

**PAYOUT POLICY, OWNERSHIP STRUCTURE, TAXATION, AND CORPORATE
VALUE: EVIDENCE FROM BRAZIL**

Jéfferson Augusto Colombo, Fundação de Economia e Estatística (FEE). Rua Duque de
Caxias, 1691, Porto Alegre/RS, Brazil, CEP 90010-283. Tel: +55 51 32169000,
Fax: +55 51 32169135, jacolombo@hotmail.com

Paulo Renato Soares Terra, School of Management, Universidade Federal do Rio Grande
do Sul, Rua Washington Luís 855, Office 321, Porto Alegre/RS, Brazil, CEP 90010-460.
Tel: +55 51 33083818, Fax: +55 51 33083991, prsterra@ea.ufrgs.br

ABSTRACT: The Brazilian tax code dictates different marginal tax rates on cash earnings payouts (dividends and interest on equity—IOE) depending on the nature of the shareholder. This, combined with the pervasive high ownership concentration characteristic of the Brazilian capital markets, influences financial decision-making and leads to potential conflicts of interest among shareholders. We use panel data probit/Tobit estimations to investigate the relationship between ownership structure and cash earnings payouts of a sample of 404 Brazilian listed firms in the period 1997–2008. Empirical results suggest that: i) ownership structure influences both the propensity and the amount to pay out as IOE; ii) the presence of institutional investors significantly increases cash payouts in the form of IOE *vis-à-vis* cash dividends; iii) deviations from the “one-share-one-vote rule” are positively related to IOE payouts; iv) larger, more profitable firms with better governance practices and more growth opportunities tend to pay out more cash in the form of IOE.

KEYWORDS: Payout Policy, Ownership Structure, Taxation, Corporate Governance, Interest on Equity

First Version: April 14, 2012

This Version: December 27, 2013

Work in progress, please do not cite without permission.

PAYOUT POLICY, OWNERSHIP STRUCTURE, TAXATION, AND CORPORATE VALUE: EVIDENCE FROM BRAZIL

1. INTRODUCTION

The relationship between ownership structure and distribution of earnings is a relatively new topic in the literature. The first studies on the subject suggested that payment of dividends reduces the agency problem between shareholders and managers (Easterbrook, 1984; Jensen, 1986), but only recently has it been noted that distribution of earnings also mitigates the agency problem between majority and minority shareholders (La Porta *et al.*, 2000; Faccio *et al.*, 2001; Truong and Heaney, 2007). To the extent that a greater share of profits is distributed, there would be a dual advantage for shareholders: i) managers would take greater care when selecting a firm's investment projects, so reducing the risk of overinvestment, and ii) there would be a reduction in monitoring costs.

An important aspect of studies on this topic concerns the influence of the legal system on investor protections (La Porta *et al.*, 1998) and on decisions made by firms, particularly regarding distribution of dividends (La Porta *et al.*, 2000). In systems based on French civil law, including Brazil, average ownership concentration is higher, which is characterized as a kind of shareholder defense given the low level of investor protection (La Porta *et al.*, 1998). This fact gives rise to an additional agency problem: the controlling shareholders can engage in activities that result in personal gain, through expropriation of other shareholders. These activities may be and often are lawful. In this context, the ownership structure, with its peculiarities regarding the nature of shareholders and the proportions of voting and total capital, may result in additional costs to shareholders, as measured by the risk of expropriation. This problem has become known in the literature by the term "tunneling" (Johnson *et al.*, 2000), and characterizes a situation in which controllers engage in activities, lawful or otherwise, to extract wealth for themselves.

Empirically, there is evidence that dividend payments are higher on average in countries with greater legal protection for minority shareholders, supporting the hypothesis that these shareholders use their increased powers to extract larger amounts of corporate dividends (*outcome hypothesis* of La Porta *et al.*, 2000). Evidence supporting the outcome hypothesis is also described in Brockman and Unlu (2009). In opposition to this idea, Mitton (2004) argues that it is precisely in countries where there is no effective corporate governance system that people should realize the risk of expropriation and attach more value to dividends,

which would corroborate the *substitute hypothesis* (La Porta *et al.*, 2000). However, evidence suggests that the outcome hypothesis best explains the relationship between corporate governance and the distribution of dividends in firms.

One of the regulatory tools used to mitigate the risk of expropriation, which is used in Brazil, is imposition of mandatory minimum dividends (La Porta *et al.*, 2000). A direct reflection of imposing a mandatory dividend is reduction in free cash flow within the company, making it difficult for controllers to obtain private benefits through tunneling activities. On the other hand, the obligation to pay dividends increases the need for external financing, putting at risk implementation of projects that may be profitable for the company (Myers and Majluf, 1984). In Brazil, where both the tax burden and cost of capital are comparatively high, internally generated profits assume even greater importance, putting into question the effectiveness of mandatory distribution of dividends. In this sense, Martins and Novaes (2012) find evidence that a significant fraction of public firms in Brazil use loopholes in Brazil's mandatory dividend rules to avoid paying dividends, with is consistent with Myers and Majluf (1984) argument.

In addition to the above-mentioned peculiarities involving the practice of benefit distribution, Brazilian legislation, with enactment of Law 9249/1995, introduced the concept of interest on equity (IOE). Article 9, Paragraph 7, of this law allows companies to charge the interest paid to remuneration of equity against the value of the dividends referred to in Article 202 of Law 6404/76, known as the Corporations Law. In addition to traditional dividends, whose tax rate to stockholders is 0%, Brazilian publicly traded companies now have an alternative mode of distributing profits to shareholders. With obvious tax advantages, profit distribution in Brazil now has a new, and apparently effective instrument, within a business environment of high taxes and lack of legal options for implementing appropriate tax planning.

Despite the notable tax advantages of IOE in earnings distribution, as demonstrated with numerical exemplifications in this study, the percentage of firms that distribute their income in that form is still relatively low. Such firms may be, and often are, destroying value for their shareholders. Of the total sample of 586 eligible assets, the average distribution of earnings in the form of interest on capital angled from 6% (1997) to 55% (2008). It was only after 2005 that distribution of IOE became representative, and yet approximately 45% of assets eligible for distribution of earnings through IOE distribute profits exclusively through dividends.

Several possible explanations for the limited use of IOE payments in Brazil are found in the literature: i) formed habits of firms and investors (Carvalho, 2003); ii) lack of more detailed regulations on the subject (Costa Jr. *et al.*, 2004; Silva *et al.*, 2006); iii) ignorance on the part of certain public companies in computation of the amount of interest on capital and imputation of the IOE (Costa Jr. *et al.*, 2004); iv) risk of transitory legislation (Carvalho, 2003); v) lack of standardization in accounting treatment and disclosure of IOE (Silva *et al.*, 2006); vi) characteristics inherent exclusively to the controller of companies (Rangel *et al.*, 2007); vii) lack of academic research and technical publications (Silva *et al.*, 2006).

In this study, we investigate whether ownership structure is a determinant of the distribution of IOE in Brazil, consonant with explanations based on the potentially conflicting interests of controllers (Rangel *et al.*, 2007). Through numerical exemplifications, it is clear that the advantages of IOE may manifest for corporate investors; however, for individual shareholders and associative investment entities, the optimal distribution is 100% of their cash dividends in the form of IOE, so long as such distribution does not surpass the limit imposed by law. Since what is optimum, from the tax standpoint, depends on the beneficiary's legal nature, decisions regarding the distribution of dividends *vis-à-vis* IOE should be analyzed considering the specific nature of the controller(s). At this point, this research represents a step toward better understanding of why many companies that recurrently distribute cash dividends to shareholders do not opt for IOE in Brazil. It is shown that, when the controller has no monetary incentive to distribute via IOE, the likelihood of value-destroying policies increases, implying undesirable consequences for the minority shareholders of these companies.

1.1. Research Question and Objectives

Given these theoretical aspects, the research problem in this paper is defined as follows: Does ownership structure, taking into account the tax aspects peculiar to the nature of the controlling shareholder, affect the distribution of IOE *vis-à-vis* dividends in Brazilian publicly traded companies?

To answer this question, the following general objective is defined: to theoretically and empirically analyze the distribution of dividends for the purpose of relating this strategic decision to the ownership structure and incentives created by Brazilian corporate and tax law. Specifically, this research aims to: a) synthesize how Brazilian tax legislation, with regard to IOE, differentiates the net benefit to shareholders according to their legal nature; and b)

analyze the influence of ownership structure on the distribution of IOE in two distinct respects: i) propensity to distribute; and ii) total amount distributed.

1.2. Background and Originality

The theme of this study is important because it is a central issue in corporate governance in the Brazilian capital markets. Controlling shareholders and their influence on minority shareholders and firm decisions were recently described as a cutting-edge topic in the research on global corporate governance (Bebchuk and Weisbach, 2010), especially in emerging markets (Kearney, 2012). The thesis driving this study is that many firms may not be enjoying the tax benefits of IOE precisely because the tax law discourages firm controllers from using it.

This study innovates and deepens analysis of the research problem in some important respects. First, we discuss the distribution of IOE from the perspective of the beneficiaries (shareholders), rather than payers (investees), as is commonly seen. Second, as a reflection of potential measurement problems, a variable was created that measures the ratio of the amount of IOE distributed and the maximum allowed by law (IOE_IOE*), which allows more assertive measurement of the size of the tax benefit obtained by each firm by IOE. Finally, several sensitivity analyses are performed that enable better and more reliable assessment of the results obtained.

1.3. Contributions and Limitations

It is hoped that this research will contribute to the study of corporate governance and ownership structure from various perspectives. As shown in Bebchuk and Weisbach (2010), frontier corporate governance research focuses on themes like controlling shareholders and shareholder activism, fields with many unanswered questions. On a theoretical level, this research facilitates better understanding of the influence of ownership structure on decisions regarding IOE distribution by Brazilian companies, which directly affect both taxes levied and shareholder wealth. In practical terms, this study suggests a policy of distributing cash dividends so that companies align payment of dividends to maximization of firm value. Finally, the end product of this research can also serve as input for regulators, who may add new elements when assessing the impacts of legislation on shareholder wealth and the potential value of firms. In such case, public authorities can question, debate, and perhaps even reassess laws and regulations, to foster the development of Brazilian capital markets.

2. THEORETICAL ASPECTS

2.1. Ownership Concentration

Brazil, like most countries whose legal systems are descended from French civil law, has concentration as a fundamental characteristic of the structure of property ownership (La Porta *et al.*, 2000). In comparative terms, the Brazilian market is closer to those of Japan and Continental Europe, and less to the markets of the US and the UK (Canellas and Leal, 2009). Despite this, ownership concentration has been changing over time. In the last decade, Brazil has faced a wave of corporate restructurings, caused by privatization and the entry of new partners in private sector companies, notably foreign and institutional investors (Silva, 2004).

A major change in corporate law in the Brazilian corporate environment occurred with the entry into force of Law 10.303/2001, also known as the New Corporate Law. Previously, legislation allowed companies to issue up to two-thirds of total capital in the form of shares without voting rights (preferred shares). Ultimately, a company might exercise majority control with only 16.67% of total capital, which gave rise to misaligned management practices in terms of risk and return on capital. With introduction of the New Corporate Law, the proportion of common and preferred shares fell from two-thirds to 50%, but only for new public companies.¹ Canellas and Leal (2009) suggest that firms that went public after 2001 present greater dispersion in their control structure. Black *et al.* (2010) show that a high percentage of Brazilian privately controlled firms (84%) issue non-voting preferred shares, revealing that this is a common practice in Brazilian capital markets. In terms of value, Black *et al.* (2012) find empirical evidence that the voting-to-common-shares ratio is directly related to firm value in Brazil, as measured by Tobin's Q.

In Brazil, as a result of ownership concentration, the very concept of corporate governance takes on a peculiar connotation. Two of the modern concepts of corporate governance are presented by the Brazilian Securities Commission (CVM) and the Brazilian Institute of Corporate Governance (IBGC), the two bodies that created Brazil's codes of corporate governance practices. According to the concept adopted by the CVM, corporate governance is the set of practices that aims to optimize the performance of a company by protecting the interests of all parties, including employees, creditors, and investors, thereby facilitating access to capital (CVM, 2002). By contrast, according to the IBGC, corporate

¹ The results of this study suggest that deviations between the voting rights and total cash flow rights have declined slightly. Between 1997 and 2008, the ratio of voting stocks to total outstanding stocks was 1.51, while between 2004 and 2008 it was 1.47. This effect can be attributed largely to Law 10303/2001, which altered the proportion of common stock to preferred stock from two-thirds to 50% for newly public companies.

governance is the system by which companies are monitored, encompassing the relationship between shareholders, boards of directors, directors, independent auditors, and the supervisory board (IBGC, 2009).

2.2. Interest on Equity

With the end of automatic monetary correction, as from January 1, 1996, Law 9249/1995, which introduced the concept of IOE,² came into effect. This legislation, in Article 9, Paragraph 7, allows companies to impute interest paid as remuneration of equity to the value of the mandatory dividends specified in the Corporations Law. Beginning the following year, 1997, the total amount of interest paid as remuneration of equity had to be limited to a maximum of half the computed earnings before deduction of interest, or accumulated profits and profit reserves. This change is in accordance with the provisions of Article 79 of Law 9430/1996.

In short, the institution of IOE represents a tax incentive for capital, parallel to the previously existing tax benefit for debt. The use of debt, incidentally, is widely used in other parts of the world, while the IOE mechanism, even with the effort expended in the search for similar legislation, seems to be exclusive to Brazil, which makes the internal environment of dividend policy even more complex and peculiar.

Regarding the legal interpretation, Neves (2007) argues that IOE, despite receiving the name “interest” is more similar to dividends than to interest itself. The CVM itself, in its Resolution 207/96, states that, regarding the concept of profit in corporate law, the distribution of return on equity constitutes distribution of income and not expenditure. Moreover, the regulatory organ affirms that if such interest is not treated as distribution of income, the comparability of the results of public companies will be affected and there may be repercussions in all holdings and allocations calculated based on corporate profit.

2.3. Tax Differences According to Legal Nature of Beneficiary

As mentioned above, Brazilian tax legislation provides for a 0% rate of income tax on dividends received, regardless of the legal nature of who receives the benefit. The amounts received as IOE, however, receive special tax treatment. When the recipient of the IOE is an individual, the tax is final and occurs on the date of the claim, subject to the basic tax rate of

² Although this law does not explicitly refer to the term “interest on equity,” the document shows that interest refers to return on capital to shareholders. The term as described was first used by lawmakers in Law 9430/1996, Article 78, which rectified the payout limits of companies.

15% (Law 9249/1995, Article 9). In this case, the firm's tax gain is greater than the increase in income tax that the beneficiary will pay—therefore it is advantageous from the standpoint of taxation that the company pays its dividends in the form of IOE, and not as regular dividends. This occurs regardless of whether the paying company (investee) pays income tax at the 15% or 25% marginal rates (Brito, 1999).

An interesting point is that although the distribution of IOE provides an increase in wealth for the individual shareholder in any situation (Brito, 1999), most (76.67%) Brazilian CFOs questioned in Décourt and Procianoy (2012) believe that the best method for distributing profits to individual shareholders is through dividends. Only a minority (21.67%) of survey respondents believe that the best way to distribute profits to individuals is via IOE.

In the case where the recipient is a corporation, the cost of receiving IOE increases significantly. According Higushi *et al.* (2011), companies taxed on taxable income must pay PIS/PASEP (Program for Social Integration) and COFINS (Contribution to Social Security Financing) at the rate of 9.25% on income received as interest on capital, since these payments are not part of the financial income taxed at the zero rate provisions in Decree 5442/2005. This is even more serious in business groups with different vertical levels: an increase in the tax burden of 9.25% can occur at each step of the chain of corporate ownership (Higushi *et al.*, 2011). For companies taxed on deemed income, besides paying PIS and COFINS of 3.65%, the interest received enters the computation basis for tax and social contributions under extraordinary income.

From Article 1 of Decree 5442 of May 9, 2005, the additional encumbrance levied on receipts of IOE for corporate shareholders is evident:

Article 1—They are reduced to zero the rates of the PIS/PASEP and Contribution to Social Security Financing—COFINS on financial income, including that resulting from operations for hedge purposes, earned by corporations subject to the non-cumulative incidence of these contributions.

Single Paragraph. The provisions set forth:

I—do not apply to interest on capital.

Decree 5442/2005.

For Brito (1999), when the beneficiary is a corporation, payment of IOE is the only way to reduce the tax burden in some cases. Briefly, this author identifies that the distribution of IOE exempts the beneficiary when it is a corporation with the following characteristics: i) tax losses and a negative basis for calculating CSLL (Contribution on Net Profits, yet another compulsory social contribution), in any situation; ii) firms taxed on deemed income—analyzing, however, the impact of additional income tax; iii) firms taxed on taxable income and a positive basis for calculating CSLL—with incidence of additional income tax, which is

applied to firms that exceeds R\$ 240,000 in revenues in a fiscal year. However, upon receipt of IOE, the respective income tax is withheld and may be compensated against the company's tax return within the same tax year, which is not always feasible (Higushi *et al.*, 2011). Thus, if the beneficiary company cannot deduct the amount withheld on receipt of IOE from its due taxes, the tax burden increases significantly.

As a result, when the controller (or controlling group) is a corporation, there is a tax incentive for the controlled company (investee) not to payout earnings (or pay less than the limit allowed by Brazilian legislation) in the form of IOE, but rather in the form of dividends, whose income tax rate is zero. Moreover, the greater the number of corporations in the vertical controlling structure, the greater the potential burden with additional rates of PIS and COFINS, which translate into an even greater disincentive for such companies to pay cash earnings via IOE. This factor is highly relevant in the Brazilian case, since 77% of publicly traded companies have a pyramid control structure (Bortolon and Leal, 2010).

Finally, we must consider a third group of beneficiaries: according to Law 9532/1997, Articles 28 and 33, when the shareholder that receives the IOE is constituted in the following forms: investment funds, investment clubs, portfolios and any other form of association or collective investment, the income tax rate is zero. This means that, for this class of beneficiary, there is no difference in fiscal terms between receiving earnings in the form of dividends (which are exempt for all shareholders) and IOE, although the latter reduces overall taxation at the company level. As a result, there is a monetary incentive that leads associative investment entities to prefer to receive cash dividends in the form of IOE, since they receive the same net value and have an asset with higher market value in the portfolio.

One question that arises with respect to the guidelines for designating companies as "associative entities" for investment is the inclusion of Complementary Pension Entities (CPEs), either open or closed, as defined by Complementary Law 109.³ In Articles 28 and 33 of Law 9532/1997, these institutions are explicitly listed among the set of investment entities that benefit from tax exemption, although they constitute a legal entity of a collective or associative nature. Despite the possible interpretative questions in Law 9532/97, enactment of Law 11053/2004 removed any suspicion on the part of those institutions and ratified the fiscally privileged nature of CPEs:

³ Briefly, according to the Complementary Law 109/2001, Closed Pension Fund Entities (CPFE) are those accessible only to employees of a company or group of companies, and to public servants, whatever the level of government. These entities are organized in the form of a non-profit foundation or civil organization. Open Pension Fund Entities (OPFE) are pension plans providing benefits conceived in the form of a single or continued payment that is available to any individual. They are constituted solely in the form of corporations.

Article 5: From January 1, 2005, they [CPEs] shall be exempt from retention at source and separate payment of income tax on income and earnings arising from the investments of resources of provisions, technical reserves and pension benefit plans of supplementary pension entities, insurance companies and FAPI, as well as life insurance coverage with survival clauses.

Single Paragraph: The provisions of this caption of this article apply to administrative funds constituted as closed supplementary pension funds and reserves, technical reserves and funds of the health plans mentioned in article 76 of Complementary Law 109 of May 29, 2001. (Included by Law 11196, of 21/11/2005).

Law 11053/2004.

This regulatory issue is also addressed in Rangel and Silva (2007). These authors conducted a case study with the company Tractebel, which has closed pension fund entities (CPFES) present in the controlling block, and suggested that the distribution of profits of the company should favor distribution by IOE. The motivation behind this is the tax exemption applied to interest on IOE for CPFES, stipulated by Article 5 of Law 11053/2004. In a numerical analysis, using estimates of cash flow and cost of shareholder equity under the Capital Asset Pricing Model (CAPM), the authors found that share value with distribution of earnings through IOE instead of dividends would be 3.49% higher for an individual beneficiary, and 8.28% higher in the case of a CPFES beneficiary.

To elucidate the tax differences between these different shareholders, a numerical summary is shown in Table 1. This demonstrates that distributing profits by IOE leads to overall tax savings of 19% for individuals. This amount is precisely the sum of the corporate tax and social contribution rates on net profits (approximately 34% for companies taxed on taxable income) that are no longer collected, less the corporate income tax withheld (15%), which is the burden levied on the individual beneficiary. This tax benefit can be seen to be proportional to the amount disbursed as IOE; so for higher payouts, the tax savings for the company will be even greater.

Table 1: Summary of tax differences in receipt of IOE

| Legal nature of shareholder | Individual | Corporation not subject to additional IT | Corporation subject to additional IT | Investment funds and pension funds |
|---|------------------|--|--------------------------------------|------------------------------------|
| A) Rates levied on IOE revenues | | | | |
| Income tax (IT) withheld at source (1) | 15% (definitive) | 15% (compensable) | | 0% |
| CSLL (2) | - | 9% | | - |
| Additional income tax (revenues over R\$240,000/yr) (3) | - | 0% | 10% | - |
| PIS / COFINS (4) | - | 9.25% | | - |
| B) Overall tax savings | | | | |
| Tax benefit at the firm level | 34.00% | 34.00% | 34.00% | 34.00% |
| Taxation at the beneficiary level (1+2+3+4) | 15.00% | 33.25% | 43.25% | 0.00% |
| Overall tax savings with the use of IOE | 19.00% | 0.75% | -9.25% | 34.00% |

Note: The above simulation uses tax rates prevailing in Brazil from 1996 to 2012. Companies with gross annual revenues over R\$240,000 pay, in addition to income tax of 15% withheld and 9% Social Contribution on Net Profit (CSLL), 10% additional corporate income tax, totaling approximately 34% of taxes on income before taxes. The rate of payment of IOE reflects the legislation relevant to each type of beneficiary, according to their specific regimen. Corporations receiving IOE can offset the income tax withheld in the receipt of IOE with the tax due in the current year, and this simulation hypothesizes that 100% of this tax can be deducted from the amount actually due on annual tax returns. The analysis of global tax savings with the distribution of IOE takes into account the total taxes paid by the investor and investee. Therefore, the differential in terms of creation (destruction) of wealth for each type of shareholder is in the positive (negative) tax saving from the standpoint of both the company (investee) and beneficiaries (shareholders). In percentage terms, the overall tax savings with distribution of IOE is obtained by dividing the absolute value of the overall tax savings by whatever would be paid in overall taxes in the event that all profits were distributed as dividends.

Source: Author's data.

Unlike the increase in shareholder wealth of individuals in any situation, in the case of corporate shareholders, the overall tax benefit depends on the incidence or not of additional income tax on the investor. As summarized in Table 1, in the case of corporate shareholders not subject to additional taxes (revenues up to \$240,000 per year), there is a small tax saving on the order of 0.75%. However, for high earning corporate shareholders subject to the additional 10% income tax rate, the tax benefit at the investor level (34%) is offset by a tax in an equivalent amount at the level of the beneficiary (34%), not counting the incidence of PIS and COFINS. In this case, the tax saving is negative at the exact percentage of the incidence of these social contributions (9.25%). It should be noted that these conclusions assume that the company is taxed on taxable income and that the firm can offset the 15% income tax withheld at the source in its annual tax returns.

The results of the simulations with corporate beneficiaries were similar to those described by Libonati *et al.* (2008), even though the latter do not consider the impact of additional PIS and COFINS on the financial income derived from IOE (Decree 5442/2005). This conclusion is also reached by Brito (1999), in which there is tax savings only for the payer of the IOE, in the case of corporate beneficiaries, in two situations: i) when firms make a fiscal loss and a negative base for calculating the social contribution, ii) when the payer of the earnings is subject to additional tax and the beneficiary is not subject to additional income

tax. As a result, the overall net benefit for corporate investors should be analyzed on a case-by-case basis.

If the beneficiary shareholder is an institutional investor (associative investment entity), the overall net benefit is evident. Exemption from income tax withheld at the source allows the full tax benefit at the level of the investee (34%) to be captured by these beneficiaries. Thus, for these shareholders, the tax savings generated by the distribution of profits through IOE rather than dividends is 34%, as shown in Table 1. Among all the legal forms of beneficiaries, the associative entities are those that benefit most from distribution by IOE.

3. METHODOLOGICAL ASPECTS

3.1. Data Collection and Sample Definition

The sample consists of companies whose shares were listed on the *Bolsa de Valores de Sao Paulo* (BM&F Bovespa) over the period 1997–2008. The data sources are the database *Economática*®, which provides financial information, and the INFOinvest® system, which gathers information on the ownership structure of the listed companies. The advantage of the latter in relation to direct access to the database of the CVM is that it groups and lists information at the individual shareholder level, making it easier to obtain data on more vertical structures.

This study's final sample consists of 404 companies, with a total of 586 traded shares, both ordinary and preferred. Where companies had more than one class of preferred share, the least liquid class was eliminated. Companies that did not distribute cash dividends, which may have adopted this practice as a policy to maximize shareholder wealth,⁴ were also eliminated. Since the aim of this study is to understand why many companies that distribute cash dividends do not do so in the form of IOE, companies that did not pay dividends or IOE were excluded from the sample.

Industry distribution of the companies is in accordance with the classification of economic activity proposed by the *Economática* database except for the industry classification “others,” which due to its large size, received a specific analytical treatment. After analyzing levels I and II of the NAICS classification, also available in the *Economática* database, the industry classification “others” was reduced from the 133 companies in the original sample to

⁴ According to Procianoy (2006), the optimal dividend policy of firms may be reinvestment of all profits generated by their activity, especially in environments characterized by financial constraints, such as Brazil.

just 54 companies. The final details of the industry distribution of the sample are set forth in Table 2.

Table 2 also shows the means for the dependent variables and the ownership structure. All non-dummy variables in this study are winsorized at a level of 2.5%, to limit the undesired influence of outliers. The mean of the variable IOE_BIN, which represents payment or not of IOE, is highest in the following industries: Mining (0.63), Industrial Machinery (0.39), and Electrical Power (0.36). The variable IOE_IOE*, which measures the ratio between the amount distributed and the maximum allowed by law, is higher in the following industries: Mining (0.31), Finance and Insurance (0.22), and Steel & Metals (0.22). The industries with greatest ownership concentration maintained by the controller(s) shareholder(s) VOTING_SHARES, are: Agriculture and Fishing (77.2%), Manufacturing (75.8%), and Electrical Power (70.3%). Finally, the largest deviations between voting capital and total capital (CONTROL_TOTALCAP) are found in companies in the Telecommunications (1.92), Pulp and Paper (1.81), and Oil and Gas (1.77) industries.

Table 2: Composition by industry, means of dependent variables and ownership structure

| INDUSTRY (n=21) | NUMBER OF OBSERVATIONS | | | | DEPENDENT VARIABLES | | | | | OWNERSHIP STRUCTURE | | | | | | | |
|-------------------------|------------------------|----------------|-------------|----------------|---------------------|-------------|-------------|-------------|-------------|---------------------|-------------|-------------|-------------|-------------|-------------|-------------------|------------------|
| | ASSETS | % | COMPANIES | % | IOE BIN | IOE TA | IOE PAYOUT | IOE EPS | IOE IOE* | IND | CS2 | CS3 | FUNDS | GOV | FUNDS PART | VOTING SHARES (%) | CONTROL TOTALCAP |
| Finance and Insurance | 491 | 11.79% | 286 | 12.58% | 0.33 | 0.00 | 0.10 | 0.27 | 0.22 | 0.10 | 0.22 | 0.31 | 0.06 | 0.28 | 0.15 | 67.69 | 1.38 |
| Steel & Metals | 456 | 10.95% | 238 | 10.47% | 0.31 | 0.01 | 0.07 | 0.22 | 0.21 | 0.08 | 0.15 | 0.61 | 0.09 | 0.00 | 0.23 | 62.98 | 1.65 |
| Electrical Power | 447 | 10.73% | 237 | 10.42% | 0.36 | 0.01 | 0.08 | 0.21 | 0.19 | 0.00 | 0.00 | 0.66 | 0.06 | 0.27 | 0.18 | 70.29 | 1.41 |
| Textiles | 293 | 7.03% | 148 | 6.51% | 0.06 | 0.00 | 0.02 | 0.05 | 0.05 | 0.31 | 0.34 | 0.20 | 0.00 | 0.00 | 0.18 | 51.69 | 1.60 |
| Chemicals | 292 | 7.01% | 146 | 6.42% | 0.19 | 0.00 | 0.04 | 0.11 | 0.10 | 0.00 | 0.21 | 0.73 | 0.00 | 0.06 | 0.18 | 70.22 | 1.69 |
| Telecommunications | 273 | 6.55% | 137 | 6.02% | 0.37 | 0.01 | 0.12 | 0.26 | 0.20 | 0.00 | 0.03 | 0.93 | 0.04 | 0.00 | 0.27 | 64.07 | 1.92 |
| Food & Beverages | 263 | 6.31% | 138 | 6.07% | 0.20 | 0.00 | 0.06 | 0.15 | 0.14 | 0.08 | 0.36 | 0.34 | 0.16 | 0.00 | 0.34 | 56.21 | 1.38 |
| Business Management | 251 | 6.02% | 143 | 6.29% | 0.17 | 0.00 | 0.04 | 0.13 | 0.11 | 0.18 | 0.45 | 0.18 | 0.07 | 0.00 | 0.30 | 54.41 | 1.58 |
| Vehicles and Parts | 201 | 4.82% | 115 | 5.06% | 0.17 | 0.00 | 0.05 | 0.12 | 0.15 | 0.25 | 0.16 | 0.39 | 0.16 | 0.00 | 0.68 | 54.87 | 1.61 |
| Commerce | 180 | 4.32% | 106 | 4.66% | 0.28 | 0.00 | 0.07 | 0.20 | 0.20 | 0.03 | 0.37 | 0.31 | 0.00 | 0.00 | 0.27 | 49.44 | 1.59 |
| Others | 155 | 3.72% | 94 | 4.13% | 0.19 | 0.00 | 0.06 | 0.16 | 0.15 | 0.45 | 0.14 | 0.09 | 0.06 | 0.18 | 0.12 | 56.70 | 1.66 |
| Oil & Gas | 122 | 2.93% | 65 | 2.86% | 0.23 | 0.00 | 0.05 | 0.17 | 0.17 | 0.00 | 0.48 | 0.22 | 0.00 | 0.20 | 0.48 | 43.93 | 1.77 |
| Pulp & Paper | 120 | 2.88% | 64 | 2.81% | 0.27 | 0.01 | 0.09 | 0.20 | 0.18 | 0.00 | 0.23 | 0.77 | 0.00 | 0.00 | 0.00 | 65.30 | 1.81 |
| Manufacturing | 118 | 2.83% | 66 | 2.90% | 0.13 | 0.00 | 0.03 | 0.06 | 0.09 | 0.12 | 0.25 | 0.62 | 0.00 | 0.00 | 0.19 | 75.76 | 1.54 |
| Construction | 114 | 2.74% | 68 | 2.99% | 0.02 | 0.00 | 0.00 | 0.01 | 0.01 | 0.50 | 0.19 | 0.07 | 0.00 | 0.00 | 0.11 | 45.58 | 1.25 |
| Industrial Machines | 97 | 2.33% | 57 | 2.51% | 0.39 | 0.01 | 0.09 | 0.21 | 0.18 | 0.00 | 0.22 | 0.53 | 0.00 | 0.00 | 0.22 | 65.92 | 1.72 |
| Electronics | 86 | 2.06% | 50 | 2.20% | 0.15 | 0.00 | 0.02 | 0.06 | 0.08 | 0.02 | 0.23 | 0.70 | 0.02 | 0.00 | 0.34 | 59.80 | 1.22 |
| Non-Metal Minerals | 72 | 1.73% | 41 | 1.80% | 0.14 | 0.00 | 0.03 | 0.06 | 0.07 | 0.00 | 0.32 | 0.35 | 0.15 | 0.00 | 0.31 | 52.29 | 1.21 |
| Mining | 68 | 1.63% | 34 | 1.50% | 0.63 | 0.01 | 0.17 | 0.56 | 0.31 | 0.00 | 0.21 | 0.64 | 0.15 | 0.00 | 0.15 | 54.38 | 1.61 |
| Transportation | 56 | 1.34% | 35 | 1.54% | 0.30 | 0.00 | 0.08 | 0.22 | 0.19 | 0.00 | 0.14 | 0.45 | 0.38 | 0.00 | 0.57 | 54.46 | 1.21 |
| Agriculture and Fishing | 11 | 0.26% | 6 | 0.26% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 77.16 | 1.48 |
| Total | 4166 | 100.00% | 2274 | 100.00% | 0.25 | 0.00 | 0.07 | 0.18 | 0.16 | 0.10 | 0.22 | 0.47 | 0.06 | 0.08 | 0.24 | 60.95 | 1.56 |

Note: This table shows the number of observations in the sample, segmented by industry, between 1997 and 2008. The sample is composed of those companies that distributed cash dividends, through dividends, IOE, or a combination of both. The column ASSETS takes into account the number of observations per asset, in each industry, for the entire period. The column COMPANIES restricts the maximum number of assets to one per company. In addition to the composition by industry of the sample, the means of dependent variables (IOE_BIN, IOE_TA, IOE_PAYOUT, IOE_EPS, and IOE_IOE*) and ownership structure (IND, CS1, CS2, FUNDS, GOV, FUNDS_PART, VOTING_SHARES and CONTROL_TOTALCAP) are presented for each of the 21 industries in the sample.

Source: Author's data.

3.2. Coverage Period

The model was tested using the period 1997–2008. The period was limited due to data availability for the variables used in the empirical model. A relatively long period of analysis was chosen, because it provides a greater number of observations, thus increasing the statistical power of the results and enabling verification of trends over time.

3.3. Definition of Ownership Structure Variables

Classification of the variables of ownership structure follow the logic of the differentiated rates of taxation upon receipt of IOE. Following the methodology by Bortolon and Leal (2010), direct and indirect ownership structures were analyzed. The purpose of applying this methodology is to understand, not only the direct shareholding in the investee, but also the composition of the shareholders at the second and other levels. In many cases, shareholders obtain substantial holdings by indirect means, controlling other companies that have shares in the investee, forming a pyramid control structure. Figure 1 summarizes the criteria considered in the classification of the variables of ownership structure.

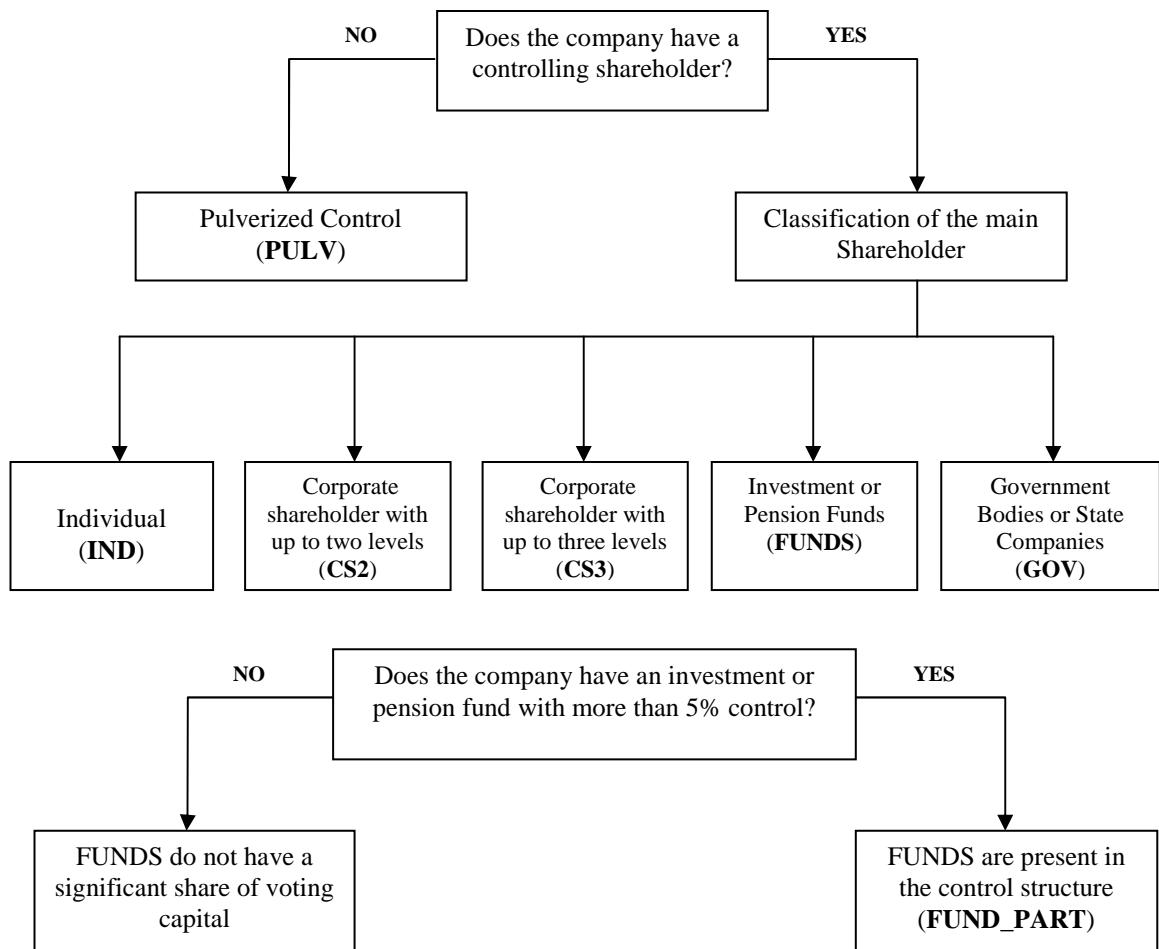


Figure 1: Classification and definition of the variables in the ownership structure

3.4. Panel Data Estimation

For Hsiao (1986), using data grouped in panels (stacking time series and cross-sectional data) is justified because it allows the use of a greater number of observations, thus increasing the degrees of freedom, reducing collinearity between exogenous variables, and thus reducing the potential bias of the omitted variable. This methodology is also quite widely used in studies in finance, especially when the objective is to analyze the behavior of individuals over time.

Estimating the panel with censored data, that is, with the accumulation of observations at a certain limit, by ordinary least squares is biased and inconsistent (Wooldridge, 2002). Since the distribution of IOE cannot be negative and many companies distribute earnings only in the form of dividends, there is a concentration of observations at zero. For this reason, regressions are estimated using two nonlinear models, based on maximizing the likelihood function, probit and Tobit.

3.4.1. Probit Model

To measure the probability of a firm paying IOE, the dependent variable is converted into a dummy variable, equal to 1 (firms that distributed IOE in a given year) or zero (all others). Probit regressions are used for these estimates.

In the probit model, it is assumed that the cumulative distribution function (CDA) of the dependent variable is normal, that is, the effect of a unit variation in X (in this case, the independent variables) on the likelihood of $Y = 1$ (if the company paid dividends in the current year) is normally distributed.

3.4.2. Tobit Model

According to Wooldridge (2002), linear probability models have drawbacks when applied to strictly positive variables, with an accumulation of values at zero. One way to circumvent this problem is to use a Tobit model, which is specially designed for modeling dependent variables that have corner solutions.

The Tobit model is used in a manner analogous to the probit model, but the dependent variable can assume any positive value in the distribution of probabilities. In the present case, this model determines the amount of benefits distributed by IOE, not just the tendency, as with the probit model. It is reiterated that the tax advantages of IOE are proportional to the amount distributed; therefore, for a better understanding of the research problem, it is essential to analyze the magnitude of the distribution.

The probit and Tobit models are widely used in the literature when a subset of the sample is censored (for example, see Truong and Heaney, 2007; Brockman and Unlu, 2009; Boulton, Braga-Alves and Shastri, 2012). This occurs with several financial series, such as dividends, where many companies choose not to distribute profits to their shareholders. In such cases, there are positive values for the regressors (independent variables), but not for the dependent variable. Estimates based on models of minimization of the squared errors, as shown above, generate not only biased but inconsistent estimates. That is, even asymptotically, the estimates of the parameters are problematic.

3.5. Model, Constructs, and Variable Definitions

The general model of this study is as follows:

$$Y_{it} = \alpha_0 + \sum_{j=1}^n \beta_j X_{jit} + \sum_{k=1}^m \delta_k Z_{kit} + \mu_{it} \quad (1)$$

$$\mu_{it} = \varepsilon_i + \omega_{it} \quad (2)$$

where Y_{it} is a measure of IOE payout for firm i in year t , X_{jit} are ownership structure variables ($j = \text{IND, CS2, CS3, FUNDS, GOV, FUNDS_PART, VOTING_SHARES, CONTROL_TOTALCAP}$ for firm i in year t), Z_{kit} are control variables ($\text{SIZE, EBITDA_TA, PROFITRES_TA, ROA, FINEXPENSES_TA, DEPREC_TA, LEVERAGE, ADR, N2_NM, N1_N2_NM, MARKET_BOOK}$ for firm i in year t), μ_i is the composit error term, with the sum of the unobserved idiosyncratic firm effect,⁵ ε_i , and u_{it} is the error term.

To ensure that the inference on the estimated coefficients of the variables of interest are as unbiased as possible, we include control variables in equation (1). In other words, the relationship between ownership structure and payment of IOE should be considered once other relevant effects, which are included based on the theoretical and empirical literature surveyed, have been checked. The control variables are listed in Table 3.

⁵ This term refers to the random effects panel data utilized in estimation. Wooldridge (2002) shows that, for Tobit and probit panel data estimations, there is no fixed effects process of estimation..

Table 3: Description of variables and motivation for using control constructs

| CONSTRUCT | DESCRIPTION | REFERENCES | THEORY AND MOTIVATION |
|------------------|--|--|---|
| IOE_BIN | Dummy that assumes value "1" if the company distributed IOE in the current year | | EARNINGS DISTRIBUTION: The companies that use IOE THE most to compensate shareholders are those with higher ratios of IOE_TA, IOE_EPS, IOE_PAYOUT and IOE_IOE*. |
| IOE_TA | Ratio between amount of IOE and Total Asset in the current year | | |
| IOE_EPS | Ratio between amount of IOE and Net Profit in the current year | - | |
| IOE_PAYOUT | Ratio between amount of IOE and total earnings distributed in cash in current year | | |
| IOE_IOE* | Ratio between amount of IOE and maximum allowed by law in current year | | |
| IND | Dummy that assumes value "1" if main controlling shareholder is an Individual | | OWNERSHIP STRUCTURE: Companies with more concentrated ownership structure pay less dividends than those with less concentrated capital, since greater free cash flow provides opportunities to expropriate minority shareholders. |
| CS2 | Dummy that assumes value "1" if main controlling shareholder is a Firm with up to two vertical levels before the ultimate individual shareholder | | |
| CS3 | Dummy that assumes value "1" if main controlling shareholder is a Firm with up to three vertical levels before the ultimate individual shareholder | | |
| FUNDS | Dummy that assumes value "1" if main controlling shareholder is an associative investment entity | | |
| GOV | Dummy that assumes value "1" if main controlling shareholder is a government body or state-owned company | | |
| FUNDS_PART | Dummy that assumes value "1" if there is any associative investment entity that holds 5% or more of voting capital | | |
| VOTING_SHARES | Proportion of voting shares held by main controlling shareholder | | |
| CONTROL_TOTALCAP | Ratio between share of voting capital and share of total capital maintained by controller | | |
| SIZE | Natural logarithm of Total Assets | Fama and French (2001), Mitton (2004), Brockman and Unlu (2009), Boulton, Braga-Alves and Shastri (2010) | |
| EBITDA_TA | Ratio between EBITDA and Total Asset in the current year | | |
| PROFITRES_TA | Ratio between total profit reserves plus accumulated profits and Total Assets in the previous year | Fama and French (2001), Mitton (2004), Truong and Heaney (2007), Brockman and Unlu (2009), Ferreira Jr. <i>et al.</i> (2010) | |
| ROA | Ratio between current net profit and Total Assets at the beginning of teheperiod | | |
| FINEXPENSES_TA | Ratio between financial expenses and Total Asset in current year | | NON-EQUITY TAX SHIELDS: Companies that receive high non-equity tax shields tend to have lower or even zero benefits with payment by IOE (interest on equity). |
| DEPREC_TA | Ratio between total depreciation and amortization and Total Asset in current year | Truong and Heaney (2007), Brockman and Unlu (2009), Boulton, Braga-Alves and Shastri (2012) | |
| PREV_LOSSES | Dummy variable that assumes the value "1" if the company has accumulated losses from prior fiscal years, "0" otherwise | | |
| ADR | Dummy that assumes value "1" if the company has ADRs on NYSE (New York Stock Exchange) | | CORPORATIVE GOVERNANCE: Better corporate governance leads to fewer agency problems, and therefore reduces need to distribute dividends. |
| N2_NM | Dummy that assumes value "1" if the company is listed at level 2 or on the Corporate Governance New Market of the BM&F Bovespa | | |
| N1_N2_NM | Dummy that assumes value "1" if the company is listed at any level of the Corporate Governance of the BM&F Bovespa | Mitton (2004), Truong and Heaney (2007), Brockman and Unlu (2009), Boulton, Braga-Alves and Shastri (2012) | |
| MARKET_BOOK | Market-to-book ratio | Fama and French (2001), Truong and Heaney (2007), Boulton, Braga-Alves and Shastri (2012), Ferreira Jr. <i>et al.</i> (2010) | INVESTMENT OPPORTUNITIES: Distribution of dividends is inversely proportional to investment opportunities / growth. |

4. RESULTS

4.1. Evolution of IOE (1997 to 2008)

Assessment of the time series of companies that paid IOE between 1997 and 2008 takes into account the ratio between the companies in the sample that distributed the IOE in the period and the number of companies that distributed cash dividends. Table 4 shows that in 1997 only 6.1% of companies that distributed earnings in cash did so in the form of IOE. In that year, the remaining 94.9% of the sample distributed profits exclusively through dividends and, thus, missed the tax benefits provided by IOE. It should be reiterated that, because IOE is imputed to the mandatory dividend of Article 202 of Law 6404/74, there is no pecuniary reason, from the point of view of the company, that cash dividends should not be distributed in this way (in other words, dividends and IOE can be interpreted as perfect substitutes in cash distribution).

As shown in Table 4, throughout the series a growing proportion of companies choose to distribute cash dividends by IOE, which shows that more and more firms are taking advantage of tax benefits provided by this mechanism. As from 2006, this proportion exceeded 50%, indicating that approximately 6 out of 10 companies distribute their profits, at least in part, in the form of IOE. This increase in the proportion of firms paying dividends in this way gives rise to an improvement in management practices aimed at maximizing the value of the firm. There is also notable growth in the ratio of firms distributing IOE in relation to eligible firms, which do not necessarily pay cash dividends, in the series from 1997 to 2008. According to Table 4, the percentage of companies that paid IOE in relation to the total number of eligible companies was 3.8% in 1997, rising to 31.1% in 2008.

Table 4: Analysis of number of companies distributing earnings in cash

| YEAR | ELIGIBLE (A) | CASH_DIST (B) | IOE (C) | (B) / (A) | (C) / (B) | (C) / (A) |
|------|-----------------|------------------|------------|-----------|-----------|-----------|
| 1997 | 480 | 297 | 18 | 61.9% | 6.1% | 3.8% |
| 1998 | 639 | 351 | 34 | 54.9% | 9.7% | 5.3% |
| 1999 | 786 | 337 | 34 | 42.9% | 10.1% | 4.3% |
| 2000 | 798 | 349 | 42 | 43.7% | 12.0% | 5.3% |
| 2001 | 787 | 374 | 41 | 47.5% | 11.0% | 5.2% |
| 2002 | 789 | 359 | 37 | 45.5% | 10.3% | 4.7% |
| 2003 | 773 | 333 | 46 | 43.1% | 13.8% | 6.0% |
| 2004 | 766 | 365 | 58 | 47.7% | 15.9% | 7.6% |
| 2005 | 736 | 393 | 119 | 53.4% | 30.3% | 16.2% |
| 2006 | 702 | 365 | 218 | 52.0% | 59.7% | 31.1% |
| 2007 | 671 | 350 | 212 | 52.2% | 60.6% | 31.6% |
| 2008 | 628 | 355 | 195 | 56.5% | 54.9% | 31.1% |

Note: The column "Eligible" represents the number of companies in the BM & F Bovespa eligible to pay interest on equity (IOE), each year, under existing law. "CASH_DIST" is the number of companies that distributed earnings in cash, irrespective of the form of distribution. "IOE" is the number of companies that distributed earnings in cash through IOE. The last three columns on the right show the proportions between these variables, so as to display both company practices and the joint temporal evolution of these variables.

Despite the visible increase over time, a very significant percentage of companies that distribute cash dividends do not use IOE, despite the clear tax advantages provided. This stylized fact cannot be explained from the viewpoint of the company—in any situation, distribution by IOE instead of by dividend reduces the company’s tax burden. Why, then, do so many companies distribute their profits through dividends and not by IOE? One explanation lies in the tax law, which establishes differential tax rates according to the legal nature of the beneficiaries. In practice, when there are deviations between the optimum outcome for the majority shareholder and the optimum outcome for the whole of the company, the decision can lead to expropriation of minority shareholders, to the extent that their shares would be worth less than their potential maximum value. The multivariate analysis described in the following sections attempts to provide empirical evidence regarding these issues.

4.2. Multivariate Analysis

Multivariate analysis provides important answers to two fundamental questions: i) what factors lead companies to distribute IOE? and ii) what factors cause companies to distribute larger or smaller amounts of cash in the form of IOE? A summary of the results is set forth in Table 5.

As with other empirical studies that address choices regarding distribution of dividends (Truong and Heaney, 2007; Brockman and Unlu, 2009) and IOE (Boulton, Braga-Alves and Shastri, 2012), the present study finds evidence that larger, more profitable companies with higher growth opportunities are more likely to distribute via IOE. Specifically, the results in Table 5 suggest that the probability of an average-sized company distributing IOE increases with the size of its total assets (SIZE), and with its earnings before interest, taxes, depreciation, and amortization (EBITDA_TA), and market-to-book value (MARKET_BOOK). The coefficients of these variables are statistically significant and robust to multiple design specifications, especially in relation to the first two. The size effect found in the empirical analysis suggests that smaller companies, typically less professionalized as regards administration, tend to deliver less IOE than larger companies. This effect may also be related to economies of scale, among other features of larger companies. Another important result is that the shares most likely to pay IOE are negotiated with larger MARKET_BOOK indices, so that there is a premium on the market value of such companies. In other words, the market seems to positively evaluate distribution by IOE, corroborating the

fact that the practice provides tax relief at the company level and aggregates value for the shareholder.

Table 5—Propensity and amount of distribution of IOE: probit and Tobit models

| VARIABLES | ESTIMATION METHOD | | | | | | | |
|------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|---------------------|------------------------|---------------------|
| | PROBIT | | | | TOBIT | | | |
| | REG_1 | REG_2 | REG_3 | REG_4 | REG_5 | REG_6 | REG_7 | REG_8 |
| _cons | -8.8773 (-9.81)*** | -8.0516 (-6.32)*** | -9.0275 (-9.57)*** | -8.9054 (-6.73)*** | -3.0225 (-10.85)*** | -4.7195 (-0.14) | -3.2044 (-10.25)*** | -5.1500 (-0.13) |
| SIZE | 0.3883 (6.95)*** | 0.3060 (4.85)*** | 0.3776 (6.55)*** | 0.3185 (4.97)*** | 0.1258 (7.58)*** | 0.0983 (4.49)*** | 0.1346 (7.17)*** | 0.1153 (5.40)*** |
| EBITDA_TA | 2.1274 (2.75)*** | 2.0959 (2.53)** | 1.7266 (2.23)** | 2.0196 (2.41)** | 1.0168 (3.99)*** | 1.1277 (4.06)*** | 0.9216 (3.47)*** | 1.1004 (3.88)*** |
| PROFITRES_TA | 1.7369 (2.67)*** | 1.1112 (1.60) | 1.7223 (2.60)*** | 0.8877 (1.24) | 0.2125 (1.00) | 0.0367 (0.16) | 0.3139 (1.42) | 0.0188 (0.08) |
| DEPREC_TA | 1.1468 (0.72) | 1.2596 (0.76) | 2.4737 (1.47) | 2.8538 (1.64) | 0.8692 (1.69)* | 1.1048 (2.14)** | 1.6997 (3.10)*** | 1.8514 (3.27)*** |
| FINEXPENSES_TA | -1.2895 (-1.07) | -1.4806 (-1.17) | -1.0161 (-0.84) | -1.0666 (-0.83) | -0.6489 (-1.64) | -0.6067 (-1.49) | -0.5238 (-1.27) | -0.4285 (-1.02) |
| ADR | 0.3938 (1.90)* | 0.2287 (1.00) | 0.5162 (2.44)** | 0.3584 (1.48) | 0.1250 (2.04)** | 0.0606 (0.81) | 0.1622 (2.47)** | 0.1021 (1.36) |
| N2_NM | 0.1858 (0.79) | 0.3157 (1.21) | 0.5503 (2.10)** | 0.6034 (2.10)** | 0.0817 (1.14) | 0.1594 (1.97)* | 0.1924 (2.42)** | 0.2509 (2.90)*** |
| MARKET_BOOK | 0.0736 (1.83)* | 0.0873 (2.11)** | 0.0792 (2.00)** | 0.0915 (2.24)** | 0.0164 (1.30) | 0.0170 (1.31) | 0.0169 (1.32) | 0.0206 (1.57) |
| IND | | -0.0978 (-0.27) | | 0.5523 (1.43) | | 0.0200 (0.17) | | 0.2306 (1.83)* |
| CS2 | | -0.4869 (-1.60) | | -0.1730 (-0.55) | | -0.1010 (-0.98) | | 0.0158 (0.15) |
| CS3 | | 0.1662 (0.55) | | 0.1767 (0.56) | | 0.0746 (0.74) | | 0.0871 (0.81) |
| GOV | | 0.8725 (1.64) | | 0.8715 (1.60) | | 0.2196 (1.34) | | 0.2070 (1.15) |
| FUNDS | | -0.3677 (-0.97) | | -0.2305 (-0.60) | | -0.1017 (-0.82) | | -0.0104 (-0.08) |
| FUNDS_PART | | 0.3302 (1.65)* | | 0.3580 (1.80)* | | 0.1525 (2.46)** | | 0.1262 (1.92)* |
| VOTING_SHARES | | -0.3055 (-0.96) | | -0.0021 (-0.68) | | -0.1044 (-1.02) | | -0.0705 (-0.68) |
| CONTROL_TOTALCAP | | 0.4994 (4.56)*** | | 0.4477 (4.16)*** | | 0.1765 (4.99)*** | | 0.1716 (4.81)*** |
| Stocks (n) | 413 | 398 | 413 | 398 | 413 | 398 | 413 | 398 |
| Observations (n) | 2358 | 2033 | 2358 | 2033 | 2358 | 2033 | 2358 | 2033 |
| Log likelihood | -803.24 | -716.74 | -772.29 | -691.58 | 1241.14 | 1171.38 | 1271.31 | 1193.61 |
| Year dummies | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry dummies | No | No | Yes | Yes | No | No | Yes | Yes |

Note: This table presents the results of the probit [REG1, REG2, ..., REG4] and Tobit [REG5, REG6, ..., REG8] panel data regressions for dependent variables IOE_BIN and IOE_IOE*, respectively. This represents the ratio between the amount of distribution of IOE in year "t" and the maximum allowed by Brazilian tax legislation. Dummy variable IOE_BIN assumes value "1" if the company proceeds are distributed by IOE in period "t" and "0" otherwise. Year and sector dummies were inserted in the table to capture the effects of period and sector on economic activity. Even-numbered regressions are similar to the previous regression (base model), but include the ownership structure variables. The estimated coefficient and the z statistic (in parentheses) are reported for each variable.

***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Source: Author's data.

In even-numbered regressions, which include the ownership structure variables, neither the variables IND, CS2, CS3, GOV, and FUNDS, nor the proportion of shares with voting rights held by the controllers (VOTING_SHARES) show statistical significance. However, with regard to the amount of distribution, state-controlled companies distribute more than others (REG_6, REG_8), which corroborates the results from Bortolon and Leal (2010), who find evidence that state-controlled companies distribute more cash dividends than other firm types. Statistically, more striking results are found with regard to the presence of institutional investors (FUNDS_PART) in the controlling structure. The presence of these investors leads to a higher propensity to distribute (REG_2, REG_4) and a greater amount of distribution by IOE (REG_6, REG_8). The presence of institutional investors, not necessarily holding controlling positions, seems to generate a substantial incentive. These institutions, often pension funds, exert considerable influence on the companies within their portfolios, even when they do not hold the majority position. This result strengthens the argument known in the literature as pension fund activism (Grinstein and Michaely, 2005, for a general discussion and application; Punsuvo, Kayo and Barros, 2007, for the Brazilian specified case), which considers the influence of such funds on various aspects of the firm.

Other important results are shown in Table 5. Higher financial expenses (FINEXPENSES_AT) reduce the probability of distributing via IOE, but the result is not statistically significant. The presence of ADRs listed on the NYSE (ADR) is positively related to both the probability and the amount of earnings distributed in the form of IOE. However, this result seems sensitive to the inclusion of variables on ownership structure (REG_2, REG_4, REG_6, REG_8), suggesting that much of ADR explanatory power is already contained in the ownership structure of the companies. Firm presence in Level II or in the *Novo Mercado* (special corporate governance listing segments of the BM&F Bovespa) presents positive and statistically significant coefficients in the models that include variables of ownership structure and controls for the year and industry effects (REG_4, REG_8). These models are, according to likelihood analysis, those that best fit the data. This evidence suggests that better corporate governance practices increase the likelihood of an average company enjoying the tax benefits of IOE when distributing earnings.

Further, regarding analysis of the corporate governance construct, a particularly important aspect must be emphasized. Inclusion of a Level I special segment of corporate governance (N1_N2_NM) dummy reverses the sign of the coefficients of the variable N2_NM in both the probit and Tobit models. This result strengthens the argument that Level I

is a segment with a lower degree of membership requirements, which places it much closer to the traditional market than the *Novo Mercado*. In this sense, considering the distribution by IOE a practice that creates shareholder value, the probability of companies using this tool only increases with listing in Level II or on the *Novo Mercado*.

Unlike Level II and the *Novo Mercado*, membership of Level I does not require, for example, mandatory bid rules for non-voting and minority shares (“tag along rights”), voting rights to preferred shareholders on matters of greater importance (mergers and acquisitions, major asset sales), adherence to the exchange’s Arbitration Board, mandatory offer to repurchase shares in circulation in the case of delisting or deregistration of trading at that listing segment. This lower level of requirements of good governance appears to be expressed in the results, since the practice of distribution of earnings found in the New Market in Level II could not be observed in Level I, indicating the importance of listing in segments with higher governance standards.

4.3. Robustness Checks

As is usual in empirical studies in the area of finance, several tests were conducted to check the robustness of the results, including proxies and different specifications. The robustness analysis indicates small changes in the overall results.

Since we created a new variable to measure the global benefits of using IOE instead of dividends (IOE_IOE*), we tried the variables commonly used in the literature to check whether our results remain the same. Table 6 shows the results using the same methods as Table 5, but with alternative dependent variables (IOE_TA, IOE_EPS, and IOE_PAYOUT). Overall, the estimates yield very similar results: the variables that measure size, profitability, good governance, and the presence of institutional investors in the control structure remain positive and significant determinants of distribution by IOE in the companies analyzed. This result is important, as it reaffirms our results even with alternative dependent variables, which are nothing more than different ways of measuring the phenomenon studied.

Table 6. Sensitivity analysis to alternative dependent variables, Tobit models

| VARIABLES | DEPENDENT VARIABLE | | | | | | | |
|------------------|------------------------|---------------------|----------------------|---------------------|------------------------|-----------------------|------------------------|-----------------------|
| | JSCP_JSCP* | | JSCP_AT | | JSCP_PROV | | JSCP_LPA | |
| | REG_1 | REG_2 | REG_3 | REG_4 | REG_5 | REG_6 | REG_7 | REG_8 |
| _cons | -3.2044 (-10.25)*** | -5.1500 (-0.13) | -0.095 (-8.96)*** | -0.1488 (-0.11) | -3.7333 (-10.22)*** | -3.5533 (-6.76)*** | -1.5139 (-10.21)*** | -1.3945 (-6.72)*** |
| SIZE | 0.1346 (7.17)*** | 0.1153 (5.40)*** | 0.004 (5.68)*** | 0.0027 (3.78)*** | 0.1676 (7.66)*** | 0.1389 (5.76)*** | 0.0685 (7.80)*** | 0.0613 (6.18)*** |
| EBITDA_TA | 0.9216 (3.47)*** | 1.1004 (3.88)*** | 0.035 (4.08)*** | 0.0414 (4.53)*** | 0.0261 (0.09) | 0.2237 (0.69) | 0.1938 (1.48) | 0.2880 (2.05)** |
| PROFITRES_TA | 0.3139 (1.42) | 0.0188 (0.08) | 0.022 (2.99)*** | 0.0134 (1.78)* | 0.8297 (3.21)*** | 0.4659 (1.69)* | 0.3132 (2.90)*** | 0.2356 (2.03)** |
| DEPREC_TA | 1.6997 (3.10)*** | 1.8514 (3.27)*** | 0.073 (4.08)*** | 0.0764 (4.18)*** | 1.9560 (2.96)*** | 2.0061 (2.93)** | 0.5493 (1.96)* | 0.6287 (2.17)** |
| FINEXPENSES_TA | -0.5238 (-1.27) | -0.4285 (-1.02) | -0.013 (-1.01) | -0.0114 (-0.84) | -0.2215 (-0.47) | -0.2109 (-0.44) | -0.3125 (-1.51) | -0.3095 (-1.43) |
| ADR | 0.1622 (2.47)** | 0.1021 (1.36) | 0.006 (2.10)** | 0.0036 (1.42) | 0.2079 (2.72)** | 0.0934 (1.09) | 0.0771 (2.46)** | 0.0462 (1.31) |
| N2_NM | 0.1924 (2.42)** | 0.2509 (2.90)*** | 0.004 (1.57) | 0.0061 (2.15)** | 0.2032 (2.19)** | 0.2119 (2.09)** | 0.1002 (2.65)** | 0.1030 (2.46)** |
| MARKET_BOOK | 0.0169 (1.32) | 0.0206 (1.57) | 0.000 (-0.49) | -0.0002 (-0.40) | -0.0078 (-0.51) | -0.0001 (-0.01) | 0.0007 (0.11) | 0.0043 (0.65) |
| IND | | 0.2306 (1.83)* | | 0.0027 (0.66) | | 0.2057 (1.42) | | 0.0630 (1.05) |
| CS2 | | 0.0158 (0.15) | | -0.0018 (-0.53) | | -0.0688 (-0.56) | | -0.0488 (-0.96) |
| CS3 | | 0.0871 (0.81) | | 0.0007 (0.21) | | 0.0464 (0.38) | | -0.0201 (-0.40) |
| GOV | | 0.2070 (1.15) | | 0.0105 (1.83)* | | 0.4398 (2.23)** | | 0.0841 (1.03) |
| FUNDS | | -0.0104 (-0.08) | | -0.0028 (-0.72) | | -0.0553 (-0.38) | | -0.0708 (-1.18) |
| FUNDS_PART | | 0.1262 (1.92)* | | 0.0060 (2.81)*** | | 0.1540 (2.14)** | | 0.0655 (2.23)** |
| VOTING_SHARES | | -0.0007 (-0.68) | | 0.0000 (-0.02) | | -0.0013 (-1.12) | | -0.0002 (-0.50) |
| CONTROL_TOTALCAP | | 0.1716 (4.81)*** | | 0.0050 (4.31)*** | | 0.1597 (3.91)*** | | 0.0442 (2.61)** |
| Stocks (n) | 413 | 398 | 413 | 398 | 413 | 398 | 413 | 398 |
| Observations (n) | 2358 | 2033 | 2358 | 2033 | 2358 | 2033 | 2358 | 2033 |
| Log likelihood | -1013.21 | -1013.21 | 1271.31 | 1193.61 | -1162.5347 | -1050.85 | -574.82 | -506.60 |
| Year dummies | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry dummies | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Note: This table presents the results of Tobit panel data regressions for dependent variables IOE_IOE*, IOE_TA, IOE_PAYOUT, and IOE_EPS, respectively. Definitions of these variables are shown in Table 3. Year and sector dummies were inserted in the Table in an attempt to capture the effects of period and sector on economic activity. The even-numbered regressions are similar to the previous regression (base model), but include the ownership structure variables. The estimated coefficient and the z statistic (in parentheses) are reported for each variable.

***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Source: Author's data.

A second point of verification is whether results are the same for different sample splits. The motivation behind this analysis is that, according to Table 4, the percentage of companies that distribute IOE jumped dramatically in 2005. Thus, we consider splitting the sample into two parts, 1997–2004 and 2005–2008. The results, shown in Table 7, suggest that there are some differences in these periods, especially related to ownership structure variables. Before 2005, the presence of institutional investors in the ownership structure seems to not have a great influence on company cash distribution decisions, unlike the 2005–2008 period. One possible explanation for this difference is enactment of Law 11053/2004, which, from January 1 2005, made explicit the fiscally privileged nature of the CPE in financial incomes. As discussed in Section 2, this law removed any possible ambiguity on the issue and made clear the taxation of financial income of these beneficiaries. Our results show that this regulatory change may have driven a distribution of dividends less costly to shareholders.

Finally, we tried using different independent variables to check whether the results remain the same. In addition to the aforementioned change in the results for corporate governance with the inclusion of the companies listed in Level I (N1_N2_NM), profitability remains a positive and significant determinant if measured by return on assets (ROA). Once Brazilian tax law allows firms to use accumulated losses in prior fiscal years to reduce taxes owed, a practice known as “carry over,” we included in models a variable (PREV_LOSSES) that equals 1 if a company has accumulated losses, 0 otherwise. As expected, accumulated losses reduce the propensity of an average company to distribute profits by IOE, since the attractiveness of this legal instrument is reduced. Nevertheless, the main results of this research stand unchanged.

Table 7—Sensitivity analysis to sample split: 1998-2004 and 2005-2008

| VARIABLES | ESTIMATION METHOD AND PERIOD | | | |
|------------------|------------------------------|-----------------------|-----------------------|-----------------------|
| | 1998-2004 | | 2005-2008 | |
| | PROBIT | TOBIT | PROBIT | TOBIT |
| _cons | -26.6919 (-6.62)*** | -6.7444 (-0.04) | -5.9353 (-4.19)*** | -1.4978 (-3.64)*** |
| SIZE | 1.3548 (6.64)*** | 0.2320 (8.62)*** | 0.3666 (3.76)*** | 0.0779 (2.72)** |
| EBITDA_TA | 11.5185 (4.58)*** | 2.1314 (5.67)*** | 3.4507 (2.86)** | 1.3582 (3.93)*** |
| PROFITRES_TA | -2.7453 (-1.54) | -0.8733 (-3.06)*** | 1.7269 (1.57) | 0.0845 (0.26) |
| DEPREC_TA | -9.3955 (-1.60) | -0.8945 (-1.08) | 0.6171 (0.31) | 0.9809 (1.81)* |
| FINEXPENSES_TA | -5.4329 (-2.01)** | -0.6647 (-1.52) | -1.4792 (-1.72) | -0.5362 (-0.95) |
| ADR | 1.0943 (2.34)** | 0.2328 (3.67)** | -0.3541 (-1.03) | -0.0578 (-0.54) |
| N2_NM | 1.2673 (1.12) | 0.2778 (1.40) | 0.2390 (0.72) | 0.1335 (1.42) |
| MARKET_BOOK | 0.3697 (3.47)*** | 0.0587 (3.67)*** | 0.0092 (0.16) | 0.0127 (0.84) |
| IND | -7.0618 (-0.01) | -1.0879 (-0.03) | -0.4994 (-0.96) | 0.0167 (0.11) |
| CS2 | -0.3312 (-0.31) | 0.4896 (2.94)** | -1.1352 (-2.47)** | -0.1671 (-1.24) |
| CS3 | 1.3356 (1.38) | 0.7048 (4.64)*** | -0.7432 (-1.57) | -0.0645 (-0.46) |
| GOV | 1.4254 (1.16) | 0.6853 (3.81)*** | -0.0478 (-0.06) | 0.0620 (0.27) |
| FUNDS | 0.6972 (0.61) | 0.4766 (2.75)** | -0.9233 (-1.68) | -0.1823 (-1.14) |
| FUNDS_PART | -0.1324 (-0.27) | -0.0410 (-0.59) | 0.4779 (1.73)* | 0.1985 (2.35)** |
| VOTING_SHARES | -0.5890 (-0.72) | -0.3747 (-3.18)*** | 0.0658 (0.15) | -0.0070 (-0.05) |
| CONTROL_TOTALCAP | 0.5589 (2.01)** | 0.1354 (3.20)*** | 0.4092 (2.46)** | 0.1757 (3.55)*** |
| Stocks (n) | 331 | 331 | 306 | 306 |
| Observations (n) | 1254 | 1254 | 779 | 779 |
| Log likelihood | -179.88 | -239.06 | -411.42 | -534.42 |
| Year dummies | Yes | Yes | Yes | Yes |
| Industry dummies | Yes | Yes | Yes | Yes |

Note: This table presents the results of the probit and Tobit panel data regressions for periods 1998-2004 and 2005-2008, respectively. Dependent variables are IOE_BIN (for probit regressions) and IOE_IOE* (for Tobit regressions). Year and sector dummies are included in the table in an attempt to capture the effects of period and sector on economic activity. The estimated coefficient and the z statistic (in parentheses) are reported for each variable.

***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Source: Author's data.

5. CONCLUDING REMARKS

The present study seeks to further analyze the distribution of IOE in publicly traded Brazilian companies by considering tax laws in light of both the company and its beneficiaries, shareholders, or owners. This approach highlights the close relationship between ownership structure and distribution of earnings in Brazil, and so represents an improvement over other studies that examine the issue strictly from the perspective of the distributing company (Ness Jr. and Zani, 2001; Boulton, Braga-Alves and Shastri, 2012).

From a theoretical standpoint, it is shown that Brazilian tax law distinguishes among the tax rates on IOE according to the legal nature of the beneficiary, creating incentives for different groups, when they are present in the controlling shareholding block of the companies, to exert influence on decisions regarding distribution of cash earnings. Moreover, since net income from IOE is differentiated with respect to distribution of profits through dividends, company decisions may reduce shareholder wealth, especially minority shareholders, who have little power over firm decisions.

The empirical results of this study suggest that ownership structure influences the distribution of IOE in Brazilian companies, even with the inclusion of control variables for size, profitability, non-property tax relief, corporate governance, and investment opportunities. Weak evidence is found that the presence of state ownership in the controlling structure increases the likelihood of a company distributing earnings via IOE. Strong evidence is found regarding the presence of institutional investors (associative investment entities) with more than 5% of voting capital, in line with *a priori* expectations. This group of investors, which includes investment clubs and funds, private equity funds, private pension entities (open or closed), and managed portfolios, benefits from receiving a zero tax rate when receiving earnings in the form of IOE, according to Laws 9532/1997 and 11053/2004. Besides being in line with the monetary incentives provided by Brazilian corporate and tax law, this result also corroborates arguments regarding pension fund activism, the presence of which in the controlling structures leads to benefits for all shareholders (Punsvuo, Kayo and Barros, 2007).

As for the sensitivity analysis, the results regarding ownership structure prove robust in several tests, including replacement by proxies of the control constructs and the use of alternative measures of the dependent variable. Among these, emphasis is placed on creation of the variable IOE_IOE*, which measures the ratio between the amount actually distributed by the company and the maximum amount allowed by law. By means of this variable, a number of potential problems in the variables extensively used in the literature can be overcome, which constitutes an advantage of the present study in terms of approach and depth of analysis.

Overall, this study suggests that larger, more profitable companies with better corporate governance practices and more growth opportunities tend to distribute more cash earnings via IOE, a practice that increases the wealth of minority shareholders. Further, these results corroborate the outcome hypothesis from La Porta *et al.* (2000), in that greater

commitment to good corporate governance practices is related to greater distribution of earnings in cash, especially via IOE.

Although this study contributes theoretically and empirically to a better understanding of the use of IOE in traded companies in Brazil, many questions remain unanswered. The Brazilian institutional environment, marked by a complex tax system involving high taxation rates, is one of the most conducive to practices of tax avoidance. Even so, many companies, even those controlled by groups of shareholders that would directly benefit from its use, have not yet adopted the practice of distributing as much earnings by IOE as legally allowed. For this reason, in future studies, it would be valuable to investigate in greater detail this decision-making process and assess the degree to which controllers influence this process.

REFERENCES

- BEBCHUK, L. A.; WEISBACH, M. S. The state of corporate governance research. **The Review of Financial Studies**, vol. 23, no. 3, 2010.
- BLACK, B. S.; CARVALHO, A. G.; GORGA, E. Corporate governance in Brazil. **Emerging Markets Review**, vol. 11, pp. 21-38, 2010.
- BLACK, B. S.; CARVALHO, A. G.; GORGA, E. What matters and for which firms for corporate governance in emerging markets? Evidence from Brazil (and other BRIC countries). **Journal of Corporate Finance**, vol. 18, pp. 934-952, 2012.
- BORTOLON, P. M.; LEAL, R. P. C. Determinantes da estrutura piramidal de controle. **Anais do 10º Encontro Brasileiro de Finanças (X EBFIn)**. São Paulo, 2010.
- BOULTON, T. J.; BRAGA-ALVES, M. V.; SHASTRI, K. Payout policy in Brazil: dividends versus interest on equity. **Journal of Corporate Finance**, vol. 18, pp. 968-979, 2012.
- BRITO, M. **Planejamento tributário: imposto de renda**. Vila Velha: SEDES/UVV, 1999.
- BROCKMAN, P.; UNLU, E. Dividend policy, creditor rights, and the agency costs of debt. **Journal of Financial Economics**, vol. 92, no. 2, pp. 276-299, 2009.
- CANELLAS, T.; LEAL, R. P. C. Evolução da estrutura de controle das empresas listadas na Bovespa entre 2004 e 2006. In: Chauvel, M. A.; Cohen, M. (Org.). **Ética, Sustentabilidade e Sociedade—Desafios da Nossa Era**. Rio de Janeiro: Mauad X, 1ª ed., pp. 49-68, 2009.
- CARVALHO, E. R. A. Política de dividendos e juros sobre o capital próprio: um modelo com informação assimétrica. Dissertação (Mestrado em Administração de Empresas)—Programa de Pós Graduação em Administração de Empresas da FGV São Paulo. Fundação Getúlio Vargas, 2003.
- COSTA JUNIOR, J. V.; MARTINS, E.; FILHO, R. C. S.; CARDOSO, R. L. JSCP e dividendos: as companhias “vacas leiteiras” estão utilizando a sistemática de imputação nos termos da lei? **Congresso USP**, 2004. Available at: <http://www.congressosp.fipecafi.org/artigos42004/372.pdf>. Accessed 28/06/2011.
- CVM—Comissão de Valores Mobiliários. **Recomendações da CVM sobre governança corporativa**. 2002. Available at: <http://www.cvm.gov.br>. Accessed: fevereiro de 2010.
- DÉCOURT, R. F.; PROCIANOY, J. L. The payout decision-making process of Brazilian listed companies: a CFO survey. **Brazilian Review of Finance**, 2012, vol. 10, no. 4, pp. 461-498.
- EASTERBROOK, F. H. Two agency-cost explanations of dividends. **American Economic Review**, pp. 221-230, September 1984.
- FACCIO, M.; LANG, L. H. P.; YOUNG, L. Dividends and expropriation. **The American Economic Review**, vol. 91, no. 1, pp. 54-78, 2001.

FAMA, E.; FRENCH, K. R. Disappearing dividends: changing firm characteristics or lower propensity to pay? **Journal of Financial Economics**, vol. 60, no. 1, pp. 3-43, 2001.

FERREIRA JR., W. O.; NAKAMURA, W. T.; MARTIN, D. M. L.; BASTOS, D. D. Evidências empíricas dos fatores determinantes das políticas de dividendos das firmas listadas na Bovespa. **FACEF Pesquisa**, vol. 13, no. 2, pp. 190-203, 2010.

GRINSTEIN, Y.; MICHAELY, R. Institutional holdings and payout policy. **The Journal of Finance**, vol. 60, no. 3, pp. 1389-1426, 2005.

HIGUSHI, H.; HIGUSHI, F. H.; HIGUSHI, C. H. **Imposto de Renda das Empresas: Interpretação e Prática**. 36ª ed. São Paulo: IR Publicações Ltda, 2011.

HSIAO, C. **Analysis of Panel Data**. Cambridge: Cambridge University Press, 1986.

IBGC—**Código das Melhores Práticas de Governança Corporativa**. São Paulo: 2009. Available at: <http://www.ibgc.org.br/CodigoMelhoresPraticas.aspx>. Accessed 15/05/2010.

JENSEN, M. Agency costs of free cash flow, corporate finance and takeovers. **American Economic Review**, vol. 76, no. 2, pp. 323-329, 1986.

JOHNSON, S.; LA PORTA, R.; LOPEZ-DE-SILANES, F.; SHLEIFER, A. Tunneling. Papers and proceedings of the One Hundred Twelfth Annual Meeting of the American Economic Association. **The American Economic Review**, vol. 90, no. 2, pp. 22-27, May 2000.

KEARNEY, C. Emerging markets research: trends, issues and future directions. **Emerging Markets Review**, vol. 13, pp. 159-183, 2012.

LA PORTA, R.; LOPEZ-DE-SILANES, F.; SHLEIFER, A.; VISHNY, R. W. Law and finance. **Journal of Political Economy**, vol. 106, no. 6, pp. 1113-1155, 1998.

LA PORTA, R.; LOPEZ-DE-SILANES, F.; SHLEIFER, A.; VISHNY, R. W. Agency problems and dividend policies around the world. **The Journal of Finance**, vol. 55, no. 1, pp. 1-33, 2000.

LIBONATI, J. J.; LAGIOIA, U. C. T.; MACIEL, C. V. Pagamento de juros sobre o capital próprio x distribuição de dividendos pela ótica tributária. **Anais do 18º Congresso Brasileiro de Contabilidade**, 2008. Available at: <http://www.ccontabeis.com.br/18cbc/113.pdf>. Accessed 28/05/2011.

MARTINS, T. C.; NOVAES, W. Mandatory dividend rules: do they make it harder for firms to invest? **Journal of Corporate Finance**, 2012, doi: 10.1016/j.jcorpfin.2012.05.002.

MITTON, T. Corporate governance and dividend policy in emerging markets. **Emerging Markets Review**, vol. 5, no. 4, pp. 409-426, 2004.

MYERS, S.; MAJLUF, N. S. Corporate financing and investment decisions when firms have information that investors do not have. **Journal of Financial Economics**, vol. 13, no. 2, pp. 187-221, 1984.

NESS JUNIOR, W. L.; ZANI, J. Os juros sobre o capital próprio versus a vantagem fiscal do endividamento. **Revista de Administração**, vol. 36, no. 2, pp. 89-102, 2001.

NEVES, F. A incidência da PIS e da COFINS sobre juros sobre capital próprio. Not published article 2007. Available at: <http://www.netlegis.com.br>. Accessed 06/06/2011.

PROCIANOY, J. L. A política de dividendos e o preço das ações. In: Varga, G.; Leal, R. (Org.). **Gestão de Investimentos e Fundos**. Rio de Janeiro: Financial Consultoria, 1ª ed., pp. 139-164, 2006.

PUNSUVO, F. R.; KAYO, E. K.; BARROS, L. A. O ativismo dos fundos de pensão e a qualidade da governança corporativa. **Revista Contabilidade e Finanças**, vol. 18, pp. 63-72, 2007.

RANGEL, J. R. G.; DA SILVA, R. N. S. A influência da distribuição dos Juros sobre o Capital Próprio no cálculo do valor das ações para diferentes investidores—o caso das Entidades Fechadas de Previdência Complementar. **Sociedade, Contabilidade e Gestão**, vol. 2, no. 1. Rio de Janeiro, 2007.

SILVA, A. L. C. da. Governança corporativa, valor, alavancagem e política de dividendos das empresas brasileiras. **RAUSP—Revista de Administração da Universidade de São Paulo**. São Paulo, vol. 39, no. 4, pp. 348-361, 2004.

SILVA, S. C.; PINTO, M. R.; MOTTA, A. C. G. D.; MARQUES, J. A. V. C. Análise dos aspectos legais e normativos do cálculo e distribuição dos juros sobre o capital próprio efetuados pelas companhias abertas do setor siderúrgico no período de 2001 a 2003: estudo de casos. **Revista de Gestão USP**, São Paulo, vol. 13, no. 2, pp. 37-54, 2006.

TRUONG, T.; HEANEY, R. Largest shareholder and dividend policy around the world. **The Quarterly Review of Economics and Finance**, vol. 47, pp. 667-687, 2007.

WOOLDRIDGE, J. **Econometric Analysis of Cross-Section and Panel Data**. London: The MIT Press, 2002.