italian law, the voting rights of the subsidiary cannot be exercised in shareholder meetings of the parent firm. At the same time, the subsidiary keeps its cash flow rights attached to the stake in the parent firm. In this scenario, the controlling shareholder has, through the subsidiary, a cash flow stake in the controlled firm that does not carry any voting rights. The average value of the dummy *FAMILY* is 0.8. This finding implies that 80% of the observations are for firms controlled by families.

C. Other variables

Additional independent variables are constructed to control for factors that should affect a firm's payout policy. Most of these variables are of accounting nature and built upon data from Worldscope.

It is commonly expected that, all else equal, firms with higher cash flows and profits choose larger payouts. This expectation is confirmed by the previous literature both for dividends (see, e.g. Fama and French, 2001; John and Knyazeva, 2006; Denis and Osobov, 2008) and repurchases (see, e.g., John and Knyazeva, 2006; Skinner, 2008). Moreover, there is some evidence supporting the notion that dividend payments are more associated with "permanent" cash flows and profits whereas repurchases are more likely to be paid out of "temporary" cash flows and profits (Guay and Harford, 2000; Jagannathan, Stephens, and Weisbach, 2000). To control for firm profitability, I use two independent variables, one for operating profits and one for non-operating profits. The first one is *OI* and it is given by a firm's operating income (Worldscope item 01250) scaled by its total assets (Worldscope item 02999). The second one,

which is called *NOI*, is computed in a similar way. A firm's non-operating income is the difference between the firm's net income (Worldscope item 01706) and its operating income. Non-operating income scaled by total assets gives *NOI*.

I use a firm's market-to-book ratio as a measure of its growth opportunities. High values of this ratio are normally interpreted as an indication of the existence of valuable investment opportunities. I expect firms with fewer growth opportunities (lower market-to-book ratios) to pay out more. My expectation is based on previous evidence on both dividends (see, e.g., Fama and French, 2001; John and Knyazeva, 2006) and repurchases (see, e.g., Fenn and Liang, 2001; Kahle, 2002). The market-to-book ratio (*MB*) is computed scaling the sum of a firm's market capitalization (Worldscope item 08001) and total debt (Worldscope item 03255) by its total assets.

All else equal, small firms should be more reluctant than large firms to distribute internally generated cash because external financing is likely to be more costly to them. For example, small firms are normally less well-known by investors than large firms. Hence, small firms, when issuing new securities, bear larger levels of the asymmetric information costs highlighted by Myers (1984) and Myers and Majluf (1984). Previous studies confirm the existence of a positive relation both between firm size and dividends (see, e.g., Fama and French, 2001; John and Knyazeva, 2006; Denis and Osobov, 2008) and between firm size and repurchases (see, e.g., Dittmar, 2000; Fenn and Liang 2001). The firm size measure used in this study is the variable *TA*, which is the natural logarithm of a firm's total assets in thousands.

Owing to agency and financial distress costs, the marginal cost of raising new debt is an increasing function of current leverage (Jensen and Meckling, 1976; Fazzari, Hubbard, and Petersen, 1988). Hence, highly levered companies, which face large costs of debt financing, should rely more on internal financing than less levered counterparts. Following this argument, I expect high leverage firms to be more reluctant to pay out cash than low leverage firms. This expectation is supported by the existing research both on dividends (see, e.g., Jensen, Solberg and Zorn, 1992; John and Knyazeva, 2006) and repurchases (see, e.g., Dittmar, 2000; Kahle, 2002). *LEV* is the leverage measure that is used in this study. The numerator of *LEV* is total debt, while its denominator is found by adding market capitalization to total debt. For each

firm-year observation, the variables *OI*, *NOI*, *MB*, *TA*, and *LEV* are calculated using end-of-year data from the previous fiscal year.

Among the control variables, I also include a measure of firm risk (*VAR*). High risk firms, which are characterized by volatile performances, should have a lower propensity to pay out cash than firms with lower risk. A firm with volatile performance is highly exposed to the risk that valuable future investment opportunities are foregone because of the lack of internally generated funds to be invested. Hence, high risk firms should tend to distribute a small fraction of their earnings. Fenn and Liang (2001) find that the volatility of operating income is negatively related to both total payout and dividend payout but positively related to repurchase payout. There is also evidence that the volatility of stock returns is negatively associated with both dividend (see, e.g., John and Knyazeva, 2006; Chay and Suh, 2009) and repurchase payout (see, e.g., John and Knyazeva, 2006). On the whole, I expect firms with more volatile performance to choose lower payout levels than counterparts with less volatile performance. For a particular firm-year, *VAR* is the sample variance of all the daily log-returns in the previous period. I use Thomson Datastream data to compute the log-returns. *VAR* should reflect both operating and financial risk (see, e.g., Christie, 1982) and be an increasing function of firm performance variability.

A firm's managers and directors holding stock options on the shares of their firm are potentially reluctant to make dividend payments that reduce the price of their firm's stock and the value of their options. They would rather prefer to pay out cash through repurchases. Similarly, managers and directors that are going to receive stock grants in the future may avoid distributing dividends because they reduce the prospective value of these grants. Finally, firms may buy back own stock to create a reserve of treasury shares that are used to fund stock grant and/or stock option plans. Overall, I expect firms with ongoing stock option and/or stock grant plans for their executives and directors to prefer share repurchases over dividend payments more than firms without this kind of plans. This expectation is also supported by some empirical studies (Fenn and Liang, 2001; Dittmar, 2000; Kahle, 2002; Cuny, Martin, and

Puthenpurackal, 2009). I use data from annual reports to build the dummy variable *OPT*.[19] This variable is equal to one in years in which there are ongoing stock option and/or stock grant plans for managers and directors. These plans are assumed to be ongoing if in the year one or more of the following events takes place. First, stock options and/or stock grants are attributed to directors and/or general managers. Second, stock options are exercised by directors and/or general managers. Third, rights to obtain future stock grants conditional on the attainment of predefined performance targets are awarded to directors and/or general managers. The value of *OPT* is set to zero if none of these events takes place in the year. *OPT* is the only independent variable for which contemporaneous values are used.

On the right hand side of every regression model, I always include a constant term and sets of year and industry dummies. Coefficients on these variables are not reported in the paper.

Descriptive statistics for the variables *OI*, *NOI*, *MB*, *TA*, *LEV*, *VAR*, and *OPT* are presented in Panel C of Table I.

III. Results

A. Univariate differences

The three panels of Table II include a series of univariate t-tests to investigate whether the means of the payout variables used in this study are related to the cash flow rights held by a firm's controlling shareholder (*ORIGHTS*), the difference between the control rights and the cash flow rights of a firm's controlling shareholder (*WEDGE*), and whether a firm is controlled by a family. For robustness purposes, Table II also includes non-parametric Mann-Whitney-Wilcoxon tests (MWW tests) on the distributions of the payout variables.

[19] Annex 3C of CONSOB Regulation no. 11,971 of 14 May 1999 requires companies to report some detailed information about incentive plans for directors and general managers in their notes to the annual financial statement. For each director and general manager, information on options held at the beginning of the period, on options granted, exercised and expired during the period, and on options held at the end of the period must be provided. Information on stock grants must be disclosed too. They are treated like options that are granted and exercised immediately.

In Panel A, I test whether the means and the distributions of the payout variables for observations belonging to firms with above-median values of *ORIGHTS* are different from the means and the distributions of the same variables for firm-years with below-median values of *ORIGHTS*. The cash flow stake of a controlling shareholder does not have a statistically significant influence neither on the level of total payout (*PAYOUT*) nor on the probability of a positive payout (*DPAYOUT*). The tests provide insignificant results also for the level of dividend payout (*DIV*), the probability of a positive dividend payout (*DDIV*), and the probability of repurchases (*DREP*). Based on the t-tests, I can conclude that the level of repurchase payout (*REP*) is significantly larger and the value of *%DIV* is significantly smaller for observations with above-median cash flow rights. However, only the second of these findings is supported by the MWW tests at a 10% level of statistical significance.

Panel B includes some tests of the impact of the variable *WEDGE* on the firm's payout policy. Findings for the variable *PAYOUT* are mixed. According to the results of the t-test, there is a statistically insignificant relation between *WEDGE* and *PAYOUT*. However, the MWW test indicates that the distribution of *PAYOUT* is significantly different between firm-years with an above-median *WEDGE* and observations with a below-median *WEDGE*. *DPAYOUT* is significantly larger, at a 1% level, in firm-years with above-median values of *WEDGE*. These firm-years are also characterized by statistically significant (at least at a 5% level) larger values of the variables *DIV* and *DDIV*. It is unclear whether *WEDGE* is significantly related to *REP* given that the t-test and the MWW test provide opposite answers. Owing to the lack of statistically significant results, nothing can be concluded with respect to *DREP*. Finally, the value of *%DIV* is significantly larger, at a 1% level, for observations with an above-median *WEDGE*.

In Panel C, I investigate whether the payout policy of family-controlled firms is different from that of non-family-controlled counterparts. The results of the tests for all of the payout variables are always statistically significant at least at a 5% level. The values of the variables *PAYOUT*, *DPAYOUT*, *DIV*, and *DDIV* are lower in firm-years belonging to family-controlled firms. These firms are characterized by larger values of the variables *REP* and *DREP*. As for *%DIV*, the value of this variable is larger for non-family-controlled firms.

1. Summary of the main univariate findings

On the whole, the results of the univariate tests support the notion that firms with weak governance set-ups choose larger payouts and tend to replace repurchases with dividend payments. The univariate findings support five of the six testable hypotheses of Section I.B. First, I find a negative relation between the cash flow stake of a firm's controlling shareholder and the share of the firm's dividend payout in total payout (H2). Second, the probability that a firm has a positive payout is an increasing function of the wedge between the control rights and the cash flow rights held by the firm's controlling shareholder (H3). Third, there is also a positive relation between this wedge and the fraction of dividend payout in total payout (H4). Fourth, both the probability of a positive payout and the level of total payout are lower in firms controlled by families than in other controlled firms (H5). Finally, in family-controlled firms, dividend payments have a lower weight in total payout (H6).

B. Regression analyses

1. Controlling shareholders' control rights and cash flow rights

I investigate whether the probability of a positive payout is dependent on the size of the control stake of a firm's controlling shareholder and on the difference between her control rights and her cash flow rights. More specifically, I run three Logit regressions of the binary variables *DPAYOUT*, *DDIV*, and *DREP* on either the variable *ORIGHTS* or *WEDGE*. In the regressions, I also include the dummy *FAMILY* and the other independent variables that may affect a firm's payout policy. However, all the multivariate findings for *FAMILY* are separately analyzed in the following section. Coefficient estimates, z-statistics, and marginal effects for the Logit regressions are presented in Table III. In the *DPAYOUT* regressions, the coefficients on *ORIGHTS* and *WEDGE* are not statistically significant. I conclude that neither the size of a controlling shareholder's cash flow stake nor the wedge between the controlling shareholder's control and cash flow rights affect the probability that the firm has a positive payout. In contrast, *ORIGHTS* and *WEDGE* are significant determinants of both *DDIV* and *DREP*. The coefficient on *ORIGHTS* (*WEDGE*) is negative (positive) in the *DDIV* specification and positive (negative) in the *DREP* regression.

Among the other independent variables, *OI*, *NOI*, *VAR*, and *OPT* are the most statistically significant predictors of the payout variables. Overall, as *OI*, *NOI*, and *OPT* increase, the probability of a positive payout becomes larger. This probability decreases when *VAR* increases.

I also want to test whether, among firms with positive payout, the odds of making dividend payments rather than repurchases is a function of the variables *ORIGHTS* and *WEDGE*. I consider the observations with positive payout and separate them into non-overlapping sets, one for each of the three possible payout outcomes. One set comprises firm-years with positive dividend payout and zero repurchase payout. A second set is made up of observations with zero dividend payout and positive repurchase payout. The remaining observations with positive dividend and repurchase payouts go into the final set. I estimate a Multinomial Logit regression with three possible outcomes, one for each of the three sets above. As base outcome, I choose that in which dividends are not paid and stock is repurchased. Results for the Multinomial Logit model are reported in Table IV.[20] The odds of distributing cash through dividends rather than repurchases seem to be dependent on both *ORIGHTS* and *WEDGE* in a statistically significant way. To be more specific, these odds are a negative function of *ORIGHTS* and a positive function of *WEDGE*. In terms of economic significance, a unit increase in *ORIGHTS* leads to a 6.48% reduction ($e^{-0.067} - 1 = -0.0648$) in the ratio between the probability of paying dividends without repurchasing stock (*DDIV=1* and *DREP=0*) and the probability of not paying dividends and repurchasing stock (*DDIV=0* and *DREP=1*). This ratio increases by 19.96% ($e^{0.182} - 1 = 0.1996$) when *WEDGE* is raised by one unit. I conclude that firms whose controlling shareholders own large cash flow stakes tend to prefer dividends over repurchases less than firms controlled by shareholders with small cash flow stakes. Furthermore, the preference for dividends, at the expense of repurchases, is an increasing function of the difference between the controlling shareholders' control and cash flow rights.

[20] It is not straightforward to interpret the coefficients of Multinomial Logit models because they are log-odds. A simple example should clarify how the coefficients of these models can be interpreted. Assume that a model with one base outcome and several alternative outcomes is estimated. The base outcome is called "outcome 1" and one of the alternative outcomes is "outcome 2". If, in the regression for outcome 2, the coefficient on a dependent variable is 0.5, the model predicts that a unit increase in the variable changes the ratio between the probability of outcome 2 and the probability of outcome 1 by a factor of 1.65 ($e^{0.5} = 1.65$), i.e. the ratio between the two probabilities increases by 65%.

As for other controls with statistically significant coefficients, there is a positive relation between profitability (*OI* and *NOI*) and the odds of paying dividends rather than making repurchases. Additionally, the coefficient on *VAR* is negative and significant in the model for the second alternative outcome. The findings for the dummy *FAMILY* are analyzed in the following section.

In Table V, I report the estimates for the coefficients, the t-statistics, and the marginal effects of the final set of the regressions. The dependent variables are *PAYOUT*, *DIV*, *REP*, and *%DIV*, and the main independent variables are *ORIGHTS* and *WEDGE*. Since the dependent variables are censored either at zero or at zero and 100, I use a Tobit estimation method. Findings for the Tobit regressions are reported in Panels A and B of Table V. From these regressions, I conclude that both *ORIGHTS* and *WEDGE* are not statistically significant predictors of *PAYOUT*. What this finding suggests is that the magnitude of a controlled firm's payout is not dependent on either the size of the cash flow stake of the firm's controlling shareholder or the wedge between the controlling shareholder's control and cash flow rights. Coefficients on *ORIGHTS* and *WEDGE* are insignificant in *DIV* specifications too, whereas the two regressors appear to be significantly related to *REP*. In particular, the magnitude of repurchase payout is positively associated with *ORIGHTS* and negatively related to *WEDGE*. A crucial finding in Table V is that the fraction of dividends in total payout (*%DIV*) is a negative function of the controlling shareholder's cash flow rights (*ORIGHTS*) and a positive function of the difference between the control and the cash flow rights of the controlling shareholder (*WEDGE*). Considering the reported marginal effects, I can conclude that when *ORIGHTS* (*WEDGE*) increases by one, *%DIV* changes by -0.22 (0.49).

In the Tobit regressions, coefficients on four controls are normally significant. To be specific, there are positive relations between both *OI* and *NOI* and the dependent variables. The coefficient on *VAR* is negative and statistically significant, except in the *%DIV* regressions. Finally, when *OPT* is equal to one, both *PAYOUT* and *REP* are larger whereas the weight of dividends in total payout (*%DIV*) is smaller. As usual, the results for *FAMILY* are described in the section that follows.

2. Family-controlled vs. Non-family-controlled firms

In Panels A and B of Table III, the coefficient on the dummy *FAMILY* is statistically significant only in the *DREP* model. When the value of the binary variable changes from zero to one, the probability of a firm making repurchases increases. On the other hand, the probabilities of positive total payout and dividend payout are not dependent on whether a firm is controlled by a family.

The results presented on Panels A and B of Table IV suggest that the odds of paying dividends rather than repurchasing own stock are significantly smaller in family-controlled firms. The four coefficients on *FAMILY* are always negative and statistically significant at a 1% level. Based on the coefficient estimates, when the value of *FAMILY* increases from zero to one, the ratio between the probability of the first alternative outcome (*DDIV=1* and *DREP=0*) and the probability of the base outcome (*DDIV=0* and *DREP=1*) decreases by a very large amount (e.g., $e^{-16.604}-1 = -0.99$).

Finally, in the Tobit regressions (Panels A and B of Table V) the coefficients on *FAMILY* are always statistically significant. The estimates of these regressions suggest that family-controlled firms are characterized by smaller total and dividend payouts and larger repurchase payouts. Also, in the dividend-repurchase trade-off, firms controlled by families tend to use dividends less when disbursing cash. As for the economic significance of the findings, a change in *FAMILY* from zero to one leads to a decrease in *PAYOUT* ranging from 0.266 to 0.268 standard-deviations (one standard deviation is 3.49) and to a fall in *%DIV* that ranges from 11.21 to 11.78.

3. Summary of the main multivariate findings

The multivariate tests provide an overall support for the notion that weakly governed firms use payout policy to mitigate corporate governance conflicts. Agency costs are reduced mainly by increasing the fraction of dividend payments in total payout rather than by paying out more. Four of the six testable hypotheses of Section I.B are supported by the multivariate findings. First, I report that the odds of paying dividends rather than repurchasing own stock are negatively related to the cash flow stake of the firm's controlling shareholder (H2) and positively associated with the wedge between the control and the cash

flow rights of the controlling shareholder (H4). Second, the weight of a firm's dividend payout in total payout (dividends plus repurchases) decreases when the size of the cash flow rights of the firm's controlling shareholder increases (H2) and when the difference between the controlling shareholder's control rights and cash flow rights decreases (H4). Third, the level of total payout is lower in firms controlled by families than in other controlled firms (H5). Finally, family-controlled firms are characterized both by lower ratios between dividend and total payout and by a lower likelihood of distributing cash through dividends payments rather than repurchases (H6).

IV. Robustness checks

I investigate the robustness of the multivariate findings presented in Section C.B by carrying out a series of robustness tests. The aim of these tests is to analyze whether the sign and significance of the relations between the payout variables and the main independent variables (*ORIGHTS*, *WEDGE*, and *FAMILY*) are sensitive to the presence of outliers, changes in regression specifications, variations in sample compositions, and changes in variable definitions. There are five sets of robustness checks.

First, I analyze whether the findings are driven by outliers. I winsorize all of the continuous variables at 2.5% and 97.5% and re-run the regressions. The results of the multivariate analyses on winsorized variables are qualitatively similar to those on the original variables.

Second, in the original regressions of Tables III to V, I never include the regressors *ORIGHTS* and *WEDGE* together. The latter variable is a function of the former, and the two variables are strongly negatively correlated. In the sample, the Pearson correlation coefficient between *ORIGHTS* and *WEDGE* is highly statistically significant and equal to -0.64. Hence, multicollinearity problems are likely to arise from the contemporaneous inclusion of the two variables. Nevertheless, in some strands of the existing research it is not uncommon to estimate specifications comprising, at the same time, independent variables similar to *ORIGHTS* and *WEDGE* (see, e.g., Claessens, Djankov, Fan, and Lang, 2002; Laeven and Levine, 2008). In line with this previous research, I re-estimate the regressions of Tables III to V always

including, on the right hand side, both *ORIGHTS* and *WEDGE*. Overall, the signs of the coefficients on both variables are not affected by their contemporaneous inclusion. However, the statistical significance of these coefficients is dramatically reduced. For example, both in the Multinomial Logit model and in the *%DIV* regression, the coefficient on *WEDGE* is positive and statistically significant whereas that on *ORIGHTS* is negative but statistically insignificant.

Third, I use two alternative measures of the wedge between a controlling shareholder's control and cash flow rights. First, I compute a relative measure of this wedge by taking the ratio between *WEDGE* times 100 and the size of the control rights. Second, I create a binary variable that is equal to one when *WEDGE* is positive. By replacing *WEDGE* with either of the two alternative measures, I obtain multivariate results that are qualitatively consistent with those for *WEDGE*.

Fourth, in this study I use a sample that comprises non-financial firms, including utilities. It is often argued that the financial policies of utilities differ from those of other non-financial firms because utilities are regulated firms. I investigate whether the main findings of this study are sensitive to the exclusion of these firms. I re-estimate the regressions of Tables III to V on reduced samples that exclude firm-years belonging to utilities. The changes in sample composition only produce a noteworthy variation in the findings: The coefficients on *FAMILY* become marginally statistically insignificant (p-values of 0.14 and 0.15) in the Tobit regressions.

Finally, in accordance with several previous studies (see, e.g., La Porta, Lopez-de-Silanes, and Shleifer, 1999; Claessens, Djankov, and Lang, 2000; Faccio and Lang, 2002), in this paper a firm is defined as controlled if at least one of its shareholders owns 20% or more of its control rights. I repeat the multivariate analyses assuming that control is achieved by holding either 35% or 50% of a firm's voting rights. The original findings are affected in two ways when these alternative control thresholds are chosen. First, the negative relation between *ORIGHTS* and *DPAYOUT* becomes statistically significant. Second, in the Tobit regressions, the coefficient on *FAMILY* is confirmed to be negative; however, this coefficient becomes insignificant from the statistical viewpoint.

V. Conclusion

The focus of this study is on the payout policy of firms controlled by shareholders with large control stakes. In controlled firms, the main agency conflict is that between controlling shareholders and minority shareholders. The conflict arises because controlling shareholders have an incentive to engage in self-dealing activities that benefit them at the expense of minority shareholders. According to the agency cost explanation of payout policy, in firms with weak governance set-ups, in which controlling shareholders are likely to pursue private interests, agency conflicts can be attenuated in two ways. First, large payouts can be chosen in order to reduce the stock of freely available cash that can be misused (Jensen, 1984) and possibly force firms to raise new external capital and fall under the scrutiny of the market (Easterbrook, 1984). Second, when choosing between dividend payments and stock repurchases, dividends can be preferred because, in contrast with repurchases, they carry implicit commitments to future dividend payouts (John and Knyazeva, 2006).

I test the validity of the agency explanation of payout policy in the Italian context. The sample used in the tests comprises observations for Italian non-financial controlled firms and the sample period is 1999-2004. The main finding of my tests, which supports the notion that a firm's payout policy is designed to reduce its agency problems, is that firms with weak corporate governance tend to prefer dividends over repurchases more and have larger shares of dividends in total payout than better governed counterparts. In the study, firms with weak governance and severe agency problems are defined as those that are not controlled by families and those having controlling shareholders that own small fractions of their cash flow rights and posses control rights that significantly exceed cash flow rights. An additional finding in support of the agency explanation of payout policy is that family-controlled firms pay out less than firms controlled by other types of shareholders.

I run a series of robustness checks. I report that my findings are very robust, with the exception of the negative relation between family control and the level of payout. Unfortunately, this relation turns

statistically insignificant when I exclude utilities from the sample and when I choose higher control thresholds to identify controlled firms.

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Table I

Descriptive statistics for all of the dependent and independent variables used in the study

This table reports the descriptive statistics for a set of variables for samples of firm-years (fiscal years) belonging to the period 1999-2004. Only observations for controlled firms are included in the samples. A firm is defined as controlled if at least one of the firm's shareholders holds 20% or more of the firm's control rights. The data necessary to build the variables is obtained from Thomson Datastream, Worldcope, firms' annual reports, Consob's website, the database Factiva, and the World Wide Web. For a particular firm-year, *DIV* (*REP*) is the ratio between the cash distributed by the firm in the year through dividend payments (repurchases) multiplied by 100 and the firm's market capitalization at the end of the previous year. The binary variable *DDIV* (*DREP*) is equal to one if *DIV* (*REP*) is larger than zero, otherwise it is set to zero. *PAYOUT* is the sum between *DIV* and *REP*, and the dummy *DPAYOUT* equals one when *PAYOUT* is positive. *%DIV* is computed dividing the product between *DIV* and 100 by *PAYOUT*. For each firm-year, the ownership variables are constructed based on the latest available information before the start of the fiscal year. *CRIGHTS* and *ORIGHTS* are, respectively, the fraction of the firm's control rights and the fraction of the firm's cash flow rights held by the shareholder with the largest control stake (i.e. the controlling shareholder). *WEDGE* is the difference between *CRIGHTS* and *ORIGHTS*. The binary variable *FAMILY* is set to one if the firm is controlled by a family. For a particular firm-year, the variables *OI*, *NOI*, *MB*, *TA*, and *LEV* are computed using information as of the end of the previous fiscal year. *TA* is the book value of total assets. *OI* and *NOI* are operating and non-operating income respectively scaled by *TA*. *MB* is the sum of market capitalization and total debt divided by *TA*. *LEV* is the ratio between total debt and the sum of market capitalization and total debt. *VAR* is the sample variance of the daily log-returns in the previous fiscal year. If, in the current fiscal year, there are ongoing stock option and/or stock grant plans for managers and directors, *OPT* is set to one; otherwise, it is equal to zero. For each of the variables above, the table reports the number of observations, the mean value, the median value, the standard deviation, the minimum value, the maximum value, the value of the first quartile, and the value of the third quartile.

PANEL A: Payout variables

Variable	Observations	Mean	Median	Standard deviation	Minimum	Maximum	First quartile	Third quartile
DIV	630	2.171	1.655	3.236	0	47.141	0	3.072
DDIV	630	0.717	1	-	-	-	-	-
REP	630	0.347	0	1.131	0	13.058	0	0.091
DREP	630	0.297	0	-	-	-	-	-
PAYOUT	630	2.519	1.883	3.487	0	47.141	0.018	3.413
DPAYOUT	630	0.759	1	-	-	-	-	-
%DIV	478	85.915	100	27.393	0	100	85.825	100

PANEL B: Ownership variables

Variable	Observations	Mean	Median	Standard deviation	Minimum	Maximum	First quartile	Third quartile
CRIGHTS	630	50.082	51.267	15.4145	20.321	91.143	37	59.683
ORIGHTS	630	44.195	49.875	19.834	0.347	91.143	29.776	57.57
WEDGE	630	5.887	0	10.277	-3.695	45.548	0	9.288
FAMILY	630	0.805	1	-	-	-	-	-

PANEL C: Other variables

Variable	Observations	Mean	Median	Standard deviation	Minimum	Maximum	First quartile	Third quartile
OI	630	0.015	0.027	0.134	-2.608	0.192	-0.014	0.068
NOI	630	-0.006	-0.014	0.124	-0.618	2.652	-0.04	0.009
MB	630	1.086	0.841	0.894	0.052	11.21	0.629	1.241
TA	630	13.166	12.917	1.807	9.755	18.362	11.823	14.341
LEV	630	0.334	0.301	0.236	0	0.967	0.14	0.508
VAR	630	0.0007	0.0006	0.0006	0.0001	0.0109	0.0004	0.0008
OPT	630	0.23	0	-	-	-	-	-

Table II

Univariate tests on the payout variables

In the table, the mean values and the distributions of the payout variables *PAYOUT*, *DPAYOUT*, *DIV*, *DDIV*, *REP*, *DREP*, and *%DIV* are compared across different sub-samples through standard t-tests on means and non-parametric Mann-Whitney-Wilcoxon tests on distributions. Information from Worldcope and firms' annual reports for the period 1999-2004 is used to build the payout variables. For a particular firm-year, *DIV* (*REP*) is the ratio between the cash distributed by the firm in the year through dividend payments (repurchases) multiplied by 100 and the firm's market capitalization at the end of the previous year. The binary variable *DDIV* (*DREP*) is equal to one if *DIV* (*REP*) is larger than zero, otherwise it is set to zero. *PAYOUT* is the sum between *DIV* and *REP*, and the dummy *DPAYOUT* equals one when *PAYOUT* is positive. *%DIV* is computed dividing the product between *DIV* and 100 by *PAYOUT*. In Panel A, the mean values (distributions) of the payout variables for observations related to firms with controlling shareholders holding above-median fractions of cash flow rights are compared to the mean values (distributions) of the same variables for observations of firms with controlling shareholders possessing below-median cash flow stakes. In Panel B, the mean values and the distributions of the payout variables are compared across two sub-samples: One with above-median values of the variable wedge, which is the difference between the controlling shareholder's control and cash flow rights, and one with below-median values of this variable. Finally, in Panel C the first sub-sample of observations is for family-controlled firms and the second comprises observations for firms controlled by other controlling shareholders. In each of the three panels, the last two columns report the two-sided p-values of the t-tests and of the Mann-Whitney-Wilcoxon (MWW) tests.

PANEL A: Cash flow rights

Variable	Observations	Mean for observations with cash flow rights above median	Mean for observations with cash flow rights below median	Median for observations with cash flow rights above median	Median for observations with cash flow rights below median	p-value of t-test	p-value of MWW-test
PAYOUT	630	2.482	2.555	1.679	2.125	0.7955	0.4945
DPAYOUT	630	0.772	0.745	1	1	0.4266	0.4262
DIV	630	2.022	2.318	1.485	1.835	0.252	0.2006
DDIV	630	0.711	0.723	1	1	0.7441	0.7439
REP	630	0.46	0.237	0	0	0.013	0.1125
DREP	630	0.317	0.277	0	0	0.2657	0.2654
%DIV	478	82.025	89.804	100	100	0.0018	0.0885

PANEL B: Wedge

Variable	Observations	Mean for observations with wedge above median	Mean for observations with wedge below median	Median for observations with wedge above median	Median for observations with wedge below median	p-value of t-test	p-value of MWW-test
PAYOUT	630	2.733	2.393	2.309	1.519	0.2374	0.0009
DPAYOUT	630	0.8240	0.72	1	1	0.0033	0.0034
DIV	630	2.511	1.972	2.112	1.372	0.0436	0.0001
DDIV	630	0.807	0.665	1	1	0.0001	0.0001
REP	630	0.222	0.421	0	0	0.0331	0.2815
DREP	630	0.283	0.305	0	0	0.5688	0.5684
%DIV	478	91.61	82.091	100	100	0.0002	0.0071

PANEL C: Family-controlled vs. non-family-controlled firms

Variable	Observations	Mean for observations of family-controlled firms	Mean for observations of non-family-controlled firms	Median for observations of family-controlled-firms	Median for observations of non-family-controlled firms	p-value of t-test	p-value of MWW-test
PAYOUT	630	2.274	3.499	1.69	2.382	0.0004	0.0007
DPAYOUT	630	0.742	0.83	1	1	0.0416	0.0417
DIV	630	1.881	3.368	1.489	2.313	< 0.0001	<0.0001
DDIV	630	0.69	0.83	1	1	0.0021	0.0022
REP	630	0.41	0.091	0	0	0.005	<0.0001
DREP	630	0.339	0.122	0	0	< 0.0001	<0.0001
%DIV	478	82.754	97.566	100	100	< 0.0001	< 0.0001

Table III

Logit models: The controlling shareholder's cash flow rights, the wedge between the controlling shareholder's control and cash flow rights, and family-controlled vs. non-family-controlled firms

This table reports the estimates for six Logit regressions (three in Panel A and three in Panel B) of the dependent variables *DPAYOUT*, *DDIV*, and *DREP* on several independent variables. The regressions are run on samples of firm-years (fiscal years) belonging to firms with controlling shareholders. The sample period is 1999-2004. The data necessary to build the variables is obtained from Thomson Datastream, Worldcope, firms' annual reports, Consob's website, the database Factiva, and the World Wide Web. For a particular firm-year, the binary variable *DDIV* (*DREP*) is equal to one if the firm pays dividends (repurchases stock) in the fiscal year, otherwise it is set to zero. The dummy *DPAYOUT* equals one if at least one of the variables *DDIV* and *DREP* is equal to one. *ORIGHTS* is the fraction of the firm's cash flow rights held by the controlling shareholder (i.e. the shareholder with the largest control stake above 20%). *WEDGE* is the difference between the fraction of the firm's control rights possessed by the controlling shareholder and *ORIGHTS*. The binary variable *FAMILY* is set to one if the firm is controlled by a family. These ownership variables are constructed based on the latest available information before the start of the fiscal year. For a particular firm-year, the variables *OI*, *NOI*, *MB*, *TA*, and *LEV* are computed using information as of the end of the previous fiscal year. *TA* is the book value of total assets. *OI* and *NOI* are operating and non-operating income respectively scaled by *TA*. *MB* is the sum of market capitalization and total debt divided by *TA*. *LEV* is the ratio between total debt and the sum of market capitalization and total debt. *VAR* is the sample variance of the daily log-returns in the previous fiscal year. If, in the current fiscal year, there are ongoing stock option and/or stock grant plans for managers and directors, *OPT* is set to one; otherwise, it is equal to zero. Both year and industry dummies are included among the independent variables; however, results for these dummies are not reported. For each independent variable, the table shows the coefficient estimate, the z-statistic robust to heteroscedasticity and within-firm correlation (in parentheses), and the marginal effect (in brackets). When the independent variable is a dummy, the marginal effect is for a discrete change in the variable from zero to one. The table also reports the number of observations and the value of the log-likelihood function for every regression.

PANEL A: Cash flow rights and family-controlled firms

	Dependent variables:		
	DPAYOUT	DDIV	DREP
Independent variables:			
ORIGHTS	-0.012	-0.024 **	0.011 *
	(-1.15)	(-2.25)	(1.66)
	[-0.002]	[-0.004]	[0.002]
FAMILY	0.048	-0.126	1.519 ***
	(0.1)	(-0.24)	(3.33)
	[0.006]	[-0.02]	[0.212]
OI	25.676 ***	46.679 ***	3.8 *
	(4.44)	(6.37)	(1.67)
	[3.406]	[7.675]	[0.689]
NOI	24.896 ***	45.735 ***	0.312
	(4.27)	(6.2)	(0.15)
	[3.302]	[7.52]	[0.057]
MB	0.259	0.311 *	-0.139
	(1.25)	(1.69)	(-0.83)
	[0.034]	[0.051]	[-0.025]
TA	0.075	0.008	0.179 **
	(0.7)	(0.07)	(1.98)
	[0.01]	[0.001]	[0.032]
LEV	-1.522 *	-0.364	-0.698
	(-1.88)	(-0.43)	(-0.95)
	[-0.202]	[-0.06]	[-0.127]
VAR	-1,704.415 ***	-2,189.245 ***	-1,111.196 **
	(-4.14)	(-5.65)	(-2.57)
	[-226.077]	[-360.088]	[-201.689]
OPT	1.186 ***	1.123 ***	0.855 ***
	(3.25)	(2.76)	(2.89)
	[0.127]	[0.154]	[0.172]
Observations	630	630	630
Log-likelihood value	-203.847	-179.857	-322.84

PANEL B: Wedge and family-controlled firms			
		Dependent variables:	
	DPAYOUT	DDIV	DREP
Independent variables:			
WEDGE	0.028	0.048 **	-0.023 *
	(1.46)	(2.35)	(-1.66)
	[0.004]	[0.008]	[-0.004]
FAMILY	0.029	-0.215	1.567 ***
	(0.06)	(-0.45)	(3.57)
	[0.004]	[-0.034]	[0.216]
OI	25.28 ***	45.826 ***	3.874 *
	(4.34)	(6.2)	(1.7)
	[3.334]	[7.57]	[0.702]
NOI	24.447 ***	44.961 ***	0.76
	(4.15)	(6)	(0.37)
	[3.237]	[7.427]	[0.138]
MB	0.294	0.367 *	-0.173
	(1.36)	(1.92)	(-1.01)
	[0.039]	[0.06]	[-0.031]
TA	0.07	0.012	0.186 **
	(0.71)	(0.11)	(2.02)
	[0.009]	[0.002]	[0.034]
LEV	-1.543 *	-0.464	-0.684
	(-1.93)	(-0.55)	(-0.94)
	[-0.204]	[-0.077]	[-0.124]
VAR	-1,729.587 ***	-2,271.762 ***	-1,135.742 ***
	(-4.03)	(-5.37)	(-2.63)
	[-228.998]	[-375.264]	[-205.726]
OPT	1.207 ***	1.153 ***	0.835 ***
	(3.25)	(2.78)	(2.77)
	[0.129]	[0.158]	[0.168]
Observations	630	630	630
Log-likelihood value	-203.492	-180.284	-322.904

* significant at 10%; ** significant at 5%; *** significant at 1%.

Table IV

Multinomial Logit models: The controlling shareholder's cash flow rights, the wedge between the controlling shareholder's control and cash flow rights, and family-controlled vs. non-family-controlled firms

This table shows the estimates for two Multinomial Logit models (one in Panel A and one in Panel B) with three alternative outcomes based on the variables *DDIV* and *DREP*. The models are estimated using samples of firm-years (fiscal years) belonging to firms with controlling shareholders. The sample period is 1999-2004. The data necessary to build the variables used in the Multinomial Logit models is obtained from Thomson Datastream, Worldcope, firms' annual reports, Consob's website, the database Factiva, and the World Wide Web. For a particular firm-year, the binary variable *DDIV* (*DREP*) is equal to one if the firm pays dividends (repurchases stock) in the fiscal year, otherwise it is set to zero. Observations with *DDIV=0* and *DREP=1* (i.e. with zero dividends and positive stock repurchase activity) constitute the base outcome of the model. There are two alternative outcomes: The first is *DDIV=1* and *DREP=0* and the second is *DDIV=1* and *DREP=1*. *ORIGHTS* is the fraction of the firm's cash flow rights held by the controlling shareholder (i.e. the shareholder with the largest control stake above 20%). *WEDGE* is the difference between the fraction of the firm's control rights possessed by the controlling shareholder and *ORIGHTS*. The binary variable *FAMILY* is set to one if the firm is controlled by a family. These ownership variables are constructed based on the latest available information before the start of the fiscal year. For a particular firm-year, the variables *OI*, *NOI*, *MB*, *TA*, and *LEV* are computed using information as of the end of the previous fiscal year. *TA* is the book value of total assets. *OI* and *NOI* are operating and non-operating income respectively scaled by *TA*. *MB* is the sum of market capitalization and total debt divided by *TA*. *LEV* is the ratio between total debt and the sum of market capitalization and total debt. *VAR* is the sample variance of the daily log-returns in the previous fiscal year. If, in the current fiscal year, there are ongoing stock option and/or stock grant plans for managers and directors, *OPT* is set to one; otherwise, it is equal to zero. Both year and industry dummies are included among the independent variables; however, results for these dummies are not reported. For each independent variable, the table shows the coefficient estimate and the z-statistic robust to heteroscedasticity and within-firm correlation (in parentheses). The table also reports the number of observations and the value of the log-likelihood function.

PANEL A: Cash flow rights and family-controlled firms

	Base outcome: DDIV=0 and DREP=1	
	Alternative outcomes:	
	DDIV=1 and DREP=0	DDIV=1 and DREP=1
Independent variables:		
ORIGHTS	-0.067 ***	-0.056 **
	(-2.82)	(-2.39)
FAMILY	-16.604 ***	-15.054 ***
	(-6.45)	(-6.08)
OI	58.165 ***	60.157 ***
	(4.76)	(5.07)
NOI	58.412 ***	57.599 ***
	(5.46)	(5.44)
MB	0.163	0.075
	(0.32)	(0.14)
TA	-0.297	-0.141
	(-0.9)	(-0.41)
LEV	0.846	0.636
	(0.49)	(0.36)
VAR	-401.673	-1,641.745 *
	(-0.58)	(-1.89)
OPT	-0.411	0.426
	(-0.44)	(0.46)
Observations	478	478
Log-likelihood value	-297.289	-297.289

PANEL B: Wedge and family-controlled firms		
	Base outcome: DDIV=0 and DREP=1	
	Alternative outcomes:	
	DDIV=1 and DREP=0	DDIV=1 and DREP=1
Independent variables:		
WEDGE	0.182 ***	0.154 **
	(2.82)	(2.43)
FAMILY	-17.649 ***	-15.964 ***
	(-9.76)	(-11.52)
OI	62.299 ***	64.92 ***
	(4.14)	(4.39)
NOI	61.023 ***	61.231 ***
	(4.29)	(4.27)
MB	0.275	0.163
	(0.51)	(0.29)
TA	-0.473	-0.308
	(-1.64)	(-1.04)
LEV	1.891	1.917
	(1.15)	(1.12)
VAR	-481.23	-1,660.812 *
	(-0.63)	(-1.81)
OPT	-0.492	0.326
	(-0.51)	(0.35)
Observations	478	478
Log-likelihood value	-292.073	-292.073

* significant at 10%; ** significant at 5%; *** significant at 1%.

Table V

Tobit models: The controlling shareholder's cash flow rights, the wedge between the controlling shareholder's control and cash flow rights, and family-controlled vs. non-family-controlled firms

This table reports the estimates for eight Tobit regressions (four in Panel A and four in Panel B) of the dependent variables *PAYOUT*, *DIV*, *REP*, and *%DIV* on several independent variables. The regressions are run on samples of firm-years (fiscal years) belonging to firms with controlling shareholders. The sample period is 1999-2004. The data necessary to build the variables is obtained from Thomson Datastream, Worldcope, firms' annual reports, Consob's website, the database Factiva, and the World Wide Web. For a particular firm-year, *DIV* (*REP*) is the ratio between the cash distributed by the firm in the year through dividend payments (repurchases) multiplied by 100 and the firm's market capitalization at the end of the previous year. *PAYOUT* is the sum between *DIV* and *REP*, and *%DIV* is computed dividing the product between *DIV* and 100 by *PAYOUT*. *ORIGHTS* is the fraction of the firm's cash flow rights held by the controlling shareholder (i.e. the shareholder with the largest control stake above 20%). *WEDGE* is the difference between the fraction of the firm's control rights possessed by the controlling shareholder and *ORIGHTS*. The binary variable *FAMILY* is set to one if the firm is controlled by a family. These ownership variables are constructed based on the latest available information before the start of the fiscal year. For a particular firm-year, the variables *OI*, *NOI*, *MB*, *TA*, and *LEV* are computed using information as of the end of the previous fiscal year. *TA* is the book value of total assets. *OI* and *NOI* are operating and non-operating income respectively scaled by *TA*. *MB* is the sum of market capitalization and total debt divided by *TA*. *LEV* is the ratio between total debt and the sum of market capitalization and total debt. *VAR* is the sample variance of the daily log-returns in the previous fiscal year. If, in the current fiscal year, there are ongoing stock option and/or stock grant plans for managers and directors, *OPT* is set to one; otherwise, it is equal to zero. Both year and industry dummies are included among the independent variables; however, results for these dummies are not reported. For each independent variable, the table shows the coefficient estimate, the t-statistic robust to heteroscedasticity and within-firm correlation (in parentheses), and the marginal effect (in brackets). When the independent variable is a dummy, the marginal effect is for a discrete change in the variable from zero to one. The table also reports the number of observations and the value of the log-likelihood function for every regression.

PANEL A: Cash flow rights and family-controlled firms

	Dependent variables:			
	PAYOUT	DIV	REP	%DIV
Independent variables:				
ORIGHTS	-0.0008	-0.011	0.02 **	-0.649 ***
	(-0.08)	(-1.22)	(2.52)	(-2.99)
	[-0.005]	[-0.007]	[0.004]	[-0.22]
FAMILY	-1.351 **	-1.65 **	1.592 ***	-41.573 ***
	(-2.13)	(-2.54)	(3.11)	(-3.06)
	[-0.937]	[-1.065]	[0.263]	[-11.209]
OI	25.28 ***	29.858 ***	6.269 *	399.68 ***
	(5.38)	(5.25)	(1.87)	(2.72)
	[16.533]	[17.702]	[1.366]	[135.219]
NOI	22.706 ***	27.704 ***	0.612	431.054 ***
	(4.58)	(4.65)	(0.23)	(2.68)
	[14.849]	[16.425]	[0.133]	[145.833]
MB	-0.468	-0.416	-0.27	0.151
	(-1.62)	(-1.43)	(-1.41)	(0.04)
	[-0.306]	[-0.247]	[-0.059]	[0.051]
TA	0.127	0.202	0.04	-1.749
	(0.71)	(1.15)	(0.34)	(-0.58)
	[0.083]	[0.12]	[0.009]	[-0.592]
LEV	-1.219	-0.7	-0.649	16.006
	(-0.93)	(-0.56)	(-0.7)	(0.66)
	[-0.797]	[-0.415]	[-0.141]	[5.415]
VAR	-3,090.729 ***	-3,117.176 ***	-1,368.058 **	10.410.52
	(-4.15)	(-3.72)	(-2.47)	(0.73)
	[-2,021.245]	[-1,848.096]	[-298.156]	[3,522.067]
OPT	0.977 *	0.525	1.212 ***	-22.539 **
	(1.84)	(1.01)	(2.79)	(-2.57)
	[0.664]	[0.319]	[0.321]	[-8.329]
Observations	630	630	630	478
Log-likelihood value	-1,386.997	-1,031.369	-582.682	-1,043.682

PANEL B: Wedge and family-controlled firms

	Dependent variables:			
	PAYOUT	DIV	REP	%DIV
Independent variables:				
WEDGE	0.009	0.026	-0.039 ***	1.459 ***
	(0.54)	(1.61)	(-2.71)	(3.6)
	[0.006]	[0.015]	[-0.008]	[0.487]
FAMILY	-1.342 **	-1.666 **	1.723 ***	-45.346 ***
	(-2.12)	(-2.56)	(3.46)	(-3.63)
	[-0.929]	[-1.075]	[0.278]	[-11.779]
OI	25.274 ***	29.572 ***	6.349 *	398.956 ***
	(5.4)	(5.24)	(1.85)	(2.7)
	[16.521]	[17.512]	[1.376]	[133.207]
NOI	22.695 **	27.444 ***	1.435	422.441 ***
	(4.57)	(4.63)	(0.52)	(2.74)
	[14.835]	[16.252]	[0.311]	[141.048]
MB	-0.458	-0.384	-0.334	1.611
	(-1.59)	(-1.35)	(-1.64)	(0.4)
	[-0.299]	[-0.227]	[-0.072]	[0.538]
TA	0.121	0.203	0.055	-2.321
	(0.69)	(1.2)	(0.44)	(-0.77)
	[0.079]	[0.12]	[0.012]	[-0.775]
LEV	-1.194	-0.722	-0.646	14.129
	(-0.91)	(-0.59)	(-0.69)	(0.61)
	[-0.78]	[-0.428]	[-0.14]	[4.717]
VAR	-3,105.511 ***	-3,144.974 ***	-1,412.046 **	10,166.54
	(-4.16)	(-3.74)	(-2.6)	(0.72)
	[-2,030.02]	[-1,862.401]	[-306.058]	[3,394.49]
OPT	0.962 *	0.543	1.171 ***	-21.437 **
	(1.81)	(1.03)	(2.73)	(-2.4)
	[0.653]	[0.33]	[0.307]	[-7.799]
Observations	630	630	630	478
Log-likelihood value	-1,386.847	-1,300.845	-582.926	-1,041.461

* significant at 10%; ** significant at 5%; *** significant at 1%.