Voting Premium in the Brazilian Equity Market*

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Abstract

This study aims to estimate the voting premium in the Brazilian stock market by looking at dual-class price differentials. We first show that the average voting premium is positive from July 2003 to June 2013. This is in contrast with the extant findings in the literature, which indicate the presence of a voting discount. We then investigate the determinants of the difference in common and preferred share prices. In particular, we examine how the voting premium relates to the relative liquidity, the difference in dividends, the extension of tag along rights to non-voting shares, the issuance of ADR on the New York Stock Exchange, the level of corporate governance, the shareholders' composition, and the government's equity participation.

Keywords: Common shares, Control, Governance, Minority shareholder, Preferred shares.

JEL Codes: G32, G34.

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1. Introduction

The newspaper *Valor Econômico* ran an article in October 28th, 2011 asking whether investors should always choose, if possible, shares with voting rights over those without voting rights. The article concluded that the investment decision of which class of shares to invest in cannot be based solely in control alienation operations or corporate restructuring events. Liquidity, the issuance of ADRs, and dividends must also be taken into consideration. Additionally, it is important to keep in mind that some companies may not issue shares with voting rights at the BM&FBovespa due to legal restrictions.

Common shares (CS) have voting rights in the shareholder meetings and election of the board. Preferred shares (PS) offer, at most, voting rights at shareholder meetings (in the case of Vale, for example), but never in board of directors elections. On the other hand, they give the shareholder priority on payment of dividends or reimbursement of capital in case of liquidation. There are currently 67 corporations with dual-class shares at the BM&FBovespa. This paper contributes to the literature by studying the determining factors in the price differential between common and preferred shares. More specifically, we examine whether the voting premium is a function of several control measures, ownership and corporate governance, apart from some stock characteristics.

In the last few decades, a vast part of the corporate finance literature documents the existence of a control premium. Zingales (1994) shows that, in Italy, the voting premium was 82% between 1987 and 1990. Zingales (1995) finds an average premium of 10% in the voting shares at the New York Stock Exchange between 1984 and 1990. Nenova (2001) reports that the voting premium ranges from 0% in Denmark to 50% in Mexico. Barclay and Holderness (1989) and Megginson (1990) find an average premium between 5% and 13% for voting shares in the UK, whereas Horner (1998) unveil an average premium of 20% in Switzerland. By contrast, Neumann (2003) and Ørdegaard (2007) respectively evince negative control premia in the Danish and Norwegian markets.

We observe an average control premium of 11% in a sample of 48 Brazilian corporations in the period from July 1st, 2003 to June 28th, 2013. This figure differs from previous results in the literature for the Brazilian market. Saito (2003) shows a discount in voting shares ranging from -22.1% to -5% from 1995 to 2002. Silva and Subrahmanyam (2007) find similar results for the period of 1994 to 2004. Saito (2003), Silva and Subrahmanyam (2007) and Saito and Silveira (2010) maintain that this discount in the Brazilian market is due the differences in liquidity and dividends between the common and preferred shares. They also argue that the difference in price in the secondary market do not take into consideration the implicit voting right held by controllers.

To understand the existence of a control premium in the period of 2003 to 2013, in opposition to the discount shown from 1994 to 2004, is necessary to point out two institutional changes in the early 2000s. First, to increase the rights of

minority shareholders, BM&FBovespa created five different listing levels in 2005 based on corporate governance criteria. “Novo Mercado” and “Bovespa Mais” concentrate 68.9% of the public corporations, demanding 100% of voting shares and 100% tag along rights. “Level 2” used to guarantee tag along rights of 100% for the common shares and of 80% for preferred shares. As from 9 September 2011, tag along rights have been raised to 100% also for preferred shares. “Level 1” and “Traditional” guarantee 80% tag along rights for common shares, according to legislation. Besides tag along rights, the BM&FBovespa segments have also some other requirements related to corporate governance of the listed firms.

The second institutional change is from October 31, 2001. The goal of the Law of Corporations 10.303/2001 was to promote a greater dispersion in the ownership structure through greater protection for the minority shareholders. Until then, companies could issue up to two thirds of equity in preferred shares, without voting rights, in the Brazilian market. This explains the greater historical liquidity of preferred shares at the BM&FBovespa. As from the enactment of the Law 10.303/2001, companies may only issue up to 50% of shares as preferred in an IPO. The article 254-A also introduced tag-along rights, guaranteeing more rights to minority shareholders. More specifically, in direct or indirect transfers of corporate control, the shareholder taking control must make a public offer to acquire the remaining common shares. In addition, there is the obligation to pay at least 80% of the price paid for the shares of the control block. Some companies voluntarily extend the tag along rights to preferred shareholders, and/or guarantee a price above 80% for common shareholders.

The goal of this paper is to revisit the question of a control premium in the Brazilian market using a more recent data panel. Our main interest lies on the period after Law 10.303/2001, so as to complement the study by Saito (2003). Our analysis controls for the main differences between the common and preferred shares (e.g. liquidity and dividends) to isolate the determining factors of the corporate control premium.

We show that ownership structure and corporate governance practice have significant impacts in the voting premium. In addition, corporations in which the largest shareholder holds over 50% of the common shares or in which the government holds over 20% of the voting shares have on average a relatively smaller voting premium. These effects are consistent with Saito and Silveira (2010), who argue that the identity of the shareholder affects the control premium, as well as with Novaes (2013), who examines the impact of the recent interventions of the Brazilian government in the stock market. The impact of governance practices is also positive for corporations that extend the tag along right for preferred shareholders, but surprisingly negative for the BM&FBovespa corporate governance segment for the company.

The remainder of this paper is as follows. Section 2 presents a brief review of literature. Section 3 discusses the institutional changes brought about by the

reformulation of the Law of Corporations in October 2001. Section 4 describes the procedure for data collection and selection. Section 5 analyzes the main results, whereas Section 6 offers some concluding remarks.

2. Literature Review

Zingales (1994) argues that the voting premium is driven by the expectation of a battle for control, which would lead to a dispute for the votes of minority shareholders. The expected dispute for votes increases the prices of the voting shares even before the dispute occurs, thus creating a voting premium. Zingales (1995) demonstrates that the purchase of a large block of shares is not the only way to acquire control of a company. Indeed, one could buy voting shares in small lots to acquire a large control block. As a result, the voting premium exists as long as there is competition for this control block of voting shares. If a company has two classes of shares, and the only difference between these two classes is the voting right, the control premium determines the relative price of those shares.

Nenova (2003) explains that the legal system is relevant in the discussion of voting premium, because it restricts how much private benefit controllers are able to extract from the company. Countries in which the legal system provides greater protection to the minority shareholders entail smaller private benefits for the controllers. In fact, Nenova shows that, on average, the voting premium is much lower in countries with greater protection for minority shareholders. See, for example, Zingales (1994) and Caprio and Croci (2008) for the analysis of voting premium in Italy; Neumann (2003) and Ørdegaard (2007) for the Scandinavian markets; and Dyck and Zingales (2004) for another cross-country comparison.

Damodaran (2005) argues that the value of the vote depends on the likelihood of a change in control and in management of the company. This probability is in the price of any publicly traded company and hence it provides a tool to measure the gains of good corporate governance practices. Damodaran concludes that having a better understanding of the value of control is paramount to explain the difference in the prices of common and preferred shares.

In the Brazilian market, Saito (2003) finds that the average price differential between shares with voting rights and without voting rights varies from -5% in 1995 to -22% in 1999 and then to -6.7% in 2002. Saito singles out as the main determinants of the voting discount the greater liquidity of preferred shares and some changes in the Brazilian legislation. Corporate Law 9.457/1997 revoked the tag along rights of the minority shareholders in 1997. This had a negative impact in the voting premium, which was only reverted after the reinstatement of the tag along rights by Law 10.303/2001. Nenova (2001) report similar results for other instances of legislation changes. She also demonstrate that the controlling group extracts, on average, 37.5% of the company's value even if it detains the rights to only a sixth of the cash flow.

Silva and Subrahmanyam (2007) also find a discount instead of a voting pre-

mium in the Brazilian equity market. They show that, between 1994 and 2004, the median value of the price differential between common and preferred shares was negative for 8 of the 11 years in their sample. Saito and Silveira (2010) argue that the presence of a voting discount in the Brazilian market is due to the following reasons. First, there is an implicit voting premium held by the controllers that previous studies fail to account for. Second, the nonvoting shares have greater liquidity. Third, preferred shares typically pay 10% more dividends than common shares. In sum, the dual-class premium reflects not only the control premium, but also other differences between the two classes of shares.

More recently, Novaes (2013) shows that corporate governance mechanisms and bylaws are not the only drivers of the voting premium. In times of distress, governments seek to increase the level of employment and economic activity in several ways, sometimes intervening in the capital market. He argues that, if the government is willing to intervene, one must control for the government's equity participation at the firm when determining its voting premium. The idea is that it is easier for the government to monitor and to exert political pressure in a company for which it is a large shareholder. The use of political pressure to resolve disputes reduces the voting premium, because a solution through the shareholder meeting is less likely.

In this paper, we investigate the main determinants of the control premium based on the relative difference between common and preferred share prices. To avoid Saito and Silveira's (2010) critique, we control for the different characteristics of each class of shares within a panel regression framework.

3. Legal Framework

The reformulation of the Corporate Law in 2001 is a major landmark in the protection of minority shareholders in Brazil. Because the control premium typically decreases with the degree of protection to minority shareholders, it is worth describing the main changes in the legislation.

The main objective of Law 10.303/2001 was to promote greater dispersion in ownership structure so as to lead to better transparency in the Brazilian stock market, more protection to the smaller investors through an egalitarian treatment of all shareholders, and greater control and monitoring of the agencies responsible for the administration of corporations. The reformulation included, among other aspects (such as, the definition of crimes against the capital market through the use of privileged information):

- a. New rules for the definition of board of directors;
- b. Greater sophistication in the questions of custody;
- c. The use of mediation to solve conflicts among minority shareholders;
- d. Limits for the issuance of shares with restricted voting rights;

e. Compulsory advantages for preferred shareholders with restricted voting rights.

Among the compulsory advantages of preferred shares, Law 10.303/2001 establishes at least one among

- (i) participation in net dividends,
- (ii) 10% dividend differential and
- (iii) tag along rights.

Notice that the payment of 10% more dividends than common shares is the only effective advantage. The participation in the net dividend is only advantageous if the net assets of the company are very substantial, whereas tag along rights only matter if the control of the company changes hands.

In comparison to Law 9.457/1997, the compulsory advantages of preferred shares became less stringent given that, before, preferred shares had necessarily to pay at least 10% more dividends than common shares.

The impact of the Law 10,303/2001 in the price difference between common and preferred shares is therefore ambiguous. On one hand, by promoting corporate governance practices that offer greater protection for minority shareholders, it should reduce the control premium. On the other hand, by limiting the issuance of preferred shares and removing the obligation of higher dividends, it should alleviate the distortions in the price of common shares relative to the price of preferred shares. To solve this ambiguity empirically, we reevaluate the price difference between common and preferred shares for a more sample period. The next section describes how we select the sample and compute the main variables of interest.

4. Data and Methodology

4.1 Sample selection

We evaluate only companies with an average of at least one transaction per day. We exclude any stock that migrate to "Novo Mercado" in the sample period. These criteria result in a sample of 48 companies from a total of 67 listed at the BMF&Bovespa with both common and preferred shares between July 1, 2003 and June 28, 2013. This amounts to a total of 120,000 firm-day observations). We obtain the daily price of shares and traded volume from the BM&FBovespa own database. To mitigate data errors, we compare each daily observation with data from Bloomberg and Economatica. We adjust prices accordingly in case of any discrepancy.

Dividend data is from Bloomberg. We calculate the relative difference in dividend distribution by looking at the dividend payments over the last 12 months for both share classes. We extract the ownership structure for each company from

Economática. The data come from quarterly CVM reports that list all shareholders with over 5% of shares in a given class or with a combined total participation of 5% in both classes. To determine the participation of the government in each company, we classify each shareholder as private or public using the ownership structure reported by each company.

The information on tag along rights is from the BM&FBovespa. Note that the tag along rights may differ for common and preferred shares of the same company. The BM&FBovespa website also includes information about the segment of corporate governance that each company belongs to as well as about double listing through ADRs on the New York Stock Exchange.

In what follows, we describe in details how we compute the voting premium and the controls we use in the panel regressions.

4.2 Control premium

To calculate the control premium, we use the daily closing prices of common and preferred shares:

$$PREMIUM(i, t) = \frac{PRICE_{ON}(i, t) - PRICE_{PN}(i, t)}{PRICE_{PN}(i, t)}$$

where $PRICE_{ON}(i, t)$ and $PRICE_{PN}(i, t)$ are respectively the closing prices of the common and preferred shares of company i on day t .

4.3 Liquidity differential

Amihud and Mendelson (1988) evince that the asset prices are positively related to liquidity. This means that relative liquidity should help explain the price differential between common and preferred shares. There are less voting shares than nonvoting shares in the Brazilian market, and hence they have lower liquidity. Zingales (1995) does not detect any link between relative liquidity and dual-class premium in the US stock market. However, preferred shares are much more common in the Brazilian market, which could well create a significant discount.

To calculate relative liquidity differential, we employ the following proxy:

$$LIQUIDITY(i, t) = \frac{VOLUME_{ON}(i, t) - VOLUME_{PN}(i, t)}{VOLUME_{PN}(i, t)}$$

where $VOLUME_{ON}(i, t)$ and $VOLUME_{PN}(i, t)$ are respectively the traded volume of common and preferred shares of company i on day t . We expect the price differential to increase with relative liquidity given that we use preferred shares as reference. Note that controlling for relative liquidity is paramount because, although it affects the dual-class premium, it does not relate to the voting premium.

As a robustness check, we also entertain an alternative measure of relative liquidity:

$$LIQUIDITY2(i, t) = \ln \sqrt{\frac{TRADES_{ON}(i, t)VOLUME_{ON}(i, t)}{TRADES_{PN}(i, t)VOLUME_{PN}(i, t)}}$$

where $TRADES_{ON}(i, t)$ and $TRADES_{PN}(i, t)$ are the number of common and preferred shares of company i traded on day t . $LIQUIDITY2$ corresponds essentially to the natural logarithm of the ratio between the BM&FBovespa tradability index for common and preferred shares.

4.4 Dividend differential

In Brazil, it is common for some companies to give advantageous treatment of dividends for preferred shares as an “ownership right” to compensate for the voting restriction. As from Laws 9.457/1997 and 10.303/2001, the preferred shareholders have the right to 10% more dividend than common shareholders, apart from any exception in the bylaws. We proxy the dividend differential by

$$DIVIDENDS(i, t) = \frac{DIV_{ON}(i, t) - DIV_{PN}(i, t)}{DIV_{PN}(i, t)}$$

where $DIV_{ON}(i, t)$ and $DIV_{PN}(i, t)$ are dividends paid by company i in the last 12 months for common and preferred shares, respectively. We expect the price differential to increase with the dividend differential. As in the case of relative liquidity, dividend differentials drive only the price differential, and not the voting premium.

4.5 Ownership structure

The existence of preferred shares in the ownership structure of a company allows the majority shareholder to leverage resources without losing controlling power. According to Harris and Raviv (1988) and Grossman and Hart (1988), leverage implies a larger private benefit and, consequently, a greater voting premium. In this study, we investigate the impact of concentrating company’s control on the hands of a small group of shareholders.

To measure concentration, we use three dummy variables. The first is $LARGESTSHAREHOLDER(i, t)$, which indicates whether the largest shareholder holds more than 50% of the voting shares of company i on day t (namely, it takes value 1 if true, zero otherwise). The second binary variable $LARGESTSHAREHOLDERS(i, t)$ indicates whether the three largest controlling shareholders hold more than 50% of voting shares of company i on day t . We employ this second dummy variable only to verify the robustness of the qualitative results we obtain using $LARGESTSHAREHOLDER$.

Lastly, the binary variable $GOVERNMENT(i, t)$ indicates whether the government holds at least 20% of voting shares in company i on day t . See Novaes

(2013) for a detailed justification for the cutoff at 20%. We consider every governmental instance, including pension funds, banks, and state-owned companies.

We expect the control premium to increase with concentration of the largest shareholder(s), but the impact of the government participation is ambiguous given that we focus on the level of the voting premium as opposed to Novaes (2013).

4.6 Tag along rights

Neumann (2003) and Hoffman-Burchardi (1999) respectively show that, for the Danish and German equity markets, extending tag along rights to preferred shares reduces the voting premium. In the Brazilian market, some companies offer different tag along rights to common and preferred shares. We consider the binary variable $TAGALONG(i, t)$ that takes value 1 if both classes share the same tag along rights, zero otherwise.

We expect the control premium to decrease with the tag along dummy.

4.7 ADR

The shares of Brazilian companies listed in the New York Stock Exchange are traded using American Depositary Receipts (ADRs). In addition to complying with the US governance regulations, companies that issue ADRs must also publish their results according to the US accounting standards (USGAAP). The governance requirements in US are more stringent than BMF&Bovespa's at the level 2 segment, thereof offering more protection to minority shareholders.

We expect companies with ADRs at the New York Stock Exchange to have a lower voting premium than those without. To test this hypothesis, we use the binary variable $ADR(i, t)$, which takes value 1 if the company i has ADRs on day t , zero otherwise.

4.8 Corporate governance

La Porta et al. (1999) document that lack of shareholder protection typically comes together with lower market assessments. We thus check whether the higher the level of corporate governance at the BMF&Bovespa (and hence the greater protection for minority shareholders), the smaller the voting premium.

To control for the level of corporate governance, we use two binary variables $LEVEL1(i, t)$ and $LEVEL2(i, t)$, which verify whether the company belongs to level 1 or 2 of corporate governance at the BM&FBovespa, respectively. We expect the control premium to decrease with the level of corporate governance.

5. Determinants of the Voting Premium in Brazil

The basic regression model we use to investigate what drives the control premium is as follows:

$$\begin{aligned}
PREMIUM(i, t) = & C0 + C1 \times LIQUIDITY(i, t) + C2 \\
& \times DIVIDENDS(i, t) + C3 \\
& \times LARGESTSHAREHOLDER(i, t) + C4 \\
& \times GOVERNMENT(i, t) + C5 \times TAGALONG(i, t) \\
& + C6 \times ADR(i, t) + C7 \times LEVEL2(i, t) + C8 \\
& \times LEVEL(i, t) + FIXEDEFECTS(i, t) \\
& + ERROR(i, t)
\end{aligned}$$

where $FIXEDEFECTS(i, t)$ aggregates both firm-specific fixed effects (invariant in time) and year fixed effects (common to every company). All the other regressors, as well as the white noise term $ERROR$, vary across firms and over time. Before discussing the regression estimates, we single out some interesting features about the evolution of the dual-class premium over the years.

Table 1
Yearly descriptive statistics for the dual-class premium

year	mean	median	maximum	minimum	std deviation
2003	-0.34%	-3.85%	154.45%	-50.00%	22.49%
2004	0.20%	-5.56%	140.00%	-69.51%	30.75%
2005	0.96%	-3.98%	334.78%	-69.14%	35.10%
2006	12.26%	-1.21%	300.00%	-59.68%	48.99%
2007	18.24%	4.03%	294.21%	-43.32%	41.14%
2008	20.33%	6.14%	708.11%	-80.98%	52.86%
2009	10.46%	0.00%	308.33%	-78.70%	42.02%
2010	0.16%	-3.97%	193.33%	-70.43%	28.59%
2011	15.60%	0.00%	800.00%	-50.00%	67.44%
2012	18.94%	0.00%	564.29%	-34.62%	72.19%
2013	18.04%	0.00%	670.00%	-50.00%	70.70%
2003-2013	11.41%	0.00%	800.00%	-80.98%	51.11%

Table 1 shows some descriptive statistics for the price differential between common and preferred shares on yearly basis. The average dual-class premium is of 11.41%. This is significantly higher than in Saito's (2003) and Silva and Subrahmanyam's (2007) samples. We also observe that the mean control premium increases until 2008. It then decreases in 2009 and 2010 probably due to the financial crisis, only to more than recover as from 2011 stabilizing at circa 18%. Interestingly, despite large differences between them, Figure 1 shows that the median price differential exhibits a somewhat similar pattern to the mean values. As

for the large discrepancy between mean and median values, it is mostly due to the presence of some aberrant dual-class premia of over 800%.

Figure 1
Evolution of mean and median voting premium

Table 2 displays the coefficient estimates for the basic the regression, with year dummy variables of year, but without firm-specific fixed effects, for the period between 07/01/2003 and 06/28/2013. As expected, the coefficient estimate for *LIQUIDITY* is significantly positive, implying a lower control premium for companies whose preferred shares are relatively more liquid than their common shares. The coefficient estimate for *DIVIDEND* is also significantly positive. This means that, the higher the dividend differential favoring preferred shareholders, the lower the dual-class premium.

In the Brazilian market, it is common to observe companies in which a single shareholder holds more than 50% of voting shares. This represents less decision power for the minority shareholder, making it easier for the majority shareholder to extract private benefits. The coefficient estimate for *LARGESTSHAREHOLDER* shows that the average voting premium is, on average, 10.98% higher for firms whose largest shareholder has over half of the voting shares.

GOVERNMENT is the only regressor that does not entail a significant effect on the voting premium, at least not in the complete sample period. Novaes (2013) argues however that this effect is particularly significant only after 2010, when the government became a lot more interventionist. We indeed observe im-

Table 2
Estimates of the voting premium model without fixed effects

	coefficient	standard error	<i>p</i> -value
<i>CONSTANT</i>	0.2030050	0.0063510	0.0000000
<i>LIQUIDITY</i>	0.0147030	0.0006970	0.0000000
<i>DIVIDENDS</i>	0.0638780	0.0062540	0.0000000
<i>LARGESTSHAREHOLDER</i>	0.1636520	0.0029030	0.0000000
<i>GOVERNMENT</i>	0.0057140	0.0044210	0.1962000
<i>TAGALONG</i>	−0.0440520	0.0033310	0.0000000
<i>ADR</i>	−0.1738240	0.0037040	0.0000000
<i>LEVEL2</i>	−0.1080320	0.0044450	0.0000000
<i>LEVEL1</i>	−0.0666320	0.0032650	0.0000000
2003	−0.1818120	0.0083240	0.0000000
2004	−0.1938920	0.0072780	0.0000000
2005	−0.1857600	0.0072500	0.0000000
2006	−0.1025160	0.0072340	0.0000000
2007	−0.0354190	0.0072270	0.0000000
2008	−0.0047910	0.0072100	0.5063000
2009	−0.0876870	0.0072120	0.0000000
2010	−0.1711010	0.0071920	0.0000000
2011	−0.0358370	0.0071920	0.0000000
2012	0.0079390	0.0071930	0.2697000

portant changes in market conditions within our sample period. There was a strong valorization of Brazilian companies between 2003 and 2008, especially in the commodities sector. From 2009 to 2010, the subprime crises caused losses in practically all stock markets, including the Brazilian market. Finally, as from 2010, the Brazilian government started to intervene much more strongly in the economy, either through loans form state-owned banks, such as BNDES, Banco do Brasil and Caixa Economica Federal, or through specific interventions on strategic companies, such as Eletrobrás, Petrobrás, and Vale. To illustrate this point, Figures 2 to 4 plot the prices of common and preferred shares of Petrobrás and Vale for each subperiod, respectively. It is easy to appreciate that the trends are not stable over time.

Figure 2
Price of Petrobrás and Vale shares between 2003 and 2007

To control for the interventionism after 2010, we run a separate regression only for that period. The results show that, to have the government as a majority shareholder, the minority shareholder demands a premium of 18.01% to compensate for the risk of government activism. In other words, the voting premium is, on average, 10.01% higher when the government holds 20% or more of common shares. This contradicts the results in Novaes (2013), who document a significant reduction on the voting premium for companies with substantial government participation in their ownership structure. There is a simple reason for these conflicting results. The identification strategy is different in Novaes (2013), who focuses on the difference between the voting premium before and after 2010, instead of the level of the voting premium.

Figure 3
Prices of Petrobrás and Vale shares between 2008 and 2009

Figure 4
Prices of Petrobrás and Vale shares between 2010 and 2013

With the introduction of the Law of Corporations, article 254-A of 2001, the minority shareholders were granted the right to receive, at least, 80% of the amount paid for the shares of the majority shareholder. However, there are companies that voluntarily extend this tag along right for the preferred shares. This should reduce the difference between the prices of common and preferred shares. Table 2 clearly shows that companies with the same level of tag along rights for both classes of shares have a mean discount of 4.4% in the voting premium.

Lastly, we test whether companies with supposedly higher levels of governance have a lower control premium. We start with companies that issue ADRs, because the corporate governance requirements at the New York Stock Exchange are greater than those at the levels 1 and 2 of the BM&FBovespa. Table 2 shows that the voting premium of dual-listed stocks is on average 17.38% lower. Similarly, companies at levels 1 or 2 of corporate governance at the BMF&Bovespa should have a lower control premium. The coefficient estimates indeed imply a control premium on average from 6.7% to 10.8% lower than stocks at the traditional level of governance. It is also reassuring that the coefficient estimates for *ADR*, *LEVEL2* and *LEVEL1* are monotonically decreasing in magnitude, mirroring our expectations that the higher the corporate governance standard, the greater the protection of minority shareholders, and therefore, the lower the voting premium.

Next, we introduce firm-specific fixed effects into the mix in order to control for any time-invariant omitted variable. We report the results in Table 3, though we comment in what follows only what changes with respect to the estimation without fixed effects.

Contrary to what we expected, the coefficient estimates for *TAGALONG*, *LEVEL2* and *LEVEL1* are now positive, indicating strong correlation with the fixed effects. In fact, the fixed effects absorb of the average corporate governance standard in the sample period. It is actually quite surprising that these estimates are significantly different from zero after controlling for fixed effects.

To sum up the analysis, Table 4 compares the estimation results with and without fixed effects, always bearing in mind the expected signal for each coefficient.

Finally, we verify whether the results are robust to the proxies for liquidity and ownership concentration using alternative measures. The regression estimates are extremely similar for *LARGESTSHAREHOLDERS*, only marginally less significant. In a similar manner, the use of *LIQUIDITY2* instead of *LIQUIDITY* does not alter qualitatively the results, apart from reducing a bit the estimation precision.

Table 3
Estimates of the voting premium model with fixed effects

	coefficient	standard error	p-value
<i>CONSTANT</i>	0.1147640	0.0067840	0.0000000
<i>LIQUIDITY</i>	0.0074640	0.0007260	0.0000000
<i>DIVIDENDS</i>	0.0481510	0.0060390	0.0000000
<i>LARGESTSHAREHOLDER</i>	0.0695530	0.0044970	0.0000000
<i>GOVERNMENT</i>	-0.2048800	0.0099060	0.0000000
<i>TAGALONG</i>	0.0226040	0.0103210	0.0285000
<i>ADR</i>	-0.1388560	0.0119700	0.0000000
<i>LEVEL2</i>	0.0437160	0.0128170	0.0006000
<i>LEVEL1</i>	0.0394530	0.0096680	0.0000000
2003	-0.1398240	0.0073920	0.0000000
2004	-0.1534140	0.0064370	0.0000000
2005	-0.1503580	0.0063840	0.0000000
2006	-0.0720100	0.0063410	0.0000000
2007	-0.0138300	0.0063410	0.0283000
2008	0.0125590	0.0062840	0.0457000
2009	-0.0746110	0.0062830	0.0000000
2010	-0.1600720	0.0062610	0.0000000
2011	-0.0239910	0.0062630	0.0001000
2012	0.0099690	0.0062400	0.1101000

Table 4
Comparative summary, with robust standard errors within parentheses

	expected signal	without fixed effect	with fixed effect
<i>CONSTANT</i>		0.2030050 (0.006351)	0.1147640 (0.006784)
<i>LIQUIDITY</i>	+	0.0147030 (0.000697)	0.0074640 (0.000726)
<i>DIVIDENDS</i>	+	0.0638780 (0.006254)	0.0481510 (0.006039)
<i>LARGESTSHAREHOLDER</i>	+	0.1636520 (0.002930)	0.0695530 (0.004497)
<i>GOVERNMENT</i>	?	0.0057140 (0.004421)	0.2048800 (0.009906)
<i>TAGALONG</i>	-	-0.0440520 (0.003331)	0.0226040 (0.010321)
<i>ADR</i>	-	-0.1738240 (0.003704)	-0.1388560 (0.011970)
<i>LEVEL2</i>	-	-0.1080320 (0.004445)	0.0437160 (0.012817)
<i>LEVEL1</i>	-	-0.0666320 (-0.003265)	0.0394530 (-0.009668)

6. Conclusion

In contrast with some previous papers, we find a positive voting in the Brazilian equity market. The main reason for this difference seems to be the sample period we consider. In particular, we focus on more recent data than previous studies, enabling us to examine the impact of the Law of Corporations 10.303/2001.

Among the determinants of the dual-class premium, we highlight relative liquidity, dividend differential, ownership structure and corporate governance practices. Naturally, only the two last effects relate to the control premium. Our results indicate a significant impact on the voting premium for companies whose greatest shareholder holds over 50% of the common shares and/or the government controls over 20% of the voting shares. There is also a positive effect for companies that extend tag along rights to preferred shareholders. Additionally, the voting premium seems to be irreversibly proportional to the level of corporate governance.

References

- Amihud, Y. & Mendelson, H. (1988). Liquidity and asset prices: Financial management implications. *Financial Management*, 17:5–15.
- Barclay, M. J. & Holderness, C. G. (1989). Private benefits from control of public corporations. *Journal of Financial Economics*, 25:371–395.
- Caprio, L. & Croci, E. (2008). The determinants of the voting premium in Italy: The evidence from 1974 to 2003. *Journal of Banking and Finance*, 32:2433–2443.
- Damodaran, A. (2005). The value of control: Implications for control premia, minority discounts and voting share differentials. Technical report, Stern School of Business, New York University.
- Dyck, A. & Zingales, L. (2004). Private benefits of control: An international comparison. *Journal of Finance*, 59:537–600.
- Grossman, S. & Hart, O. (1988). One share-one vote and the market for corporate control. *Journal of Financial Economics*, 20:175–202.
- Harris, M. & Raviv, A. (1988). Corporate governance: Voting rights and majority rules. *Journal of Financial Economics*, 20:203–235.
- Hoffman-Burchardi, U. (1999). Corporate governance rules and the value of control: A study of German dual class shares. Financial Markets Group Discussion Paper 315, London School of Economics.
- Horner, M. R. (1998). The value of the corporate voting right. *Journal of Banking and Finance*, 12:69–83.

- La Porta, R., Lopez-de Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *Journal of Finance*, 54:471–518.
- Meggison, W. L. (1990). Restricted voting stock acquisition premiums and the market value of corporate control. *Financial Review*, 25:175–198.
- Nenova, T. (2001). Control values and changes in corporate law in Brazil. Technical report, Harvard University.
- 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.
- Novaes, W. (2013). Intervenções governamentais em crises econômicas: Impacto sobre o Prêmio do Voto da Vale. Technical report, Departamento de Economia, PUC-Rio.
- Ørdegaard, B. A. (2007). Price differences between equity classes: Corporate control, foreign ownership or liquidity? *Journal of Banking and Finance*, 31:3621–3645.
- Saito, R. (2003). Determinants of the differential pricing between voting and non-voting shares in Brazil. *Brazilian Reviews of Econometrics*, 23:77–111.
- Saito, R. & Silveira, A. d. M. (2010). The relevance of tag-along rights and identity of controlling shareholders for the price spreads between dual-class shares: The Brazilian case. *Brazilian Administration Review*, 7:1–21.
- Silva, A. C. & Subrahmanyam, A. (2007). Dual class premium, corporate governance, and the mandatory bid rule: Evidence from the Brazilian stock market. *Journal of Corporate Finance*, 13:1–24.
- Zingales, L. (1994). The value of the 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*, 4:1047–1073.