ecgi

Am I right or am I right? Dividend privileges and the value of voting rights.

Marco Bigelli
University of Bologna and ECGI

Ettore Croci
University of Milan - Bicocca

ECGI Working Paper Series in Finance

Am I right or am I right?
Dividend privileges and the value of voting rights.

Marco Bigelli
Ettore Croci

Abstract

The value of a right should not be lower than zero. The present paper overcomes some possible measurement errors and proposes a new measure of the voting right, the Relative Vote Segment, which incorporates dividend privileges into the inferior class of shares, when granted. Results from Italian non-voting shares listed in the 1999-2008 period show that our more accurate measure reports an average voting right equal to +45.58%, while the standard relative price difference and the Nenova (2003) measure greatly underestimate its value and report average values equal to +20.35% and +1.30%, respectively. Our methodology reports almost no negative values, while traditional measures report almost 25% of negative values. Though a more correct measure of the voting right is essential to estimate its average value and make unbiased cross-country comparisons, the determinants of the voting rights are also well captured by the relative price difference, once the dividend yield differences are controlled for.

Keywords: non-voting shares; voting premium; dual-class share firms; Italy

JEL Classifications: G34

Marco Bigelli*
University of Bologna
Via Capo di Lucca 34
40124 Bologna
Italy
phone: +39-051-2098060, fax: +39-051- 6390612
e-mail: Marco.bigelli@unibo.it

Ettore Croci
University of Milan - Bicocca
Via R. Bicocca 8
20126 Milan
Italy
e-mail: ettore.croci@unimib.it

*Corresponding Author

1. Introduction

A voting right, being a right and not an obligation, must have a non-negative value and should never be lower than zero. Negative values signal that the measure of the voting right is not properly made or that it is affected by some other factors. Since estimates of voting rights are mostly based on the price difference between two classes of shares with different voting rights, existing literature has tried to explain which other determinants may also affect the price difference and even determine a lower value for the superior voting shares. A higher liquidity of the inferior voting shares seems to play a major role in northern European countries and certainly in Denmark (Neumann, 2003). In Norway, negative voting premiums have also been explained by restrictions on foreign ownership of voting shares (Ødegaard, 2007). A mandatory bid rule volontarily extended to non-voting shares by the companies' charters is associated with a lower and negative voting premium in Brasil (Carvalhal da Silva and Subrahmanyam, 2007), while a law that obliges bidders to offer to the inferior voting shares the same relative premium offered to the superior voting shares seems to play a role in Denmark (Bechmann and Raaballe, 2003). Existing literature has not yet considered dividend privileges to inferior voting shares as a major factor in determining a severe underestimation of the voting premiums and negative values. [1] However, relevant dividend privileges are granted to non-voting or inferior voting shares in many countries and firms around the world (as documented in this paper) and they have almost never been incorporated into the estimate of the voting right.

The existing literature has determined the value of a voting right as: the plain relative price difference or price ratio (Lease et al., 1984, Horner, 1988, Loderer and Jacobs, 1995, Nicodano, 1998, Doidge, 2004, Ødegaard, 2007, Caprio and Croci, 2008); the relative price difference or price ratio adjusted for the different voting ratio or the different par value of the shares (Levy, 1982,

---

[1] Probably because most of the northern european countries where negative premiums are observed do not offer dividend privileges to the inferior voting shares.

Megginson, 1990, Zingales, 1995, Gardiol et al., 1997, Rydqvist, 1996); the relative price difference in tender offers with differentiated bids (Bergstrom and Rydqvist, 1992, Smith and Amoako-Adu, 1995); the fraction of half of the total price differences on the firm's equity (Nenova, 2003); the premium paid in control-block transactions (Barclay and Holderness, 1989, Dick and Zingales, 2004); the internally negotiated value in dual-class unifications (Hauser and Lauterbach, 2004); the difference between a stock and the corresponding synthetic stock obtained from the put-call parity relation (Kalay et al., 2011). Though Zingales (1994) highlights that the voting premium would be underestimated if dividend privileges were ignored, and Cox and Roden (2002) show that inferior voting shares entitled to more dividends are characterized by lower voting premiums, dividend privileges granted to non-voting or inferior voting shares are often overlooked in estimates of voting rights. To the best of our knowledge, only Chung and Kim (1999) incorporate the simple dividend difference that characterizes all Korean dual-class shares (1% of par value) into their empirical estimate of the voting premium.

Despite this relative lack of attention to dividend privileges, they matter. Even more importantly, their effect on the voting premium differs across countries: while in countries like Sweden, Norway, Switzerland, and the US, dividend privileges are non-existent or are hardly relevant, in others like Italy, Germany, and France, their importance is extremely high. The varying importance of dividend privileges can lead to wrong inferences in cross-country comparisons if the adopted measure of voting premium does not account for their effect. To overcome this problem, following Manne (1964), we propose a new measure, the Relative Vote Segment (RVS), which explicitly includes dividend privileges to non-voting shares into the computation of the value of the voting right. The Relative Vote Segment is the difference between the actual price of the voting share and the value of its investment segment, given by the price of the non-voting share

net of the present value of the dividend privileges. The Relative Vote Segment is then scaled on the price of the non-voting share (in order to be comparable with the relative price difference).

We test our new measure against the standard relative price difference and the Nenova (2003) measure (two well-known proxies of the value of a voting right that do not explicitly incorporate dividend privileges) to quantify the severity of the error we would commit using an inappropriate measure of the voting premium. We use a sample of Italian dual-class shares companies over the 1999-2008 period to carry out this test.

Italy, like some other countries, is characterized by relevant dividend privileges to all non-voting shares and is a perfect setting to estimate the severity of the impact of dividend exclusion in the estimate of the voting right. We compare these measures on a full sample and on a clean sample from which we have progressively removed non-voting shares that are: partially convertible; highly illiquid; announced to be converted into voting shares; under a tender offer; belonging to distressed firms. Our results show that both the relative price difference and the Nenova measures systematically underestimate the true value of voting rights and report many negative values. On the full sample of Italian non-voting shares, the average value of the voting premium is equal to +20.35% using the relative price difference and only to +1.30% with the Nenova measure. About 25% of the voting rights report negative values and the Nenova measure even gives rise to some negative yearly averages (-19.38% in 2008). On the contrary, our proposed Relative Vote Segment measure reports a more accurate estimate of the average voting premium equal to +35.62% for the whole period and shows a negligible number of negative values. When we remove the observations affected by measurement errors from the sample, the average value of the Relative Vote Segment further increases to +45.58% for the whole period. Moreover, almost all negative values disappear and the few remaining values have firm-specific reasons for explaining the anomaly. Our multivariate analysis further supports the superiority of the Relative

Vote Segment measure over the Nenova one in identifying the determinants of the voting premium. On the other hand, the Relative Vote Segment and the relative price difference measures seem to have similar determinants, once the dividend yield differential is controlled for. Significantly higher voting premiums are determined by higher fractions of non-voting shares, higher dividend privileges, market prices closer to the par value of the shares, and smaller firms.

We conclude that a correct measure of the voting right should consider dividend privileges to non voting or inferior-voting shares (when granted) and exclude from the sample those observations that can lead to measurement errors. Otherwise, in those countries where dividend privileges are relevant, the average value of the voting right would be greatly underestimated and could not be used as a proxy for the country's investor protection and corporate governance efficiency. Besides, since the average size and value of dividend privileges greatly vary across countries, the size of such underestimations would also vary at international level and cross-country estimates would be greatly distorted.

The present paper offers several contributions to the literature on the voting premium. Firstly, we discuss dividend privileges granted to dual class shares around the world in order to indentify which countries should report higher estimates of the actual voting premium if dividend privileges were included. Secondly, we propose a new measure of the voting right, the Relative Vote Segment, which takes dividend privileges into considerations. Thirdly, we propose a series of screens to avoid measurement errors in the sample construction. Finally, we test the Relative Vote Segment and the other measures of voting premiums on a sample of Italian dual class shares in the 1999-2008 period and we find that the Relative Vote Segment is much more accurate than the traditional measures.

The remainder of this paper is organized as follows. The next section briefly summarizes the empirical literature on the voting premium. Section 3 shows how the inclusion of dividend

4

privileges should affect cross-country comparisons of the voting premium. Section 4 offers a quick overview of the institutional setting of the Italian non-voting shares. Section 5 explains the methodology and the samples' construction. Section 6 shows the results of the empirical analysis. Section 7 reports the major conclusions.

2. Review of the literature on the estimate of the voting right

Existing literature has estimated the value of a voting right in several ways. The most common one is based on either the relative price difference or on the price ratio of the two classes of shares (Lease et al., 1984, Horner, 1988, Loderer and Jacobs, 1995, Nicodano, 1998, Doidge, 2004, Ødegaard, 2007, Caprio and Croci, 2008) and reports a positive value whenever the class with the voting right trades at a premium. However, since some countries allow dual cass shares to carry a different number of votes (tipically 10 to 1) or to have a different par value for the same voting power (also typically 10 to 1), the value of a voting right based on the relative price difference or the price ratio has been adjusted in order to consider the different voting ratio or the different par value of the shares (Levy, 1982, Megginson, 1990, Zingales (1995), Gardiol et al., 1997, Rydqvist, 1996). An alternative approach is to estimate the value of voting rights when a price is explicitly paid for them, as in takeovers with differentiated bids for the two classes of shares (Bergstrom and Rydqvist, 1992, Smith and Amoako-Adu, 1995). A well-cited cross-country study (Nenova, 2003) adopts a measure where the sum of half of the values of all voting rights (assumed to give control) is expressed as a fraction of the firm's equity value, though the value of voting rights is still based on the price difference adjusted for different voting power, when needed. Since voting rights are valuable if control is valuable, some researchers have determined their implicit value from the premium paid in control block transactions (Barclay and Holderness, 1989, Dyck and Zingales, 2004). A different methodology, though not replicable in other institutional settings,

derives the value of voting rights from the compensation granted to superior voting shareholder in the unification process of Israeli dual-class shares (Hauser and Lauterbach, 2004). Finally, a recent paper has proposed a new original methodology that derives the value of a voting right from the difference between the value of a stock and the value of the corresponding synthetic stock, which has no right to vote and is obtained with the put-call parity relation (Kalay et al., 2011).

Prices of shares with equal cash flow rights but different voting power may also differ for other factors rather than the voting right such as, for example, a different tax treatment, a different liquidity (Neumann, 2003, Smith and Amoako-Adu, 1995) and transferability restrictions to foreign investors (Loderer and Jacobs, 1995, Gardiol et al., 1997, Ødegaard, 2007). While all these factors have been addressed and accounted for, dividend differences have received little attention and have been rarely incorporated into the empirical estimate of the voting right (though often included in the multivariate analysis). To the best of our knowledge, only Chung and Kim (1999) have incorporated the simple and homogeneous dividend difference that characterizes Korean dual-class shares (1% of par value) into the empirical estimate of Korean voting premiums. However, Zingales (1994) highlights that the voting premium is underestimated if dividend-privileges are ignored, while Cox and Roden (2002) report lower voting premium for US low-vote shares entitled to more dividends.

3. Dividend privileges in other countries and the impact on the estimate of the voting premium

Overall, the existing literature does not include dividend privileges in the estimate of the voting right. For this reason, the values of the voting rights are greatly underestimated in countries where dividend privileges are relevant and granted to all non-voting or inferior voting shares, while they are correctly computed where dual class shares enjoy the same dividend payments. Since our new proposed measure incorporates the dividend privileges granted to the non-voting shares, in this

section we report an international survey of the dividend privileges granted to the inferior class of shares and how their inclusion should affect the voting premiums in a cross-country comparison.

Dividend privileges are not common in Scandinavia. In fact, there are no dividend privileges to the inferior voting shares both in Sweden (Bergstrom and Rydqvist, 1990, Cronqvist and Nilsson, 2003, Holmen and Hogfeldt, 2004) and in Denmark (Neumman, 2003, Bechmann and Raaballe, 2003). In Norway, the three equity classes (A, B and F shares) also have identical cash flow rights, with equal claims to future dividends (Ødegaard, 2007). In Finland, dividend privileges to the non-voting or to the inferior voting shares can be set by the company charter and few companies pay higher dividends to the inferior voting shares (Chapter 3, Section 4 of the Companies Act 624/2006; Kaisanlahti, 2002). In Switzerland, corporations issue three different share classes: bearer, registered and nonvoting shares (participation certificates). Each voting share (i.e. bearer and registered shares) has one vote, but its face value may differ. However, dividends are the same fraction of the par value for all share types (Schmid, 2009). In the UK, the few dual class firms having multiple and limited voting shares assign the same dividend to the two classes (Megginson, 1990).

On the other hand, the lack of voting rights of the non-voting shares is compensated with mandatory dividend payments and dividend privileges in other European countries (La Porta et al., 1998). In Italy, a minimum dividend and an extra dividend payment to non-voting shares (initially set by law) are determined by the firms' charters and respectively average 6.6% and 3% of the par value of the shares. In Germany, non-voting shares are entitled by the company charter to a minimum dividend, generally between 2% and 10% of the face value (Dittmann and Ulbricht, 2008). If the minimum dividend is not paid for two consecutive years, the non-voting share receives a temporary voting right until the arrears are fully paid. In France, non-voting shares (*action à dividende prioritaire sans droit de vote*, ADP) are entitled to a dividend that cannot be

7

inferior to the dividend of the voting shares or to the 7.5% of the face value (Muus, 1998). In Spain non-voting shares are entitled to a minimum dividend set by the company charter to a level that cannot be below the 5% of the issue price paid for the shares (art. 91 Royal Decree 1564/1989). Any unpaid minimum dividend must be distributed within the following five years. If greater than the minimum amount, the dividend paid to the non-voting shares must be equal to the dividend paid to voting shares. In Greece, non-voting shares are entitled to the same dividend as ordinary shares but also to a preferential minimum dividend equal to 6-8% of their par value (Milonas, 2000). In Russia, the law initially assigned non-voting shares a minimum dividend equal to 10% of the firm's annual profits. After 1996, dividend privileges were set by the companies' charters. Due to the previous law privileges, 93% of non-voting shares are still granted the 10% minimum dividend, which corresponds, on average, to a greater dividend equal to about 6% of the non-voting share market price (Muravyev, 2007).

In the US, according to a recent research (Gompers et al., 2010), dual-class firms are about 6% of listed firms (362 out of 6,345), most have only the inferior class traded (278 cases out of 362) and the voting arrangement, set by the company charter, often assigns one vote to the inferior voting share and 10 votes to the superior one (129 out of 362). As far as dividend arrangements are concerned, the inferior class receives the same dividend in 311 cases (out of 362), is entitled to a higher dividend in 46 cases (about 13%) and to a lower dividend in the remaining 5 cases. In Canada, Smith and Amoako Adu (1995) report that about 44% of dual class shares in their 1981-1992 sample were granted a dividend privilege to the inferior voting share. Since such privileges could be a higher absolute amount per share or a higher proportionate distribution or a priority payment, only 10 firms out of 81 (about 12%) were paying more dividends to inferior voting shares in 1992, and such dividend differences were often negligible.

In Brazil, where 85% of listed shares have a dual class equity structure and many show a negative voting premium, Carvalhal da Silva and Subrahmanyam (2007) report that, after the 2001 reform, companies must grant one of the following rights to non-voting shares as a condition for being traded on the stock market: a priority minimum dividend of 3% of the book value per share; dividends 10% higher than those assigned to voting shares; a mandatory bid rule for at least 80% of the control block price. Since the authors report that 46 firms out of 106 chose the third option, the remaining 60 firms (56% of the total) should have chosen to grant either a priority dividend or an extra dividend. In Israel, superior and inferior voting shares are entitled to the same dividend per share (Hauser and Lauterbach, 2004).[2] In Australia, Taylor and Whittred (1998) indicate that firms with dual class shares are characterized by having a superior voting class either entitled to a fixed percentage of total votes or to multiple voting rights for their shares (typically between 2-5 times an inferior voting one). However, 75% of dual-class shares receive the same dividend and only 25% of the superior voting shares receive a lower dividend or, more commonly, are not entitled to any dividend at all. In Korea non-voting shares receive an extra dividend equal to 1% of par value whenever voting shareholders get a dividend (Chung and Kim, 1999).

From this review of dividend privileges granted (or denied) to non-voting or inferior voting shares around the world (summarized in Table 1) it should be clear that the impact of including dividend privileges into the estimates of the voting premiums should have a different impact from one country to another. The average voting premium for the country would be remarkably greater in Italy, Germany and Russia, significantly greater in France, Spain, Greece and Korea, slightly greater in Finland, Brazil and Australia, almost unaffected in the US and Canada and exactly the same in those countries with no dividend differences for dual class shares, i.e. Sweden, Denmark, Norway, Israel and Switzerland. The non inclusion of dividend privileges may therefore distort

---

[2] A superior share in Israel gives the holder a vote. Usually, five inferior shares give the holder a vote.

cross-country comparisons of the value of voting rights, especially if they are used as proxies for the private benefits of control. The Relative Vote Segment measure proposed in this paper can solve this problem, allowing more meaningful cross-country comparisons.

[Please insert Table 1 about here]

4. The Italian case: Institutional Background

The two most common classes of shares issued by Italian listed companies are voting shares (*azioni ordinarie*) and non-voting shares (*azioni di risparmio*), which can be issued up to fifty percent of the equity capital.[3] The two classes of shares have the same par value but differ in voting rights and dividend privileges. In fact, only voting shares have the right to vote in the general and extraordinary shareholder meetings and carry one vote per share. As in other countries, the lack of voting rights of the Italian non-voting shares is compensated with mandatory dividend payments and dividend privileges. Since the 1998 corporate governance reform (Law 58/1998), which greatly increased investors' protection,[4] these privileges have been set by the company's charter, though most firms still keep the original privileges set by law (Law 216/1974), which are the following:

1. a minimum yearly dividend equal to (at least) five percent of the share's par value is granted to non-voting shares before any dividend can be paid to voting shares;

2. when dividends are also paid to voting shares, the dividend to the non-voting share has to be greater than that to the voting share by an amount equal to (at least) two percent of the par value;

3. in case dividends are not paid because of accounting losses, when dividends are paid again,

---

[3] A third type of shares are the so called "*azioni privilegiate*", a class of shares entitled to vote only in the extraordinary shareholders meetings. Since there are only two listed firms using this third class of shares we did not considered it in the analysis, similarly with Zingales (1994).

[4] The anti-director rights index elaborated by La Porta et al. (1998) reports a value equal to 1 in 1997, before the reform, but it raises to 4 in 2005 (Spamann, 2010).

non-voting shares have the right to receive up to (at least) two past unpaid minimum dividends in addition to the dividend of the current year;

4. when accounting losses reduce the company's equity, non-voting equity is reduced only after all voting equity is cancelled out;

5. in the case of bankruptcy, non-voting shares have a prior claim on the company's assets.

While all existing non-voting shares enjoy the last two privileges, the first three privileges have often been set at levels higher than the minimum levels originally required by law. These privileges are always referred on a yearly basis as Italian firms, differently from US ones, typically pay dividends once a year. Their combination assures that Italian non-voting shares receive a higher dividend than the one paid to voting shares whenever a dividend is paid (Bigelli and Mengoli, 2011).

5. Methodology and sample description

5.1 Measures of the voting premium

Our sample consists of all dual-class firms having both voting and non-voting shares listed on the Italian Stock Exchange in the 1999-2008 period. The full sample is made up of 430 year-observations, composed of a decreasing number of dual-class firms which passed from 72 firms in 1999 to 28 at the end of 2008. Using market prices at the end of the year, for each sample year and each firm we compute three measures of the voting premium: the Relative Price Difference, the Nenova (2003) measure (henceforth Nenova) and the Relative Vote Segment.

The Relative Price Difference (RPD) is simply obtained as the ratio of the difference between the price of a voting share (P_v) and the price of a non-voting share (P_{nv}) over the price of the non-voting share, that is:

$$Relative\ Price\ Difference = \frac{(P_v - P_{nv})}{P_{nv}}$$

The second measure of the voting premium is the one suggested by Nenova (2003) and applied to the Italian case where the two classes of shares differ only by one vote. The Nenova measure is represented by the ratio between the sum of half of the total price differences between the voting and the non-voting shares (*Total PDs/2*) over the firm's total equity capitalization (*Mkt Cap*), that is:

$$NENOVA = \frac{Total\ PDs/2}{Mkt\ Cap}$$

Finally, the Relative Vote Segment (RVS) is our measure aimed at including the value of the specific different privileges granted to non-voting shares. Following Manne (1964), we split the value of a voting share into two components: a vote segment and an investment segment, where the latter is represented by the present value of dividends to voting shares and the first one is the remaining part of the voting share stock price. The Relative Vote Segment measure (*RVS*) is then obtained through the ratio of the vote segment ($Vote_{segm}$) over the price of the non-voting share (P_{nv}), as follows:

$$Relative\ Vote\ Segment = \frac{Vote_{segm}}{P_{nv}}$$

where the $Vote_{segm}$ is obtained as the difference between the price of the voting share (P_v) and its investment segment (Inv_{segm}), that is:

$$Vote_{segm} = \left(P_v - Inv_{segm} \right)$$

The investment segment of a voting share cannot be estimated with the price of the non-voting share, as the latter is entitled to more dividends. Once the present value of dividend privileges is determined, the investment segment of the voting share (Inv_{segm}) can therefore be derived from the difference between the price of a non-voting share (P_{nv}) and the present value of the dividend privileges granted to non-voting shares ($PV_{\Delta div}$):

$$Inv_{segm} = \left(P_{nv} - PV_{\Delta div} \right)$$

We obtain the historical dividends and the specific dividend privileges granted to the Italian non-voting shares from "*Indici e dati*", a yearly publication by *R&S Mediobanca*. This publication includes a special section on the characteristics of the non-voting shares and it reports detailed information on all their privileges. We assume that at the end of the fiscal year (December) market prices incorporate expectations on the dividends relative to the year ending, which are paid a few months later.[5] We also assume that future earnings will be high enough to pay dividends to both classes of shares. Such an assumption is the most conservative because the dividend difference between the two classes of shares will be limited to the minimum extra-dividend payment granted by the companies' charters. However, by also taking the next dividend difference into consideration, we do also consider the other dividend privileges for the coming year, i.e. the minimum dividend and the arrears for unpaid minimum dividends. The first privilege can be relevant in firms reporting low earnings while the latter in firms coming out from an unprofitable

---

[5] Since firms have already published three quarterly reports and anticipated the yearly results and payout policy, we believe our assumption is reasonable.

period. While Chung and Kim (1999) take into consideration only the same extra-dividend common to all Korean non-voting shares, our measure incorporates for each single firm: 1) the extra-dividend granted to non-voting share; 2) the priority minimum dividend; and 3) the minimum dividend arrears. For each year and firm we therefore compute the present value of the dividend privileges to a non-voting share in the following way:

$$PV_{\Delta div} = \frac{1}{(1 + K_e)} \cdot \left[(Div_{1nv} - Div_{1v}) + \frac{Extra\ Div_{nv}}{K_e} \right]$$

where:

$PV_{\Delta div}$ is the present value of dividend privileges granted to the non-voting share; [6]

K_e is the cost of equity for the non-voting share;

$Div_{1nv} - Div_{1v}$ is the next dividend difference paid to non-voting share and referred to the past fiscal year, which can reflect all three dividend privileges (the extra dividend, the priority minimum dividend and the arrears);

$Extra\ Div_{nv}$ is the perpetual extra-dividend granted to the non-voting share.

The cost of equity has been estimated with a standard CAPM approach, where the risk-free rate is the gross yield on the 10-year Italian Treasury bond at the end of the measurement year, and the non-voting shares' beta is estimated from weekly returns in the year before the measurement day. Following Dimson et al. (2002), the market risk premium (geometric average) is set equal to 4.3%.

5.2 Sample selection to avoid measurement errors

---

[6] Though differences would be negligible, we use fractional discounting since the first following dividend is typically paid at the end of May, five months after market prices are measured (at the end of December).

By incorporating the value of dividend privileges to non-voting shares, the Relative Vote Segment measure should report a more accurate estimate of the voting premium, which would otherwise be systematically underestimated. However, the estimate of the voting right can also be greatly distorted by some other factors which are not controlled for by the existing literature. In fact, we believe that the observed sample should not include non-voting shares which are partially convertible; so illiquid that they have unreliable prices; announced to be converted into voting shares; under a tender offer; belonging to severely distressed companies. We hereby offer more explanations on which kind of non-voting shares we progressively exclude from our sample.

Convertible or partially convertible non-voting shares.

Some Italian non-voting shares are always convertible into voting shares on a periodical basis and usually identified as such by the financial databases, so that they are automatically excluded from any sample aimed at determining the voting premium. However, some non-voting shares, labeled as non-voting shares by financial databases and the financial press, are actually convertible into voting shares in a 1:1 ratio only for one day or for a short period in the future.[7] The conversion option obviously makes a non-voting share look like a future voting share entitled to higher dividends until it is not converted. The market prices of such non-voting shares are therefore usually higher than the respective voting shares and must obviously be excluded from the observed sample in order not to report negative values of the voting premium. From the full

---

[7] For example, Banca Carige non-voting shares are labeled by both the Sole 24 Ore financial newspaper and the Datastream database as simple non-voting shares (respectively with the "R" and "RSP" codes which stand for "Risparmio", i.e. non-voting share), while Mediobanca's "Indici e dati" indicates that they are convertible into voting shares (since November 2007) and their conversion option is expressly indicated also on the company investor relation website (http://www.gruppocarige.it/grp/gruppo/html/ita/investor_relations/azioni_carige.htm). At the end of 2008, Banca Carige (convertible) non-voting shares were traded at 2.015, well above the voting shares' price, equal to 1.737. An estimate of the voting premium based on the relative price differential would have obviously reported a negative value (-13.80%) which had nothing to do with the estimate of the true value of the voting right.

sample of 430 firm-year observations, we therefore drop 44 firm-year observations and we are left with 386 observations (*Sample 1*).

Non-voting shares with unreliable market prices due to excess illiquidity.

As documented by Bigelli et al. (2007), many Italian dual-class shares went into a unification process after the 1998 corporate governance reform, and almost half of them were proposed on a voluntary basis, where only a small fraction of non-voting shareholders decided to keep their shares. As a consequence, voluntary unifications greatly reduced the number of outstanding non-voting shares and their liquidity. In some cases, post-unification extreme illiquidity made some non-voting shares trade well above the voting shares' stock prices. In May 2002 eight non-voting shares (out of 47) exacerbated this problem and traded at a premium between 32% and 761% compared to the corresponding voting shares. The Italian Stock Exchange declared that those prices had no economic meaning and decided to suspend trading for the two non-voting shares with the most unreasonable prices (5 and 7 times the respective voting shares) and forced the others to switch from continuous trading into a single daily auction (where only orders with a price limit were allowed) in order to improve their liquidity. If these shares were kept in the general sample they would originate relevant negative estimates of the voting rights (up to -88% for the relative price difference) which would significantly drive downward the average estimate, especially for some sample-years. We therefore looked at the liquidity characteristics of those shares targeted by the exchange restrictions. We found that seven of those eight non-voting shares were not traded in at least 20% of the 2002 trading days and, when traded, the average value of the daily trading was below €50,000. We therefore select these two illiquidity criteria to identify non-voting shares whose stock price could be affected by similar illiquidity conditions. Most of the non-voting shares satisfying such illiquidity criteria were the same firms identified by

the Italian Stock Exchange in 2002, but some other firms also met the criteria in some sample-years. From *Sample 1*, we therefore drop 66 firm-year observations and we are left with 322 observations (*Sample 2*).

Non-voting shares announced to be unified into voting shares.

Dual class unifications have experienced a strong international trend (Pajuste, 2005). At the unification announcement, the voting and non-voting share stock prices react and already incorporate the unification terms, though not yet approved by the shareholders meeting. Since most of Italian unifications are carried out with a straight 1:1 conversion ratio (Bigelli et al. 1997), the price of a non-voting share gets aligned with the price of a voting share after the announcement, though non-voting shares remain classified as such in all databases until the unification takes place. When measuring the voting premium at the end of a given year, some non-voting shares can already be under the effect of the unification announcement, and therefore trade at a level which is determined by the terms of the unification rather than by expected dividends.[8] We therefore remove those non-voting shares for which a dual-class unification has already been announced but is still not effective at the end of the year. Our sample further reduces from 322 to 314 observations (*Sample 3*).

Non-voting shares under a mandatory bid.

When a takeover offer is launched on all voting shares it can also be extended to non-voting shares. If voting shares are offered a higher price for their vote, the differentiated bid prices could even represent a way of estimating the value of a voting right (Megginson, 1990, Bergstrom and Rydqvist, 1992, Rydquist, 1996). However, if the two classes of shares are offered the same price

---

[8] Moreover, if the unification is on a 1:1 base and it becomes effective after the next dividend payment, the extra-dividend granted to non-voting shares would make them trade even above the voting shares' stock price.

we cannot conclude that the value of a voting right is equal to zero, as other factors may have determined the choice of offering the same price. Such an argument finds easier support if non-voting shares are bid for a higher price than voting shares. In such cases, we cannot obviously use the offer prices to determine the value of a voting right and conclude that it is negative.[9] Nor we can estimate it from market prices, as they get aligned to the offer prices from the announcement date. We therefore also exclude from the sample those non-voting shares for which a tender offer has been announced or anticipated by rumors, if non-voting shares are offered a price equal or greater than the price offered to the voting shares. Our sample is further reduced from 314 to 305 observations (*Sample 4*)

Non-voting shares for companies under financial distress.

When a company is in financial distress, non-voting shares can become more valuable than voting shares if they have a seniority claim in case of bankruptcy and if the non-voting equity is cancelled-out for excess losses only after the whole voting equity gets cancelled-out. Since Italian shares are entitled to such privileges, it is relatively common that firms in financial distress have non-voting shares traded at market prices exceeding those of voting shares. Since firms in financial distress usually have their stocks traded below the par value of the shares, we finally exclude those firm-year observations whose voting shares' stock price is below half of their par value. Our final clean sample is made of 298 observations.

---

[9] Some Italian mandatory bids have actually been extended to non-voting shares and offered them a price equal or even greater than the price offered to voting shares. For example, when a single-class parent company wants to incorporate a dual-class subsidiary through a merge, it promotes a totalitarian tender offer to minority shareholders of the controlled company. However, since non-voting shares cannot be transformed into voting shares of the incorporating company without the approval of the non-voting class of shareholders, hedge funds and institutional investors holding a majority of the non-voting class may ask (and have asked) to receive a higher price for tendering their non-voting shares and allow the operation to be approved. In the 2005 Allianz-Ras merger, for example, Allianz was incorporating Ras by offering 3 Allianz voting shares every 19 Ras voting or non-voting shares. Allianz launched a bid on the Ras voting shares at €26.50 and was forced to bid the non-voting shares at €55.

6. Empirical Analysis

6.1 Estimates of the voting premium with the three different measures

We start our empirical analysis presenting descriptive statistics for the three voting premium measures in the full sample of 430 firm-year observations and in the reduced samples where we progressively remove non-voting shares that are: partially convertible (*Sample 1*); highly illiquid (*Sample 2*); announced to be converted into voting shares (*Sample 3*); under a tender offer (*Sample 4*); belonging to distressed firms (*Clean Sample*).

[Please insert Table 2 about here]

Our estimates of the voting premium with the RVS measure are reported in Panel A. In the full sample, the average voting premium is equal to +35.63% while the number of observations with negative voting rights is 46. However, when we pass to the clean sample the value of the average Relative Vote Segment increases to +45.57% and negative values almost disappear. In fact, out of 298 firm-year observations that survive our five screens, only eight of them still present negative values of the Relative Vote Segments. These eight negative values can be explained singularly.[10] Looking at Panel B of Table 2, the RPD measure reports an average voting premium on the full sample equal to +20.35% and 130 negative values. In the clean sample, the average RPD rises +to 32.42% and the number of negative voting premiums drops to 45 observations. The comparison

---

[10] All the eight negative Relative Vote Segments are due to particular situations affecting six firms: Gemina (in 1999) was one of the eight companies whose shares were targeted by the Stock Exchange restrictions in 2002 for their extreme illiquidity, though not enough for being excluded by our conservative illiquidity filters; Indesit Company (in 2006) and Intek (in 2007) were also slightly less illiquid than what required to be filtered out by our illiquidity criteria; Impregilo (in 2006 and 2007) was in financial distress and the stock price was below the par value but not below our conservative 50% cutoff; Ras (in 2004) had already a negative voting premium the year before non-voting shares received a tender offer at a price more than double than that of the voting share (€55 versus €26.50); Unicredit (in 2007 and 2008), in the mid of the financial and banking crisis was considered the Italian bank more at risk for the international financial turmoil and the seniority claim of the non-voting shares may have become valuable and incorporated in their market prices.

between the two panels shows that the RVS measure always translates into a significantly greater estimate of the voting premium in a contest of dividend privileges to the non-voting class of shares. Moreover, the RVS measure greatly reduces the possibility of reporting negative values of the voting rights, though their almost complete elimination can be obtained only by removing those observations affected by a price distortion (for a conversion option, an extreme illiquidity, a dual-class unification, a tender offer or a financial distress condition). When the voting premium is estimated by the Nenova measure (Panel C), the average value reduces to only +1.30% and +7.61% for the full and clean samples, respectively (though referred to the firm's market capitalization). Being based on the price difference between the two classes of shares, the amount of negative values is the same reported for the RPD measure. As we can observe from the minimum value (equal to -308%), the Nenova measure can give rise even to negative values that exceed the total equity market capitalization (4 observations in our full sample) whenever voting shares trade at a large negative premium and represent almost the entire firm's equity. [11]

In Table 3 we report three time series of the average annual voting premium estimated by the RVS, the RPD, and Nenova measures in both the full and clean samples. All the three measures show a general decrease in both samples since 1999, a result also found in Caprio and Croci (2008). The downward trend reverses in 2008 for all measures in the clean sample and only for the Relative Vote Segment in the full sample. Such a reversal could be due to a higher perceived probability of control block transactions and hostile takeovers due to the low stock prices in the midst of the financial crisis[12] or to a drop in the liquidity of the non-voting shares.[13] When all non-

---

11 In fact, the minimum value, equal to -308%, is related to Stefanel 2008 and originates from the combination of voting shares trading at an anomalous wide negative premium (-2.411€ , given a market price of 0.389€ for the voting shares and 2.800€ for the non-voting shares) and representing a negligible fraction of the firm's total equity (only 0.6%). Since voting shares account for 99.4% of all shares and almost all market capitalization, the Nenova measure gets proxied by the ratio of half of the negative price difference over the price of a voting share. In fact, such value corresponds to -309% (-1.2055€/0.39€) and is quite close to the actual reported value equal to -308%.

12 As a matter of fact, in late 2008 and early 2009 the Italian government passed some provisions in order to protect Italian listed companies from possible foreign takeovers attracted by the low stock quotes. Among these: the passivity

voting shares are considered (Full sample), Nenova reports the lowest estimates, which are even negative for several years (and equal to -19.38% in 2008). The relative price difference also underestimates the voting premium and always reports lower yearly values compared with the Relative Vote Segment. Over the 10-year period, the average three measures of the voting premium on the full sample would respectively be equal to +35.63% (RVS), +20.35% (RPD), and +1.30% (Nenova). In the clean sample, the differences between the three measures are smaller but remain statistically significant (at the 1% level). The average voting premium is now larger, positive in all years for all the three measures, and respectively equal to +45.57% (RVS), +32.41% (RPD), and +7.61% (Nenova).

In Table 3 we also split the value of the voting shares between the value of the vote segments and the value of the investment segments. As discussed in Section 4, the values of the investment segments are obtained as the differences between the prices of the non-voting shares and the present values of the additional dividends granted only to non-voting shares.[14] After having normalized to 100 the value of all non-voting shares at the end of each sample-year, we report the average weights of the vote segments, of the investment segments and of the present value of dividend privileges along the sample-years. Since voting shares receive less dividends, their investment segment accounts for between 82% and 91% of the value of a non-voting share. Accordingly, the value of the dividend privileges to non-voting shares varies between 18% and 9%

---

rule under a takeover attempt was not more mandatory but it could be applied on a reciprocity basis; the disclosure threshold was lowered from 2% to 1% of voting rights; the maximum amount of shares for a stock buyback was increased from 10% to 20% of the firm's equity; the annual maximum percentage increase in the controlling block of voting rights (already exceeding the 30% mandatory bid threshold) was increased from 3% to 5%.

[13] Liquidity can also concur to explain the higher voting premiums in 2008. In fact, the bid-ask spread on non-voting shares increased from an average of 81 basis-points in 2007, which was in line with the average bid-ask spread of the previous year, to an average of 166 basis-points in 2008 (while the average bid-ask spread increased from 38 to 59 basis-points for the voting shares).

[14]The dividend granted to non-voting shares is equal, on average, to 6.57% of their par value (median 5%), while the minimum extra-dividend (in excess of the one on voting share) is equal to 3.10% (median 2.07%).

of the non-voting shares stock price. The vote segment shows much more variability in the sample period and ranges between 20% and 75% of the price of a non-voting share.

[Please insert Table 3 about here]

Figure 1 graphically shows that both the RPD and Nenova measures systematically underestimate the true value of the voting right, which is much better captured by the Relative Vote Segment.

[Please insert Figure 1 about here]

6.2 Descriptive statistics for the determinants of the voting premium

Descriptive statistics for the dividend privileges and the variables used in the multivariate analysis are reported in Table 4 and referred to the clean sample. As far as dividend privileges are concerned, the average (median) minimum dividend entitled to Italian non-voting shares is equal to 6.6% (5.0%) of their par value and varies in a wide range (from 3% till 27.85% of par). The mean (median) extra dividend paid to non-voting shares in excess of the dividend paid to voting shares equals 3.0% (2.1%) of their par value and also vary in a wide range (from 2% to 20% of par). The next average differential dividend yield (*Diff. Div/PNV*) paid to non-voting shares then lowers to a smaller percentage (1.2)% since it is referred to their higher market price. The fraction of voting shares on total shares (*VS Equity Fraction*) averages 83.17% and ranges between 50% (the minimum allowed by law) and 99.84%. A non-voting share is trading, on average, at 8.67 times its par value (*PriceNV/ParNV*) though in a very wide interval (0.46-93.12 times). The largest

shareholder holds a mean (median) percentage of voting rights equal to 43.19% (49.67%),[15] while

the mean (median) holding of the second largest shareholder is equal to 6.73% (5.47%). Similarly

to Ødegaard (2007), we compute a proxy for the relative liquidity of the two share classes based

on the ratio between the non-voting and the voting bid-ask spreads (*Relative BidAsk*). The average

daily bid-ask spread for the non-voting and voting shares is calculated as the absolute value of (Bid

- Ask)/Stock Price. Voting shares tend to be more liquid of the non-voting shares, as their mean

(median) average daily bid-ask spread is equal to 0.97% (0.74%), versus a higher 1.26% (1.02%) for

the non-voting shares. As a consequence, the mean (median) ratio of the non-voting and voting

shares' bid-ask spread is equal to 1.80 (1.35). The average dual class firm has a market

capitalization equal to billion 1.42€ and industrial firms represent 58.31% of the sample.

[Please insert Table 4 about here]

6.3 Multivariate regression analysis

Several studies have examined the cross-sectional determinants of the voting premiums in Italy

(Zingales, 1994; Caprio and Croci, 2008) using the relative price difference as a proxy for the value

of a voting right. Since we have documented that the RPD measure underestimates the true value

of the voting premium, we expect that some determinants may differently affect the RVS and the

RPD measures.

Table 5 and 6 show (for the full and clean sample, respectively) the results of a multivariate

regression analysis in which we regress the three measures of the voting premium (RVS, RPD and

Nenova) on their major firm-specific and country-level determinants. For each independent

variable we run two models. The first one includes only variables related to the equity structure of

---

[15]Not so different from the mean and median values found by Mengoli et al. (2009) on the whole population of Italian listed companies for the 1995-2005 period, respectively equal to 50% and 52%.

the firm while the second also includes the others. We used pooled OLS regression models with robust standard errors and firm fixed-effects to control for omitted variables at firm level.

We first examine the determinants of the RVS measure for the clean sample (Models I and II in Table 5). The coefficient of the fraction of voting shares over the total amount of shares is negative and significant in both models. Consistent with Nicodano (1998) and Caprio and Croci (2008), the more the firm's equity is represented by voting shares, the lower the value of the right to vote is. In fact, greater fractions of voting shares require the majority shareholder to control the company with lower ownership/control wedges and, therefore, lower returns from control (Nicodano, 1998). The ratio between the price of the non-voting share and its par value is also significantly negatively correlated with the Relative Vote Segment, as expected, since dividend privileges are set as percentages of the par value of the shares and become more valuable when market prices are lower. A higher differential dividend yield granted to non-voting shares (*Diff. Div/PNV*) is significantly associated with higher values of the Relative Vote Segment, as expected. In fact, larger dividend yields paid to non-voting shares translate into higher present values of the dividend privileges and greater corrections incorporated into the vote segments of the voting shares. As far as the ownership variables are concerned, the value of the Relative Vote Segment is not affected by the percentage of voting rights held by the largest and second largest shareholders. The size of the firm negatively affects the Relative Vote Segment, as expected, since a large firm is less likely to attract potential acquirers because of the cost of the acquisition, reducing the probability of a control contest or that the controlling block of shares will be transferred under the European mandatory bid rule regulation. Besides, institutional investors tend to invest more in larger firms (Ferreira and Matos, 2008) and their monitoring role reduces the extraction of private benefits by the largest shareholder. The yearly market return presents a positive coefficient, which can be explained by the fact that acquisitions are more likely in periods

of increasing stock prices and this reflects into a higher value of the voting rights (Rhodes-Kropf et al., 2005). Finally, the relative bid-ask spread of the non-voting shares over the voting ones does not seem to affect the size of the RVS measure.[16]

When the dependent variable is the RPD measure (Models III and IV), we observe only a few differences. The ratio of the market price over the par value and the extra-dividend yield seem to have less explanatory power, as expected. The firm's size is no longer significantly negatively correlated with the voting premium, while stronger statistical significance is found both for the positive correlation with the stock market return and for the negative correlation with the relative liquidity of the non-voting shares.

When the multivariate regression models are run on the Nenova measure (Models V and VI), all the explanatory variables also keep the same signs and confirm the robustness of the multivariate results, which do not seem to depend on the adopted measure. However, with the exception of the relative liquidity ratio, most variables reduce or lose their statistical significance compared with the models run on the RVS and RPD measures. The R-squared values are consequently lower. Overall, the Nenova measure also appears the worst performing for the multivariate analysis of the voting premium's determinants.

[Please insert Table 5 about here]

---

[16] In order to make a robustness check, we have also computed the Relative Vote Segment measure using the yield on the 10-year Italian Treasury bond as the discount rate for the additional dividends to the non-voting shares. Given the non-voting shares' seniority claim on the firm's earnings, their additional dividends can be considered as granted, unless the firm is not reporting earnings for more than three consecutive years. A long term risk-free rate could therefore also be taken as a reasonable proxy for discounting the additional dividends, and, hence, determining the Relative Vote Segment measure. When we discount the additional dividends with the lower Treasury bond rate, the average Relative Vote Segment for the clean sample obviously increases but the results of the multivariate regression models on the new Relative Vote Segment values do not minimally change and all variables keep their signs and statistical significances.

In Table 6 we replicate the analysis of Table 5 on the Full Sample, which include those firm-year observations which originate measurement errors. The RVS and RPD measures show a reduction of the models' R-squared, though all variables keep their sign and most of them also retain their statistical significance. Results for the RPD measure suggest that the measurement errors due to the observations that should be filtered-off greatly affect the single and average estimate of the voting premium but do not greatly affect its determinants. The same cannot be said for the Nenova measure of voting premium. In fact, when the multivariate analysis is run on the full sample its explanatory power substantially decreases (the two R-squared drop from 0.17 and 0.25 to 0.04 and 0.11, respectively) and some variables lose their statistical significance. This is probably due to the effect of the four outliers having values lower than -100% generated by the joint combination of a large negative voting premium and non-voting shares representing a negligible fraction of the firm's total equity.

[Please insert Table 6 about here]

6.4 The value of voting right in business groups

In Table 7 we report descriptive statistics of the three different measures of the voting premium split among stand-alone companies, subsidiaries and holding companies. We first set the ownership of at least 20% of voting rights as the condition for controlling a company. A company is then categorized as stand-alone if it is not controlling any other listed company nor is controlled by another listed firm. Within business groups, we define a listed firm as the holding company if it is controlling other listed firms and is located at the top of a pyramidal group, while we define as subsidiary any other controlled listed company in the group.

The results for the full sample show that the average voting premium is significantly higher in holding companies and listed subsidiaries than in stand-alone companies for all the three

measures of the voting premium. When the analysis is repeated on the clean sample, the voting premium remains significantly higher (in median terms) for the holding companies compared with the stand-alone firms, but only when it is determined with the RPD or the Nenova measures. These results are similar to what was found by Nicodano (1998), who also adopts the RPD measure. However, when we focus on the Relative Vote Segment, the size of voting premium in the clean sample is not significantly higher in holding companies and averages to +41.59% for stand-alone firms, to +48.94% for subsidiaries and to +47.17% for holding companies.

In an unreported analysis, we replicate the regression models of Tables 5 and 6 including two dummy variables taking the value of 1 for holding companies and for subsidiaries. Results are remarkably similar to those of Tables 5 and 6.[17] The two dummies are never statistically significant, with the exception of the holding company dummy whose coefficient is positive and statistically significant at the 10% level in the RPD-regressions both in the full and clean samples. In conclusion, holding companies have higher voting premiums only when the premium is measured with the RPD measure, as also found by Nicodano (1998). However, when the more accurate RVS measure is adopted, this relationship disappears.

7. Conclusions

If a right is a right, its value should not be lower than zero. The empirical literature has estimated it using several measures of the voting premium, which implicitly assume that the share with a right or with a superior-voting right is traded at a premium compared with the non-voting or inferior-voting class of shares. In so doing, dividend privileges often granted to the non-voting or inferior-voting shares have not been considered and the voting premium has been accordingly underestimated in those countries where they are relevant.

---

[17] The results are available from the authors.

Italy, like some other countries, is characterized by relevant dividend privileges granted to all non-voting shares and is a perfect setting to look at the impact of the inclusion of dividend privileges in the estimate of the voting right. We therefore compute the value of voting rights for Italian dual-class shares in the 1999-2008 period adopting three different measures of the voting premium: the Relative Vote Segment, the Relative Price Difference and the Nenova (2003) measures. Our new proposed measure, the Relative Vote Segment, incorporates all kinds of dividend privileges and is therefore much more accurate than the other standard measures adopted in the literature. Over a ten-year period, the average value of the voting right is found to be equal to +35.63% with the Relative Vote Segment, versus a lower +20.35% and +1.30% with the RPD and Nenova measures, respectively. The higher estimate for the whole period is actually equal to +45.57% and is found using the RVS measure after removing from the sample those observations that should originate measurement errors because they are: convertible into voting shares; too illiquid for having reliable prices; under a unification process; under a tender offer; belonging to financially distressed firms. While 130 estimates of voting rights (25% of the sample) have negative values when computed with the standard measures on the full sample of non-voting shares, when the sample is properly cleaned to avoid measurement errors and the voting premium is estimated with our RVS measure, the number of negative voting rights drop to only 8 firm-year observations, all having firm-specific reasons for their negative values.

As far as the determinants of the voting premium are concerned, the choice of the measure does not appear to have a significant impact, as long as the dividend differences are controlled for. We find that higher fractions of non-voting shares, higher dividend privileges, market prices closer to the par value of the shares, and smaller firms determine higher voting premiums.

In conclusion, traditional measures for estimating the value of voting rights should take dividend privileges into consideration and the samples should be cleaned from possible measurement errors. Otherwise, in countries where dividend privileges are relevant, the average value of the voting right would be greatly underestimated and could not be used as a proxy for the country's investor protection and corporate governance efficiency. Besides, since dividend privileges greatly vary across countries, the size of such underestimations would also vary at international level and cross-country estimates would be greatly distorted.

References

Barclay, M., and C. Holderness. 1989. Private benefits from control of public corporations. *Journal of Financial Economics* 25: 371–395.

Bechmann, K. L., and J. Raaballe. 2003. A Regulation of Bids for Dual Class Shares. Implication: Two Shares –One Price. *European Journal of Law and Economics* 15: 17–46.

Bergstrom, C. and K. Rydqvist. 1992. Differentiated bids for voting and restricted voting shares in public tender offers. *Journal of Banking and Finance* 16: 97–114.

Bigelli, M., and S. Mengoli. 2011. Self-expropriation versus self-interest in dual-class voting: the Pirelli case study. *Financial Management*, forthcoming.

Bigelli, M., V. Mehrotra and R. Rau. 2007. Expropriation, Unification, and Corporate Governance in Italy. *ECGI Working Paper* 180.

Caprio, L. and E. Croci. 2008. The determinants of the voting premium in Italy: The evidence from 1974 to 2003. Journal of Banking & Finance 32: 2433–2443.

Carvalhal da Silva, A. and A. Subrahmanyam. 2007. Dual-class premium, corporate governance, and the mandatory bid rule: Evidence from the Brazilian stock market, *Journal of Corporate Finance* 13: 1–24.

Cox, S. R., and D. M. Roden. 2002. The source of value of voting rights and related dividend promises. *Journal of Corporate Finance* 8: 337–351.

Chung, K. H., and J. Kim. 1999. Corporate ownership and the value of a vote in an emerging market, *Journal of Corporate Finance* 5: 35–54.

DeAngelo, H., and L. DeAngelo. 1985. Managerial ownership of voting rights. A study of public corporations with dual classes of common stock. *Journal of Financial Economics* 14: 33–69.

Dimson, E., P. Marsh, and M. Staunton. 2002. Triumph of the Optimists: 101 Years of Global Investment Returns, Princeton University Press, New Jersey.

Dyck, A., and L. Zingales. 2004. Private benefits of control: an international comparison. *Journal of Finance* 59: 537–600.

Doidge, C.. 2004. U.S. cross-listings and the private benefits of control: Evidence from dual class shares. *Journal of Financial Economics* 72: 519–553.

Ferreira M., and P. Matos. 2008. The colors of investors' money: The role of institutional investors around the world. *Journal of Financial Economics* 88: 499–533.

Gardiol, L., R. Gibson-Asner and N.S. Tuchsmid. 1997. Are liquidity and corporate control priced by shareholders? Empirical evidence from Swiss dual class shares. *Journal of Corporate Finance* 3: 299–323.

Gompers P. A., J. Ishii, and A. Metrick. 2010. Extreme governance: an analysis of dual-class firms in United States. *Review of Financial Studies* 23: 1051–1088.

Hauser, S., and B. Lauterbach. 2004. The value of voting rights to majority shareholders: Evidence from dual-class stock unifications. *Review of Financial Studies* 17: 1167–1184.

Holmen M., and P. Hogfeldt. 2004. A law and finance analysis of initial public offerings. *Journal of Financial Intermediation* 13: 324–358.

Kalay A., O. Karakaş and S. Pant. 2011. The market value of corporate votes: Theory and evidence from option prices, working paper.

Kaisanlahti T. 2002. Minority shareholders in the Finnish System of Corporate Governance. *ETLA Discussion Paper* 810.

Horner, M.R. 1988. The value of the corporate voting right. *Journal of Banking and Finance* 12: 69–83.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R.W. Vishny. 1998. Law and finance. *Journal of Political Economy* 106: 1113–1155.

Levy, H. 1982. Economic evaluation of voting power of common stock. *Journal of Finance* 38: 79–93.

Loderer C., and A. Jacobs. 1995. The Nestlè crash. *Journal of Financial Economics* 37: 315–339.

Manne, H. G. 1964. Some theoretical aspects of Share Voting. An Essay in Honour of Adolf A. Berle. *Columbia Law Review* 64: 1427–1445.

Megginson, W. 1990. Restricted voting stock, acquisition premiums, and the market value of corporate control. *Financial Review* 25: 175–198.

Mengoli, S., F. Pazzaglia, and E. Sapienza. 2009. Effect of Governance Reforms on Corporate Ownerhip in Italy; is it Still Pizza, Spaghetti and Mandolino? *Corporate Governance an International Review* 17: 629–645.

Muravyev A. 2007. Dual Class Stock in Russia: What Explains the Price Differential between Common and Preferred Shares? *DIW Berlin Discussion Paper* N. 680.

Milonas, N.T. 2000. Similarly traded securities: Greek common vs. preferred stock. *European Financial Management* 6: 343–366.

Nenova, T. 2003. The value of corporate voting rights and control: A cross-country analysis. *Journal of Financial Economics* 68: 325–351.

Neumann, R. 2003. Price differentials between dual-class stocks: Voting premium or liquidity discount? *European Financial Management* 9: 315–332.

Nicodano, G. 1998. Corporate groups, dual-class shares and the value of voting rights. *Journal of Banking and Finance* 22: 1117–1137.

Ødegaard, B. A. 2007. Price differences between equity classes. Corporate control, foreign ownership or liquidity? *Journal of Banking and Finance* 31: 3621–3645.

Pajuste, A. 2005. Determinants and consequences of the unification of dual class shares, working paper, European Central Bank.

Rhodes-Kropf, M., D.T. Robinson, and S. Viswanathan. 2005. Valuation waves and merger activity: the empirical evidence. *Journal of Financial Economics* 77: 561–603.

Rydqvist, K. 1996. Takeover bids and the relative prices of shares that differ in their voting rights. *Journal of Banking and Finance* 20: 1407–1425.

Schmid, M. M. 2009. Ownership structure and the separation of voting and cash flow rights – evidence from Switzerland. *Applied Financial Economics* 19: 1453–1476

Smith, B. F., and B. Amoako-Adu. 1995. Relative prices of dual class shares. *Journal of Financial and Quantitative Analysis* 30: 223–239.

Spamann H. 2010. The "Antidirector Rights Index" Revisited. *Review of Financial Studies* 23: 467–486.

Taylor, S., and G. Whittred. 1998. Security design and the allocation of voting rights: Evidence from the Australian IPO market. *Journal of Corporate Finance* 4: 107–131.

Zingales, L. 1994. The value of voting right: A study of the Milan Stock Exchange experience. *Review of Financial Studies* 7: 125–148.

Zingales, L. 1995. What determines the value of corporate votes? *Quarterly Journal of Economics* 110: 1047–1073.

Figure 1. Time Series of the average annual Relative Price Differences and Relative Vote Segment

The figure shows the evolution of the average annual voting premiums for the Italian dual class shares in the 1999-2008 period, according to the Relative Vote Segment, the Relative Price Difference and the Nenova (2003) measures. The evolution is shown both on the full sample and on the clean sample where all measurement errors are removed.
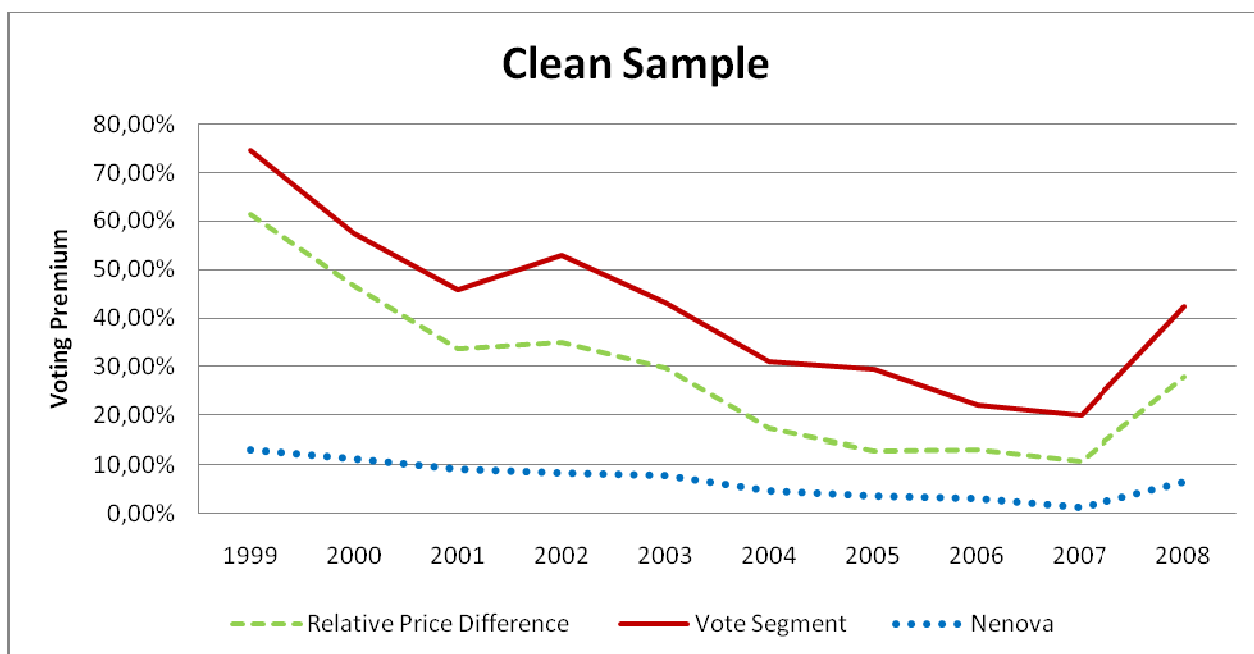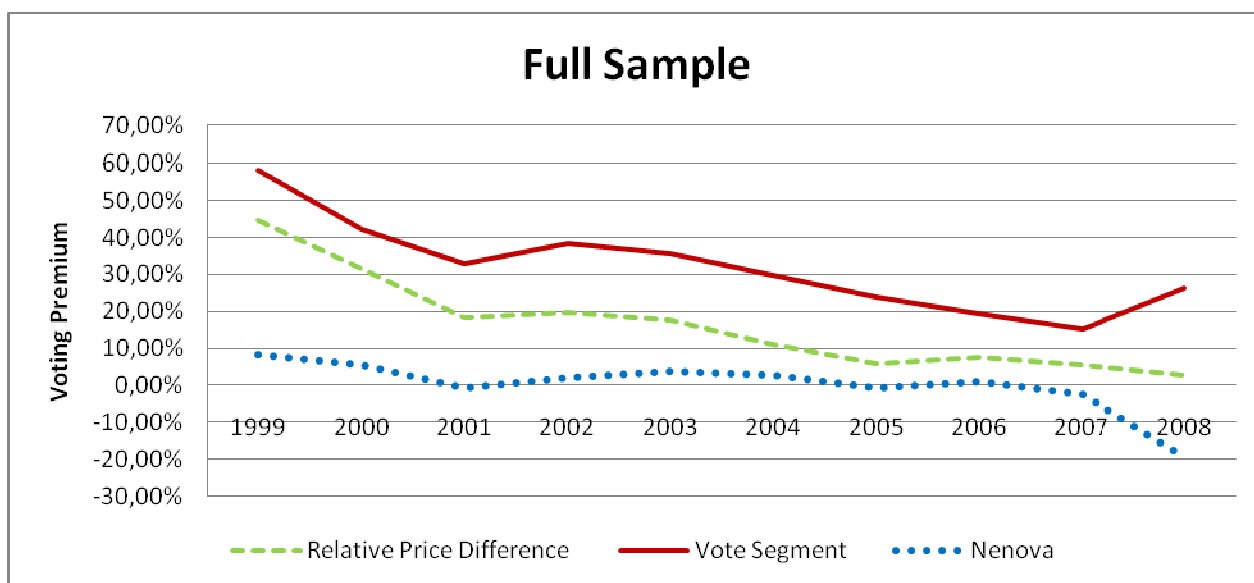
Table 1. Cross-country impact of dividend differences on average voting premium

The table presents whether non-voting or inferior voting shares are entitled to a minimum dividend and to an extra dividend compared to voting or superior voting shares for several countries. It then reports if this entitlement is set by the law (*Law*), by the company charter (*Charter*), by the charter with a minimum threshold set by the law (*Charter/Law*) or by the charter after having previously been set by the law (*Charter/Law before*). The last three columns report the percentage of the non-voting or inferior voting shares affected by these dividend privileges, the source of the reported information, and the estimated impact of including dividend privileges in the estimate of the average country voting premium (indicated with some arrows).

Country	Minimum dividend	Extra dividend	Set by Law/Charter	% of NV shares with dividend privileges	Source	If considered, estimated effect of dividend privileges on average voting premium
Sweden	No	No	Law	0%	Holmen and Hogfeldt, 2004	↔
Denmark	No	No	Law	0%	Neumann, 2003	↔
Norway	No	No	Law	0%	Odegaard, 2007	↔
Finland	Yes/No	Yes/No	Charter	28%	Kaisanlahti, 2002	↑
UK	No	No	Charter	0%	Megginson, 1990	↔
Italy	Yes	Yes	Charter/Law before	100%	Law 58/1998	↑↑↑
Germany	Yes	Yes	Law	100%	Dittmann and Ulbricht, 2008	↑↑↑
France	Yes	No	Law	100%	Muus, 1998	↑↑
Spain	Yes	No	Charter/Law	100%	Royal Decree 1564/1989	↑↑
Greece	Yes	No	Law	100%	Milonas, 2000	↑↑
Switzerland	No	No	Law	0%	Schmid, 2009	↔
US	No	No	Charter	10%	Gompers et al., 2010	↑↔
Canada	Yes/No	Yes/No	Charter	12%	Smith and Amoako Adu, 1995	↑↔
Brazil	Yes/No	Yes/No	Charter/Law	56%	Carvalhal da Silva and Subrahmanyam, 2007	↑
Israel	No	No	Law	0%	Hauser et Lauterbach, 2004	↔
Russia	Yes/no	Yes/No	Charter/Law before	93%	Muravyev, 2007	↑↑↑
Australia	No	Yes	Charter	25%	Taylor and Whittred, 1998	↑
Korea	No	Yes	Law	100%	Chung and Kim, 1999	↑↑

34

Table 2. Voting premium as Relative Vote Segment, Relative Price Difference, and Nenova

The table presents descriptive statistics for the three measures of voting premium: the Relative Vote Segment (Panel A), the Relative Price Difference (Panel B) and the Nenova (2003) measure (Panel C). All descriptive statistics are reported both for the full sample of 430 firm-year observations and for the reduced samples where we have progressively removed the firm-year observations that would have originated measurement errors: convertible non-voting shares (Sample 1); the most illiquid non-voting shares (Sample 2); non-voting shares for which the board of directors has announced a dual class unification (Sample3); non-voting shares for which a tender offer is in place (Sample 4); non-voting shares for financially distressed firms (Clean sample).

Panel A: Voting premium as Relative Vote Segment (in %)

	Full sample	Sample 1	Sample 2	Sample 3	Sample 4	Clean sample
#	430	386	322	314	305	298
Mean	**35.628**	39.091	45.477	45.738	46.089	**45.568**
Median	27.222	31.644	37.584	38.054	39.439	38.054
Min	-62.983	-62.983	-61.140	-61.140	-38.338	-38.338
Max	209.619	209.619	209.619	209.619	209.619	209.619
Std dev	39.224	39.738	37.906	38.193	36.609	36.774
First quartile	9.052	12.641	19.109	19.178	20.131	19.313
Third quartile	56.512	63.134	67.280	67.580	67.580	66.374
# negative VP	46	34	12	12	8	8

Panel B: Voting premium as Relative Price Difference (in %)

	Full sample	Sample 1	Sample 2	Sample 3	Sample 4	Clean sample
#	430	386	322	314	305	298
Mean	**20.354**	23.368	30.874	31.171	31.269	**32.42**
Median	9.087	15.093	23.076	23.076	23.893	24.581
Min	-86.107	-86.107	-61.464	-61.464	-51.504	-51.504
Max	202.367	202.367	202.367	202.367	202.367	202.367
Std dev	40.465	41.55	39.285	39.6	38.145	37.848
First quartile	-2.677	-0.437	3.249	3.77	3.977	5.169
Third quartile	40.821	45.585	48.373	48.524	48.561	49.666
# negative VP	130	98	55	55	51	45

Panel C: Voting premium as Nenova (in %)

	Full sample	Sample 1	Sample 2	Sample 3	Sample 4	Clean sample
#	430	386	322	314	305	298
Mean	**1.295**	1.842	6.832	6.865	7.198	**7.606**
Median	3.922	5.501	7.503	7.620	7.703	8.092
Min	-308.535	-308.535	-79.339	-79.339	-52.665	-52.665
Max	28.122	28.122	28.122	28.122	28.122	28.122
Std dev	25.170	26.453	10.709	10.808	9.549	9.164
First quartile	-1.319	-0.288	1.364	1.604	1.819	2.185
Third quartile	12.013	12.782	13.516	13.518	13.518	13.666
# negative VP	130	98	55	55	51	45

Table 3. Time Series of the three estimates of the Voting Premium

The table reports the average annual voting premium over the sample years. We present three measures of voting premium: the Relative Vote Segment; the Relative Price Difference between the voting and non-voting shares; and the Nenova (2003) measure. For each of these three measures we show the average annual voting premium for all non-voting shares (Full sample) and for the reduced sample of observations that survived our five filters aimed at removing major measurement errors (Clean sample). The last two columns of the clean sample report the yearly averages both for the Investment Segment of the voting shares and for the present value of dividend privileges (as percentages of the non-voting share's stock price).

	Full Sample				Clean Sample					
Year	# Obs	Relative Vote Segment	Relative Price Difference	Nenova	# Obs	Relative Vote Segment	Relative Price Difference	Nenova	Investment Segment	PV Dividend Privileges
1999	72	58.21%	44.51%	7.57%	46	74.85%	61.29%	13.10%	86.45%	13.55%
2000	58	42.10%	31.35%	5.38%	41	57.48%	46.60%	11.24%	89.12%	10.88%
2001	58	32.89%	18.21%	-0.62%	34	45.76%	33.78%	9.10%	88.02%	11.98%
2002	47	38.25%	19.75%	1.87%	32	53.09%	34.97%	8.24%	81.88%	18.12%
2003	39	35.57%	17.73%	3.74%	27	43.09%	29.59%	7.73%	86.49%	13.51%
2004	37	29.89%	11.17%	2.56%	27	31.12%	17.42%	4.52%	86.30%	13.70%
2005	35	23.71%	6.02%	-0.73%	26	29.53%	12.91%	3.49%	83.38%	16.62%
2006	32	19.40%	7.73%	1.00%	24	21.96%	12.98%	2.92%	91.03%	8.97%
2007	28	15.14%	5.69%	-2.29%	23	20.06%	10.74%	1.06%	90.68%	9.32%
2008	28	26.29%	2.91%	-19.38%	18	42.48%	27.77%	6.34%	85.29%	14.71%
Total	430	35.63%	20.35%	1.30%	298	45.57%	32.42%	7.61%	86.87%	13.13%

Table 4 – Descriptive Statistics for the Clean Sample

The table presents descriptive statistics for the variables used in the multivariate analysis. *Minimum Dividend* is the minimum dividend granted by the company's charter and set as a percentage of the par value of the shares. *Extra Dividend* is the fixed amount of greater dividend that is granted to nv-shares by the firm's charter and that should be paid in excess of the dividend paid to voting shares. *Diff. Div/PNV* is the ratio between the next dividend difference paid to non-voting shares and their stock price. *VS Equity Fraction* is the fraction of the firm's equity represented by the voting shares. *PriceNV/ParNV* is the ratio of the market price of the non-voting shares over their par value. *Largest (Second Largest) shareholder* is the percentage of voting rights held by the firm's largest (second largest) shareholder. *BidAsk Vot (BidAsk NV)* is the bid-ask spread of voting (non-voting) shares and it is calculated as the absolute value of (Bid - Ask)/Stock Price. *Relative BidAsk* is the ratio of the non-voting and voting bid-ask spreads. *Ln(mkt cap)* is the log of the market capitalization of the firm's equity at the end of the year.

Variable	Mean	Median	Std . dev.	Min	Max	#
Minimum Dividend (% Par)	6.5646	5.0000	3.9685	3.0000	27.8500	298
Extra Dividend (% Par)	3.0048	2.0700	2.4551	2.0000	20.0000	298
Diff. Div/PNV	1.2130	0.4324	2.4478	0.0000	20.5080	298
VS Equity Fraction	0.8317	0.8986	0.1570	0.5000	0.9984	298
PriceNV/ParNV	8.6692	4.6617	12.8423	0.4608	93.1200	298
Largest Shareholder (%)	43.1947	49.6750	19.8985	4.5400	97.6100	298
Second Largest shareholder (%)	6.7320	5.4750	5.8678	0.0000	27.7200	298
BidAsk Vot	0.0097	0.0074	0.0089	0.0012	0.0825	298
BidAsk NV	0.0126	0.0102	0.0089	0.0018	0.0515	297
Relative BidAsk	1.7970	1.3487	1.7418	0.1277	14.9571	297
Ln(mkt cap)	21.0740	21.1574	1.7812	16.9470	25.1895	295

Table 5. Multivariate regressions of the three voting premiums on the clean sample

The table presents the results of a pooled OLS regression model with firm-fixed effects and robust standard errors on the clean sample. The Relative Vote Segment (Columns I-II), the Relative Price Differences (Columns III-IV), and the Nenova (2003) measures (Columns V-VI) are regressed on firm-specific and country level variables. *VS Equity Fraction* is the fraction of the firm's equity represented by the voting shares. *PriceNV/ParNV* is the ratio of the market price of the non-voting shares over their par value. *Diff. Div/PNV* is the ratio between the extra dividends granted to non-voting shares and their stock price. *Largest (Second Largest) shareholder* is the percentage of voting rights held by the firm's largest (second largest) shareholder. *Ln(mkt cap)* is the log of the market capitalization of the firm's equity at the end of the measurement year. *Market return* is the annual return on the Italian Comit General Index in the measurement year. *Relative BidAsk* is the ratio of the non-voting and voting bid-ask spreads, where the bid-ask spread is calculated as the absolute value of (Bid - Ask)/Stock Price. The symbols ***,**,* denote statistical significance at the 1%, 5%, and 10% level, respectively. Robust standard errors are reported in brackets.

	Relative Vote Segment		Relative Price Difference		Nenova	
	I	II	III	IV	V	VI
Constant	2.6611***	3.1609***	2.4673***	2.7679***	0.4765***	0.5180***
	[0.4310]	[0.4397]	[0.4156]	[0.4133]	[0.0916]	[0.1027]
VS Equity Fraction	-2.5834***	-2.3535***	-2.5078***	-2.3025***	-0.4735***	-0.3684***
	[0.5008]	[0.4416]	[0.4818]	[0.4271]	[0.1064]	[0.0848]
PriceNV/ParNV	-0.0098**	-0.0103**	-0.0079*	-0.0088**	-0.0012	-0.0012
	[0.0045]	[0.0046]	[0.0041]	[0.0044]	[0.0008]	[0.0008]
Diff. Div/PNV	2.2937***	2.6375***	0.8864**	1.0510**	0.3236***	0.3696***
	[0.4983]	[0.6688]	[0.3515]	[0.4423]	[0.0819]	[0.1142]
Largest Shareholder		-0.0002		-0.0003		-0.0006
		[0.0033]		[0.0031]		[0.0009]
2nd Largest Shareholder		0.0133*		0.0121*		0.0014
		[0.0067]		[0.0062]		[0.0017]
Ln(mkt cap)		-0.0353**		-0.0241		-0.0043
		[0.0141]		[0.0147]		[0.0040]
Market Return		0.1307*		0.1658**		0.0226
		[0.0751]		[0.0680]		[0.0157]
Relative BidAsk		-0.0154		-0.0140*		-0.0119**
		[0.0108]		[0.0081]		[0.0059]
Adjusted R2	0.284	0.331	0.2841	0.3231	0.1712	0.2466
Observations	298	294	298	294	298	294

Table 6. Multivariate regressions of the three voting premiums on the full sample

The table presents the results of a pooled OLS regression model with firm-fixed effects and robust standard errors on the full sample. The Relative Vote Segment (Columns I-II), the Relative Price Differences (Columns III-IV), and the Nenova (2003) measures (Columns V-VI) are regressed on firm-specific and country level variables. *VS Equity Fraction* is the fraction of the firm's equity represented by the voting shares. *PriceNV/ParNV* is the ratio of the market price of the non-voting shares over their par value. *Diff. Div/PNV* is the ratio between the extra dividends granted to non-voting shares and their stock price. *Largest (Second Largest) shareholder* is the percentage of voting rights held by the firm's largest (second largest) shareholder. *Ln(mkt cap)* is the log of the market capitalization of the firm's equity at the end of the measurement year. *Market return* is the annual return on the Comit General Index in the measurement year. *Relative BidAsk* is the ratio of the non-voting and voting bid-ask spreads, where the bid-ask spread is calculated as the absolute value of (Bid - Ask)/Stock Price. The symbols ***,**,* denote statistical significance at the 1%, 5%, and 10% level, respectively. Robust standard errors are reported in brackets.

	Relative Vote Segment		Relative Price Difference		Nenova	
	I	II	III	IV	V	VI
Constant	2.6475***	3.1382***	2.5162***	2.6732***	0.6254***	0.6239***
	[0.4004]	[0.4322]	[0.4093]	[0.4141]	[0.1781]	[0.1720]
VS Equity Fraction	-2.5872***	-2.3305***	-2.6104***	-2.3413***	-0.6730***	-0.5071***
	[0.4592]	[0.4203]	[0.4680]	[0.4200]	[0.1995]	[0.1270]
PriceNV/ParNV	-0.0102***	-0.0102***	-0.0085***	-0.0089***	-0.0038*	-0.0047**
	[0.0031]	[0.0032]	[0.0028]	[0.0030]	[0.0021]	[0.0023]
Diff. Div/PNV	1.9046***	2.3118***	0.5348	1.0439**	-0.0392	0.6122
	[0.5741]	[0.6750]	[0.4352]	[0.4811]	[0.4653]	[0.5221]
Largest Shareholder		-0.0038		-0.0036		-0.0002
		[0.0029]		[0.0028]		[0.0012]
2nd Largest Shareholder		0.0038		0.0058		-0.0055
		[0.0052]		[0.0047]		[0.0065]
Ln(mkt cap)		-0.0273**		-0.0125		-0.0038
		[0.0132]		[0.0124]		[0.0052]
Market Return		0.2440***		0.2633***		0.2175**
		[0.0680]		[0.0588]		[0.1056]
Relative BidAsk		-0.0017		-0.0022		-0.0031
		[0.0020]		[0.0016]		[0.0038]
Adjusted R2	0.25	0.3001	0.2659	0.3174	0.0379	0.1091
Observations	430	423	430	423	430	423

Table 7. Groups and stand-alone companies

The table presents descriptive statistics of the three different measures of the voting premium (Relative Vote Segment, Relative Price Difference and Nenova) split among stand-alone companies, subsidiaries and holding companies. We first define control of a company as the ownership of 20% of its voting rights. A company is then categorized as stand-alone if it is not controlling any other listed company nor is controlled by another listed firm. Within business groups, we define a listed firm as a holding company if it is controlling other listed firms and is located at the top of a pyramidal group, while we define as subsidiary any other controlled listed compay in the group. All statistics are reported both for the full sample of 430 firm-year observations and for the Clean sample. The symbols ***,**,* denote statistical significance at the 1%, 5%, and 10% level, respectively, for the mean and median difference tests between stand alone companies and the other two firm's categories (subsidiaries and holding companies).

	Full Sample			Clean Sample		
	Relative Vote Segment	Relative Price Difference	Nenova	Relative Vote Segment	Relative Price Difference	Nenova
Stand-Alone Companies						
#	182	182	179	119	119	119
Mean	29.57%	13.31%	-3.72%	41.59%	28.52%	6.39%
Median	24.49%	5.62%	2.29%	38.04%	18.89%	7.14%
Min	-62.98%	-86.11%	-308.53%	-38.34%	-51.50%	-52.66%
Max	155.45%	146.46%	27.18%	155.45%	146.46%	27.18%
Std dev	37.75%	38.87%	35.81%	34.49%	35.41%	10.20%
Subsidiaries						
#	141	141	141	105	105	105
Mean	40.90%**	25.67%***	4.74%***	48.94%	35.16%	8.10%
Median	29.68%	10.93%	4.33%	38.07%	22.16%	7.69%
Min	-38.98%	-53.08%	-56.30%	1.83%	-23.67%	-15.06%
Max	209.62%	202.37%	26.46%	209.62%	202.37%	26.46%
Std dev	41.95%	42.34%	11.71%	40.83%	41.79%	8.49%
Holding Companies						
#	107	107	107	74	74	74
Mean	38.99%**	25.33%**	5.17%***	47.17%	34.80%	8.87%*
Median	30.46%	19.14%**	7.34%**	38.43%	30.83%**	10.24%**
Min	-26.69%	-59.14%	-65.39%	-4.81%	-31.98%	-22.09%
Max	186.52%	181.97%	28.12%	181.59%	170.26%	28.12%
Std dev	36.85%	39.33%	12.46%	34.05%	35.67%	8.14%

european corporate governance institute

ECGI Working Paper Series in Finance

www.ecgi.org/wp