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Centro de Pós- Graduação e Pesquisas em Administração - CEPEAD

30 April 2006

Online at <https://mpra.ub.uni-muenchen.de/9449/>
MPRA Paper No. 9449, posted 05 Jul 2008 05:12 UTC

Asymmetric information and dividends payout at the São Paulo stock exchange

Robert Aldo Iquiapaza

Departamento de Ciências Administrativas, Centro de Pós-Graduação e Pesquisas em Administração
Universidade Federal de Minas Gerais, 30170-120- Belo Horizonte/MG, **Brasil** (raic@face.ufmg.br)

Wagner Moura Lamounier

Departamento de Ciências Administrativas, Centro de Pós-Graduação e Pesquisas em Contabilidade e Controladoria
Universidade Federal de Minas Gerais, 30170-120- Belo Horizonte/MG, **Brasil** (lamounier@ufmg.br)

Hudson Fernandes Amaral

Departamento de Ciências Administrativas, Centro de Pós-Graduação e Pesquisas em Administração
Universidade Federal de Minas Gerais, 30170-120- Belo Horizonte/MG, **Brasil** (hfamaral@face.ufmg.br)

Abstract

Iquiapaza, Robert Aldo; Lamounier, Wagner Moura; Amaral, Hudson Fernandes (2008): **Asymmetric information and dividends payout at the São Paulo stock exchange**. *Adv. sci. appl. Account.* 1(1), 1001-14.

The research objective was to assess the influence of asymmetric information, agency costs and property structure on the dividends payout in 178 open capital companies listed at the São Paulo stock exchange (Bovespa). The analyzed period was 2000-2004. Tobit's regression model for censored data was used due to the fact that the payout index was censored at zero. It was verified that companies with American Depositary Receipts (ADRs) issued at the New York stock exchange, a proxy for smaller asymmetric information, paid smaller dividends, which is in line with the *signaling* hypothesis. After asymmetric information control, propriety concentration by the company gestors (*insiders*) presented a negative relationship with dividends payout. Finally, dividends payment relationship was found to be *negative* with opportunities for growth and *positive* with the cash flow, as forecasted by the *pecking order* hypothesis.

Index terms: dividends - asymmetric information - agency costs - property structure.

Received: 2007/11/10

Peer reviewed: 2008/03/31

Reformulated: 2008/04/15

Recommended*: 2008/04/22, by Piotr Trzesniak

Published: 2008/06/15

1. Introduction

In company financing, dividends policy has been the subject of multiple studies, aiming on clarifying its importance and consequences for both the company and the investor. It constitutes a central theme; it's not just about a decision on how much should be paid to shareholders, but mostly on defining how much from the yielded profit will be retained in the company, as well as on the reasons for such a retention.

In spite of the large volume of empirical research on the policy of dividends, it is not quite known how the companies define it. In financial theory, it is possible to distinguish different hypotheses on why companies pay dividends. Miller and Modigliani (1961) were the precursors of the *irrelevance hypothesis*, for companies financed with 100% of their own capital, in a world of perfect capital markets. In line with that proposal, what would determine the company's market value is solely its investment policy, i.e., the forthcoming cash flow generated by the company's assets.

However, when the presence of market imperfections is noticed, one cannot accept the irrelevance hypothesis. According Deshmukh (2005), in that case, the various explanations on the dividends policy can be classified at least in three categories: *asymmetric information*, *agency costs* and *transaction costs*.

Regarding *asymmetric information*, the implication of the hypotheses of *pecking order* (Myers, 1984; Myers and Majluf, 1984) and *signaling* (Miller and Rock, 1985) on the dividends policy were considered. For Myers and Majluf, the asymmetric information can lead to sub-investment, being the profit retention (or dividends reduction) a way to reduce it, aiming to finance new projects with the accumulated cash reserve. So, the pecking order hypothesis suggests that the larger the asymmetric information level, the smaller will be the dividends payout.

On the other hand, Miller and Rock (1985) developed a model where larger dividends distribution is associated to larger forthcoming profits. That model means that, keeping other variables constant, the amount of dividends paid as

Advances in Scientific and Applied Accounting

Building theories and improving applications since 2007

www.asaaccount.org

ISSN 0000-0000

An online scientific journal published simultaneously in Portuguese or Spanish and English by the Associação Nacional de Programas de Pós-Graduação em Ciências Contábeis (<http://www.anpcont.com.br>).

General Editor: Piotr Trzesniak (2007/2009)

*To be published, articles must be recommended by one of the editors or by a member of the Scientific Advisory Board

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a “signal” increases with the level of asymmetric information among companies and investors. So, in the presence of the asymmetric information, the forecast of the pecking order hypothesis would oppose the signaling hypothesis, and it would therefore be important to distinguish between them in the Brazilian context.

The relevance and contribution of the present research consist in identifying the factors that influence the dividends payout, bearing in mind an increase in the number of companies that started to distribute their results directly. Approximately 60% of local companies distributed their results through dividends or interests over their own capital in 2003, and along with that, it was perceived that there was a relevant growth in the *payout ratio* for the last few years (Silva, Lima and Brito, 2005; Loss and Sarlo Neto, 2006). According to Silva and Brito (2005), the dividends distributed by Brazilian companies from 1995 to 2000 were a small share of the net profit, close to 20%. So, it is important to determine whether or not the dividends distribution is related to the asymmetric information (Silva, 2004), as well as to identify other factors relevant on the explanation of that distribution (Loss and Sarlo Neto, 2006). That would, for example, justify the adoption or not of higher transparency practices by the companies listed at the stock exchange.

The main objective of this research is to determine, through an empirical model, the asymmetric information impact on the payment of dividends. The specific purposes are: analyzing empirically the forecasts of the pecking order hypotheses and the signaling hypothesis on the determination of company payment of dividends, controlling the model for the agency costs and for effect of the property structure. For such, the financial demonstratives of a sample of companies listed at the São Paulo stock exchange (Bovespa) in the period 2000 thru 2004 were considered.

2. Theoretical referential

2.1. The dividends policy

The policy of distributing results is a way of passing to shareholders some share of the profit yielded by the company. In Brazil, starting in 1995, the *interests over the own capital* (IOOC) were introduced as an alternative to remunerate shareholders. So, the term *revenue* is usually utilized to refer to the payment of dividends and of IOOC, and reflects a direct retribution to the shareholders. The term *dividends*, as used in this paper, refers to *revenue*, except if otherwise explicitly stated.

The profit share to be destined to distribution as revenue is not restricted to a simple percentage, statutorily determined through a partner agreement or through the society legislation. Although the dividend is calculated over the results, it is the cash balance that determines in what extent it may be carried out. Companies with cash pressure, like the ones in growth stage, may reduce dividends; on the other hand, companies showing high yield and good cash flow can increase them. In other words, in spite of a pre-defined policy, there is a range of actions for company gestors, generating multiple theoretical interpretations and proposals, of which the most relevant for the research are summarized in the following sections.

Although one must refer to dividends policy in the theoretical context, in this research the analysis was restricted to the empirical examination of the results distributed directly. We emphasized the effects of the actions of the company gestors that in some cases reflect the policy’s application, if any, and in other cases means a decision conditioned by the circumstances. However, through the methodology applied and described ahead, the analysis refers to a combination of what the companies (or their gestors) practiced in the studied period.

2.1.1. The dividends policy relevance hypothesis

The theory of investment analysis considers dividends as a key factor in determining the stock value. Therefore, investors would favor a generous distribution of dividends and would oppose their reduction. In that case, it is considered a normal practice to assess the common stock starting from the analysis of the fraction of profits paid in dividends (the *payout ratio*).

Lintner (1956) and Gordon (1959) stand out as early defenders of that proposal. Lintner (1956) interviewed North American company executives and showed that they cared about dividend stability, indicating *profit* as major determinant factor on the changes of dividend levels. The results of the recent Baker and Smith (2006) survey, covering a sample of 306 US companies, are likely to ratify Lintner’s proposal partially. Those authors indicate that the most important determinant factors of the dividend policy are: profit stability; dividends’ past behavior; profits’ current level; expected profit; and the willing to keep a payout level in the long run.

The key assumption of the relevance hypothesis is that the market price of company stock is directly proportional to a dividends distribution increase. That is because when high dividends are distributed, the investor will demand a smaller return ratio. Under that perspective, investors are not likely to risk and then prefer current dividends at capital revenues since that would decrease its grade of uncertainty as to the flow of future profit, an argument that is

also known as the *theory of the bird in the hand*. When analyzing that proposal, however, Miller and Modigliani (1961) showed that, in perfect capital markets, the dividend policy would be irrelevant for the shareholders' richness maximization.

2.1.2. The dividends policy irrelevance hypothesis

Miller and Modigliani (1961) argued contrarily to the premises that companies may impact the value of their stock through the dividends policy. They say that once to the company's investment policy is established, paying dividends will neither impact the price of their stock nor the total returns of their stockholders. So, there would not exist a policy of dividends that would be better than any other. In that context, the investors could "create" their own dividend policy through the constitution of a securities portfolio according to their preference of stock paying or not dividends (clients). Miller and Modigliani's key argument is the premise of total independence among the investment decisions and the dividends policy.

It must also be born in mind that the dividends policy irrelevance is maintained only if the investment decisions are not impacted by the conflict of interests among the company gestors and their stockholders. Still by the same token, the main objection to the irrelevance arguments of the dividends policy refers to the fact that their defenders base their premise on a perfect and effective capital market. Therefore, as Lease *et al.* (2000) defend, in spite of the Miller and Modigliani's well-based argumentation (1961), they ignore many relevant factors of the market practices. Mostly when considering developing capital markets (such as Brazil), where there are information asymmetry, agency problems among gestor, controller and minority stockholders, besides a specific government ruling.

When there are imperfections like agency problems and asymmetric information among the company and the investors, when there are transaction and broker costs in the stock buying and selling and when the income tax rates impacting dividends and capital gains are different, investors may not be so indifferent to receiving current dividends or capital gains (Lease *et al.*, 2000). In that case, there is space to discuss the importance of paying more or less dividends.

2.1.3. Information asymmetry and the dividends policy

Researchers' different explanations regarding the stock price oscillation in dividends post-payment periods reflect the great difficulty in isolating market imperfections. Among the major ones already studied, the *asymmetric information*, *agency costs*, *transaction costs*, and the *tax impact* stand out.

2.1.3.1. The pecking order theory

Myers and Majluf (1984) say that, in the presence of asymmetric information among gestors and investors, a company may be *sub investing*, i.e., neglecting good projects in certain circumstances, especially when the company has no sufficient capital reserve to achieve them. The probability of sub investing, which results in *ex-ante* losses in the value of the company, originates in the problem of *adverse selection*¹, associated to new emissions of capital. This analysis therefore suggests that the company may minimize the *transaction costs* (or the cost of issuing new stock) to raise capital in the market, restricting paying dividends to those resources that will not be used for investment.

Specifically, the authors suggest that a company may reduce the problems originating from sub investment by accumulating cash through profit withholding. Consequently, by maintaining other variables constant, the pecking order foresees that the larger the asymmetric information level is for companies and investors, the smaller the level of dividends will be.

2.1.3.2. Signaling

Miller and Modigliani (1961) attributed the stock price increase in response to changes in the amount of dividends distributed to the phenomenon of markets' asymmetric information and to the *signaling power* of dividends'. According to that proposal, company gestors spread market information deliberately using changes in dividends policy as "tips" for investors to elaborate their own expectations on the company's future performance.

After that initial suggestion, multiple studies tried to provide evidence of the hypothesis of signaling through dividends, that is, models originated from assumptions that the companies would be adjusting their dividends as a way of signaling their future profit projections (Bhattacharya, 1979; Miller and Rock, 1985). In the Miller and Rock model (1985), the gestors utilize the increase in the dividends payment ratio as a mechanism to *reduce* the asymmetric information between gestors and investors. As they perceive the signal, investors would change their expectations and the company stock might be evaluated at a value close to its real one. So, that model suggests that, when maintaining other variables constant, the larger the asymmetric information level between the company and the investors, the larger the dividends value would be.

¹ This problem arises when investors and gestors do not hold the same information regarding the quality of the company's projects. In that case, the investor will always be encouraged to demand a premium or better returns from stock and/or loans, or rather pay a reduced price for securities in the market.

Espitia-Escuer and Ruiz-Cabestre (1995) concluded that the dividends contained information on forthcoming profits in the Spanish market. Recent studies, such as the ones done by Garret and Priestley (2000), utilizing several definitions of *non-expected profits*, *permanent dividends* and *change in dividends*, perceived that variations in dividends provide scarce information on future profits in the short run, but are likely to be relevantly related to non-expected profits in the long run. The exception is the case of dividends reduction, which would likely to be followed by large increases of dividends in the next period.

Nissim and Ziv (2001) surveyed the relationship between *change of dividends* policies and future *profitability* using *future returns* and *abnormal forthcoming returns* as variables. They found that the change of dividends would provide information on future profitability level. The authors provided evidence that the change in dividends signals changes in future earnings, effective two years after the change in dividends occurs.

Decourt, Procianny and Pietro Neto (2007) tested the signaling hypothesis through changes in the payout ratios of companies listed at the São Paulo stock exchange (Bovespa), as compared to the net profit variation of the previous and the following year (with respect to the year the distribution of revenues took place), utilizing a qui-square test to check whether the differences in profits reflected the variations of the payouts done. The results they found show that payout *increases* do not signal future profits but, however, payout *reductions* do signal *increased future profits*.

Mougoué and Rao (2003) used the backbone of the co-integrating analysis to study the temporal dependence between dividends and profits, aiming at providing a better insight on the hypothesis of information contents of dividends. They found that, 20% of the companies belonging to non State-regulated sectors show a temporal behavior consistent with the signaling hypothesis. Among companies more regulated by the State (like utilities), that number increases to 33%. In a study with similar characteristics in Brazil, Iquiapaza, Bressan and Barbosa (2005) perceived that 18% to 20% of a sample of companies presented that signaling behavior through changes in the dividends distribution. That means that, in Brazil, gestors believe that dividends do carry signals on the future of the organization (Loss and Sarlo Neto, 2003), i.e., they would indicate that they really have different information, which is not disclosed to investors.

2.1.4. Dividends and agency theory

In the *agency theory*, the principal shareholders contract agents to manage the company in favor of them. Shareholders will probably be better off by having someone more specialized managing their businesses (Jensen and Meckling, 1976; Easterbrook, 1984) and the executives will be paid for their work through salary and perquisites. That contract, usually called *agency relationship*, requires that the *principal shareholders* delegates part of the decision-making authority to the *agents*.

There is also a difference in preference for the risk among agents and shareholders. The gestors tolerate less risk and, as a consequence, they will select more conservative alternatives. Additionally, considering that gestors are expected to leave the organization before its owner, who will supposedly stay in the business indefinitely, gestors will tend to focus their actions preferably in the short run. Then the question is: how can the principal shareholder be assured that the agent is performing the contract in the best interest of the organization? As pointed out by Meckling (1976), guaranteeing that the agent will take optimized decisions from the principal shareholders' perspective is usually impossible, except for a cost. So, the conflicts arising from the agency relationship (inconsistency of objectives between the principal shareholders and the agent) generate real costs, called *agency costs*.

The agency theory tries to explain the capital's corporate structure as a result of attempts for minimizing the cost associated with the separation of corporate property and control. The agency costs therefore reflect the total money spent on structuring and managing contracts regarding residual losses (Jensen and Meckling, 1976). The goal is to define a set of contracts capable of reducing conflict costs and simultaneously increase the company value. The success in defining that set of contracts at minimum costs will possible guarantee, in time, the organization's survival. One of those contracts might include the property of a share of the company's capital by the gestors.

So, the agency costs are lower in companies where *insiders* hold a larger property share, owing to a better objective alignment among shareholders and gestors (Jensen and Meckling, 1976), as well as in companies with huge blocks of shareholders, who better monitor the administration activities or have a direct participation in the company's management.

In that context, the payment of dividends is invoked to reduce the agency costs. The shareholders are interested in reducing the discretionary funds for a better alignment between the interests of the gestors and those of the shareholders, in order to minimize the agency cost (Jensen and Meckling, 1976; Fama and French, 2001). Easterbrook (1984) emphasized the value of the dividends in reducing agency costs, since the dividends payment may force companies to look for resources in the marketplace, where gestor monitoring is available at a lower cost.

Multiple studies have evaluated that subject and assessed mechanisms capable of better aligning the gestors' interests with those of the shareholders. Rozeff (1982), for example, noticed relevant relationships among the insiders' property, growth, sustainability and dividend payout. Short, Zhang and Keasey's studies (2002) revealed an important relationship between institutional investors and gestors' property with the payment of dividends.

La Porta *et al.* (2000) analyzed agency problems and the dividends policies in about 4,000 corporations in 33 countries. It was found that, in countries with more minority shareholders protection, the companies paid larger dividends. The study did not consider companies from countries like Brazil, where mandatory policies of dividends are in place. The existence of a legal minimum level of distribution of dividends recognizes the problem of guaranteeing equality of rights for shareholders and partially restricts the freedom of insiders to decide on withholding/distribution of the generated profits.

Dividends are also related to agency costs when conflict between shareholders and creditors is considered. Shareholders are likely to expropriate richness from creditors by paying themselves generous dividends (Black, 1976) and reducing resources for the debt payment. Fama and Jensen (1983a, 1983b) showed that the potential shareholders and creditors conflicts may be minimized by including *covenants* in the contracts, thus inhibiting the transfer of richness from creditors to shareholders (Kalay, 1982). More indebted companies will probably have less freedom to change the dividends.

Loss and Sarlo Neto (2003) indicate that, in Brazil, dividends tend to be more utilized for reducing issues of agency conflicts. Those authors however do not provide empirical evidence. According to Silva and Brito (2005), the more profitable and less indebted companies distribute a larger share of profits as dividends.

2.2. Dividends and legislation

The tributary theme has been widely analyzed in the United States, especially before 1986, considering that the tax over the capital earnings was inferior to the tax over the gains from dividends, and that some companies continued on paying dividends. According to Leal and Saito (2003) and Deshmukh (2005), the evidence related to this theme remains without any clear explanation. Additionally, the analysis of tributary issues does not provide any relevant forecast for the policy of dividends on the level of companies, basically because shareholders have different tax rate levels (Smith and Watts, 1992), or because other factors prevail on what should be expected according to changes in the tributary policy (Procianoy, 1995).

The policy of dividends is restricted by the society or by fiscal nature factors all over the world. In the case of society ruling, it's usually about creating tools like minority shareholder protection against abusive practices by controllers and gestors, inhibiting the withholding of resources. That withholding could be used in favor of the controller (especially in family owned companies, where controllers are part of the management). The Brazilian legislation defines that open companies must distribute as dividends at least 25% of the net profit for common stock and 27.5% for preferred capital stock. Therefore, usually the local companies adhere to the legislation without explaining any different dividend policy. For La Porta *et al.* (2000), the obligation on paying minimum dividends points to a preoccupation on assuring investors their participation on the results and encourage them to acquire stock.

In Brazil, in addition to alterations included in the society legislation (effective 1996), the dividends policy was also influenced by the tax legislation over dividends and capital earnings, that suffered significant changes in past decades, in 1988-1989 and 1994-1995 (for assessing their impact, refer to Procianoy (1995) and Correia and Amaral (2002), respectively). The last change determined that dividends distributed after 1996 should have tax rates smaller than those of capital gains. In 1995, the tax legislation introduced the option for companies to remunerate their own capital through *interests over the own capital* (IOOC) restricted to the *long run interest* rate, up to a maximum of 50% of the net profit, adjusted according to specifications of the legislation itself. From then on, IOOC, different from dividends, are seen as financial expenses, deductible for income tax and social welfare contribution purposes.

In practice, organizations consider dividends and IOCC jointly in the company's earnings (Heineberg and Procianoy, 2003; Silva, Lima and Brito, 2005). It is therefore attractive for companies to provide their shareholders with the maximum IOOC possible in order to take advantage of the tax benefit, and complement it through dividends. Hence, some companies distribute combinations of IOCC and dividends, while others just some of them. For the investor, dividends, not IOCC, are exempt from income tax payment; the IOOC income tax rate however is smaller than that defined for capital gains.

Mota and Eid Junior (2007) evaluated empirically how the choice among tools like *dividends*, *IOOC* and *re-purchase of stock* is done for a sample of organizations listed at Bovespa. They found that while the distribution of IOOC is more attractive than dividends, many companies with resources available do not use them, which leads to

value destruction. The findings obtained by those authors also reveal that the companies that distribute more IOOC are the oldest at Bovespa, and those who have the largest payouts.

Recent publications note that the majority of companies increased the level of dividends payment above the legal limit, which is explained mainly by improved macroeconomic conditions and corporate results (Iquiapaza, Bressan and Barbosa, 2005; Silva, Lima and Brito, 2005; Loss and Sarlo Neto, 2006). In 2003, for example, an average of 45% of the net profit was distributed directly to shareholders of Bovespa-listed organizations (Silva, Lima and Brito, 2005).

3. Methodology

3.1. Theoretical and econometrical model

For the analysis of dividends payment, different authors have used the partial adjustment model suggested by Lintner (1956). According to that model, there is a dividend level target in the long run, while in the short run such a level would mostly depend on the profits generated in the current period, adjusted by the variations of the profit in the previous period. So, it's a model that allows following up the evolution of the dividends payment in time, yet it becomes hard to apply when there are factors that do not vary in time.

Other authors suggest a transversal cut approach, where one would analyze the factors that explain the average of the payout ratio ($P = \text{dividends/profit}$). This second assessment way, which is preferred when some studied variables remain constant in time, includes the Rozzef model (1982), whose specification is as follows:

$$P_m = \lambda_0 + \lambda_1 \Delta R_m + \lambda_2 Q_m + \lambda_3 \beta_m + \lambda_4 \pi_m + \lambda_5 E_m + \lambda_6 T_m + u_m \quad (1)$$

where λ_n 's are constant; the transaction costs are represented by the *past growth rate* (ΔR) and by the *expectation of forthcoming growth* (Q) of the net profit and by β of the CAPM (capital asset pricing model); the agency costs are reflected by the *property proportion of the insiders* (π) and by the *indebtedness* E (property dispersion or third party participation); scale effect is included through the variable *size* T ; and u is a non-correlated random term, with zero average and constant variance.

Aggregating an asymmetric information variable A to the ones already considered by Rozeff, at the econometrical estimate, and representing other explicative variables as X_n s (including dummy variables for the sectors), one arrives to the model given by equation 2, which was tested utilizing the average of the continuous variables for every company in the defined period (1998-2004, revert to section 3.2) and assuming a static behavior for the objective payout ratio:

$$P_m = \lambda_0 + \gamma A_m + \sum_{n=1}^k \lambda_n X_{nm} + u_m \quad (2)$$

Due to the problems referred to the estimate of the β 's and to the CAPM model validity, especially when the stock exchange liquidity is not verified, these were replaced by the *financial indebtedness rate*, as considered in Heineberg and Procianoy (2003) and Silva, Lima and Brito (2005); or by the *financial stress indicator*, defined by Deshmukh (2005).

Equation 2 can be adjusted by ordinary minimum squares, but that procedure is only valid when the companies that do not pay dividends (payout ratio = zero) are not considered. As those organizations do exist in practice, a more efficient option, and one that allows obtaining consistent parameter estimates, is the Tobit regression model, since this is appropriate when the dependent variable has a distribution truncated at a minimum value (in this case, in zero).

3.2. Samples and variables

The *non-random* sample was formed by 178 open capital Brazilian companies of the non-financial sector (*table I*), with information in the *Economats*² database for the period from 1998 to 2004. Criterion for inclusion was to be present to more than 20% of Bovespa's cry outs for every year during which the company had negotiations. The financial sector was not included for lacking a representative number of companies on the database, after the criterion was applied. On the other hand, the sample included by some companies that did open their capital as well as some that closed their capital or were liquidated in the same period. That allows for partially controlling the survival bias (that bias would be greater if only companies active at the end of 2004 would have been considered).

Data were collected at the Economats database and at the External Communications System (*Sistema de Divulgação Externa de Informações*³ - Divext) of the Securities Commission (*Comissão de Valores Mobiliários* - CVM). The study used variables or accounts of the *Balance Sheet*, of the *Fiscal Year Demonstration of Results* and of the *Demonstration of Origins and Applications of Resources* (Doar). All indicators expressed in currency were duly corrected by inflation rate IGP-DI (General Price Index - internal availability) of Fundação Getúlio Vargas. At the Doar, the revenues (IOOC and dividends) are usually accumulated in an account named *dividends*. Just a few organizations make a distinction among hem.

² <http://www.economica.com/>, active on May 06, 2008.

³ http://www.cvm.gov.br/port/CiasAbertas/download_divext.asp, active on May 06, 2008.

Table 1: the studied sample.

<i>Sector</i>	<i># of companies</i>	
Retail	5	(3%)
Mining and construction	8	(4%)
Electricity, oil, gas and water	32	(18%)
Manufacturing industry	103	(58%)
Telecommunications	28	(16%)
Others	2	(1%)
<i>Total</i>	<i>178</i>	<i>(100%)</i>

Table 2: Description of variables for the determination of the dividends payout ratio

<i>Variable name (symbol)</i>	<i>Proxy</i>	<i>Summarized description</i>	<i>Expected sign</i>
<i>Payout (P)</i>	payout ratio	total amount of dividends paid in cash as percentage of the fiscal year's net profit	dependent variable
<i>Asymmetric information</i>	dummies (several)	according to asymmetry indicators, revert to text	negative/positive
<i>Observed growth (ΔR)</i>	observed growth	net revenue's growth rate	negative
<i>Expected growth (Q)</i>	future company growth	Tobin's <i>Q</i> : Market value of company assets vis-à-vis the total accountancy assets	negative
<i>Property of insiders (π)</i>	property of the controller	proportion of common stock withheld by the controller	positive
<i>Company size (T)</i>	assets or gross revenue	level of <i>assets</i> or <i>gross revenue</i> of the period	positive
<i>Cash flow (Φ)</i>	company's cash flow	profit before interests, taxes, and assets amortization/depreciation (%)	positive
<i>Third party indebtedness or participation (E)</i>	indebtedness	(short run financial debt + long run realizable)/net assets	negative
<i>Financial stress</i>	dummy	1, if <i>Q</i> and Φ are smaller than their corresponding median; 0 in remaining cases	negative
<i>Performing sector</i>	dummy	<i>regulated</i> (utilities, oil, water, gas) or <i>manufacturing</i>	negative/positive
<i>Kind of controller</i>	dummy	local private, foreign, or state owned	negative/positive

Table 2 summarizes the (measurable and proxy) variables included in the study, which are described as follows:

- *Payout index P* (dependent variable): Reflects the net fiscal year profit percentage distributed directly to the shareholders as revenues (dividends and IOOC), collected at the Economatic database. In the cases of negative net profit and positive revenues, the direct application of this concept would end up in a negative *P* value; in those cases, the current period's net profit and revenues were accumulated with those of the previous period before the calculation was done. If the result remained negative, the previous fiscal year's indicator was considered; in other cases, the variable was not defined. The dependent variable did not take into account the repurchase of stock by the own company. However, according to Leal and Saito (2003), in spite of existing some financial flexibility for the choice between dividends and stock repurchase, that is not likely to be the Brazilian stock market case. An increase of the direct remuneration via dividends is still perceived (Silva, Lima and Brito, 2005) in the period studied.
- *Asymmetric information*: Dummy variables were used to indicate the larger or smaller presence of the asymmetric information at the company. So it was assumed that a company has a smaller asymmetric information vis-à-vis others when: it has issued American Depositary Receipts (ADRs) at the New York stock exchange (NYSE) and/or has adhered to the Bovespa corporate governance levels N1, N2, and New Market. It is known that for getting access to both the United States market and to the differentiated levels of Bovespa's corporate governance, the requirements for information disclosures are higher, therefore reducing the information asymmetry between the company and the investors. Regarding the (algebraic) sign expected for this variable, *pecking order hypotheses* and *signaling* provide conflicting conclusions, but that contradiction can allow its differentia-

tion. The first foresees *smaller* dividends to accumulate cash and, in that way, prevent sub-investment issues; the latter foresees that the organization should pay *larger* dividends to signal its good forthcoming opportunities regarding companies with smaller asymmetry.

- *Observed growth ΔR* : As a proxy to measure the company's past growth, a variation of the net income, obtained from Economatics, was utilized. The companies presenting higher growth rates will need more resources to finance it, thus reducing the resources for paying dividends.
- *Expected growth Q* : As a proxy for the company's growth opportunities, as it has been done in other investigations, the Tobin Q indicator was used. It was defined as the market value index of the company's assets, (in this case using the definition of *firm value* given by Economatics: the stock market value plus the debt's accountancy value), referred to the company's total assets. A negative relationship is expected reflecting that, when company gestors anticipate good investment opportunities, they would need larger resources to this end, thus reducing dividends.
- *Property of insiders π* : This indicator measures the common stock percentage withheld by the controlling shareholder. The data were collected at the Economatics system. In Brazil, like in the majority of developing countries, the companies' property is highly concentrated, as opposed to what takes place in developed countries. That means that most of the times the majority shareholder is the company's controller (*insider*). In that case, according to Miller and Rock (1985), the stock price changes lead to a strong impact on the controlling shareholder richness, a condition that favors a larger distribution of dividends.
- *Cash flow Φ* : It is expected that a company with high profits (or high cash flow) will pay larger dividends.
- *Indebtedness E* : A more leveraged capital structure forces companies to perform interest payments and debt amortizations, reducing the resources available for the payment of dividends. In that way, the indebtedness would replace the dividends payment as a way to reduce the free cash flow and force the gestor to perform better. Therefore, a negative relationship with the revenue payment indicator is expected.
- *Financial stress*: The definition proposed by Deshmukh (2005) was utilized. According to it, the companies with a low cash flow and smaller growth opportunities have greater probability of suffering financial stress than the remaining sampled companies. To identify them, a dummy variable was created. It has the value 1 (one) for companies with low cash flow (below the median of Φ) and slim growth opportunities (below the median of Q); and 0 (zero) in other cases. Should the company present financial difficulties, it should reduce the payment of dividends and vice-versa.
- *Company size T* : Larger companies could tend to a more generous dividends policy. The same would occur with higher billing companies, which should be more likely to distribute more dividends. So, as size proxy candidates, there are the *total assets level* and the *gross revenue*.
- *Sector dummy*: Based on the empirical evidence of Mougoué and Rao (2003), Heineberg and Procianoy (2003), and Silva (2004), the analysis also considered the company sector. The sectors were particularly grouped as *regulated*, covering *energy, oil, gas and water*, which are more subject to government supervision; and as *other sectors*, including *food, commerce, textile, mining and steel making*. By the same token, a dummy was created for the manufacturing sector, because this is the more representative in the sampling, assessing whether or not it impacts the results.
- *Kind of controlling shareholder*: The nature of the controlling stockholder was included as a controlling variable; the information were obtained from the Divext system and classified as *local private, foreign and state owned*.

4. Analysis of the results

4.1. Descriptive analysis

The univariate statistics estimated with the average values for the period 2000-2004 are shown on **Table 3**. During that period, for the 178 companies included in the sample, the average payout ratio was 40.9%, considering the median. Including the organizations that did not make any payout, that value would be 33.4%, a value still above the legal minimum. Considering average values, the revenue growth was 12.7%, the indebtedness was 69.1% and the cash flow was 14.1% of the assets. The future growth possibilities measured by Tobin's Q presented a median of 0.61, varying from 0.02 and 5.7. Likewise, the size showed a dispersion from 27 millions and 133 billions *reais* ($\text{\$R}$)⁴ as an accountancy assets average.

On **Table 4**, we show some statistics of the payout index in comparison with several category variables (dichotomic), which were defined for the research and are specified in the first column. The t test was performed for the average differences, being significant at level 5% only the one connected to the presence of *financial stress*, a situation where companies pay an average 42% less in dividends. The remaining conditions do not make any relevant difference

⁴ Brazilian currency

for the payout index. It is worthwhile mentioning that, at the 20% level, the variables *asymmetric information*, *corporate governance*, *ADR issuing at NYSE*, *regulated sectors* and *manufacturing sector* present significant differences.

Table 5 shows the correlation coefficients among the continuous variables defined as the average between 2000 and 2004 for the 124 companies with positive payout index. The largest coefficient (0.446) corresponds to the cash flow variables Φ and Tobin's Q ; the coefficients for the remaining variables are small and not relevant. The dependent variable correlations were *negative* with the concentration of property by the controller π and with the cash flow Φ ; and positive for the remaining ones.

As part of the descriptive analysis, we also identified the characteristics that influence most the distribution of company results as revenue, differing from those that do not distribute. For such, we used the *logistic regression (logit model)* where the dependent variable was defined as having a dichotomic nature, taking the value 1 or 0, depending if the company did or did not distribute revenues, respectively.

Table 3: Descriptive statistics

<i>Variable</i>	<i>Average</i>	<i>Median</i>	<i>Maximum</i>	<i>Minimum</i>	<i>Std.-deviation</i>	<i># of observ.</i>
<i>Payout P</i>	36.132	33.443	163.381	0.000	33.652	178
<i>Payout P (excluding zeros)</i>	51.867	40.874	163.381	4.360	28.406	124
<i>Expected growth Q (Tobin)</i>	0.710	0.612	5.696	0.021	0.624	178
<i>Observed growth ΔR</i>	12.650	10.950	80.001	-36.155	16.452	178
<i>Insiders property π</i>	63.756	62.307	99.997	9.797	23.601	178
<i>Indebtedness E</i>	69.085	59.206	728.961	1.178	69.203	178
<i>Cash flow Φ</i>	14.05	14.21	38.76	-6.97	8.12	178
<i>Size T (millions \$R)</i>	5,036.868	1,474.523	133,099.78	27.657	13,732.841	178
<i>Market value (millions \$R)</i>	2,286.656	491.598	73,277.501	1.121	6,979.191	178

Table 4: Payout average index statistics, according to the category variables.

<i>Condition</i>	<i>Inclusion</i>	<i>Average</i>	<i>Std.-deviation</i>	<i>Probab.</i>	<i>Median</i>	<i>n</i>	<i>%</i>
Financial stress	without	40.492	32.455	0.0206	36.051	114	64.0%
	with	28.365	34.594		19.347	64	36.0%
American Depositary Receipts or adherence to Bovespa's Governance Levels or New Market	without	33.822	35.501	0.1545	29.740	127	71.3%
	with	41.730	28.217		36.954	51	28.7%
American Depositary Receipts	without	35.943	34.275	0.8569	33.454	152	85.4%
	with	37.236	30.345		33.316	26	14.6%
Adherence to Bovespa Governance Levels	without	34.181	35.359	0.1181	29.990	143	80.3%
	with	44.105	24.340		40.395	35	19.7%
Adherence to the Bovespa New Market	without	35.590	33.380	0.1570	33.277	174	97.8%
	with	59.707	42.461		71.331	4	2.2%
Institutional investors holding more than 5% of common stock	without	36.780	34.297	0.6695	33.367	131	73.6%
	with	34.327	32.074		33.519	47	26.4%
Pertinence to regulated sector (energy, oil, water, and gas)	without	34.339	31.917	0.1219	33.114	147	82.6%
	with	44.636	40.415		42.141	31	17.4%
Pertinence to the manufacturing sector	with	40.381	36.705	0.1512	34.170	75	42.1%
	without	33.038	31.061		33.114	103	57.9%
Local private control	with	35.641	33.941	(1/) 0.9181	33.114	145	81.5%
Foreign control	with	38.682	35.312	(2/) 0.7152	39.013	19	10.7%
State control	with	37.758	30.281	(2/) 0.8224	35.504	14	7.9%

Notes: (1/) For the *F*-test, with all three categories;

(2/) For the *t*-test, compared to *local private control*.

Table 5: correlations among the variables (average values between 2000 and 2004), considering the 124 companies with positive P .

<i>Variable</i>	<i>Symbol</i>	<i>P</i>	<i>Q</i>	ΔR	π	<i>E</i>	$\ln T$
Expected growth	Q	0.147	1				
Observed growth	ΔR	0.016	0.150	1			
Property of insiders	π	-0.092	-0.047	0.099	1		
Indebtedness	<i>E</i>	0.021	0.017	0.037	-0.283	1	
Size	$\ln T$	0.301	0.278	0.224	-0.164	0.231	1
Cash flow over assets	Φ	-0.036	0.446	0.070	0.065	-0.103	-0.079

The results indicate that the company's decision is impacted by the *growth possibilities*, the *cash flow availability*, the *size* and the *indebtedness*. So, the companies with less future profitability expectations, of larger size, with larger resources in cash and less indebted have more probability to distribute results directly via dividends or interests over the own capital (**Table 6**). For example, when the *cash flow vis-à-vis the total assets* index increases 1%, the odds of dividend payment increase 1.3 times. The companies with less asymmetric information, defined in this research as those that have adhered to *Bovespa's corporate governance*, have a greater possibility of paying dividends, although with a relevance limit slightly above 5%. For them, the odds for paying dividends is 3.7 times vis-à-vis those companies who did not adhere to the governance principles.

Table 6: Logit model for dividends distribution (dependent logit variable = 1 if $P > 0$).

<i>Variable</i>	<i>Coeffic. C</i>	<i>Standard-error</i>	<i>p</i>	<i>exp (C)</i>
Constant	-2.985	3.579	0.4042	0.051
Log Q	-1.439	0.538	0.0075	0.237
Log <i>E</i>	-1.698	0.635	0.0075	0.183
Log T	0.434	0.171	0.0111	1.544
Φ	0.288	0.055	0.0000	1.333
With corporate governance	1.299	0.673	0.0537	3.665
LR-test (5 DF)	100.3226		0.000	
R^2 (McFadden)	0.459195			

4.2. Empirical results – cross section regression model

In order to respond to the objectives of this research, we used the Tobit regression model for truncated data. As indicated previously, the estimate of equation 2 through the conventional ordinary minimum squares technique, originates inconsistent and less efficient estimators, since it ignores the null values of the dependent variable, which potentially contains valuable information on the parameters of interest. Tobit's model considers all the available observations and is appropriate to the research context. In that case, the dependent variable is the *payout average index P* that takes value zero for companies that did not distribute dividends, or a positive value, equal to the average dividends divided by the average net profit.

Thus, on the Brazilian companies sample, the quantitative analysis of paid dividends was performed using different Tobit-model specifications. In the results, shown on **Table 7**, the specifications I and II include all the explicative variables defined on **Table 2**; some dummy variables present a high or perfect correlation, hence the need of two specifications. On the final specification III, we considered those variables with *probability value (p-value)* up to the 10% level.

The dummy variable for companies with ADRs at NYSE had a negative coefficient, relevant at the 1% level, being the only significant asymmetric information proxy. The negative coefficient would indicate that companies with higher information asymmetry must define more generous dividend payment policies. This result is *consistent with the signaling theory* but *inconsistent with the pecking order hypothesis*. The remaining asymmetric information proxies, like the different corporate governance levels and the presence of institutional investors, do not present significant coefficients.

In the case of governance levels, although not relevant, all coefficients were positive, just as forecasted by the pecking order hypothesis. In that case, the payout average index was 46.2% for companies that participated in just some of governance levels, 36.8% in companies with ADRs at NYSE, 38.0% for companies participating of the governance and having ADRs at NYSE, and 33.8% in those that neither do participate of the governance nor have issued

Table 7: Tobit's model for dividends payout

<i>Specification</i>		<i>I</i>		<i>II</i>		<i>III</i>	
<i>Variable</i>	<i>Symbol</i>	<i>Coeffic.</i>	<i>Probab.</i>	<i>Coeffic.</i>	<i>Probab.</i>	<i>Coeffic.</i>	<i>Probab.</i>
Constant		-110.438	0.013	-80.792	0.076	-93.930	0.025
Expected growth	$\text{Ln } Q$	-15.215	0.020	-15.966	0.017	-12.947	0.034
Observed growth	ΔR	0.326	0.103	0.313	0.128		
Indebtedness	$\text{Ln } E$	-20.732	0.002	-18.312	0.006	-21.474	0.001
Size	$\text{Ln } T$	13.443	0.000	9.789	0.000	12.744	0.000
Cash flow (over assets)	Φ	2.442	0.000	2.628	0.000	2.527	0.000
Property of insiders	π	-0.214	0.108	-0.226	0.096	-0.209	0.098
Issues ADR's		-22.417	0.014			-21.875	0.012
Pertinence to regulated sector				12.975	0.202		
Pertinence to manufacturing sector		1.269	0.850	7.007	0.343		
State controlled		-18.336	0.132				
Foreign controlled		-13.643	0.173	-8.706	0.393		
Adherence to Corporate Governance				9.384	0.215		
Presence of institutional investors		-5.311	0.470	-5.272	0.479		
Adherence to Corporate Governance (level 1)		7.278	0.383				
Adherence to Corporate Governance (level 2)		19.249	0.266				
Adherence to New Market		27.778	0.150				
Presence of financial stress		2.075	0.814	1.132	0.902		
	R^2	0.322		0.275		0.292	
	R^2 (adjusted)	0.250		0.217		0.263	
	$\text{Ln}(\text{likelihood})$	-650.16		-654.59		-654.86	
	# of observations	178		178		178	

ADRs. So, when comparing the first with the latter, the companies with higher asymmetric information would pay smaller dividends to prevent market financing and, as opposed, more transparent organizations would not be concerned with the loss of value using financing via market and could distribute a larger share of profits to the shareholders. Those results however have to be confirmed.

The coefficient for property concentration by the controlling shareholder (insider) was relevant at the 10% level, but had a sign opposed to the expected one. In that case, an increase in the concentration of the controlling shareholder does not necessarily lead to an increase in the payout index, as forecasted in the agency theory over the dividends monitoring. That result is similar to the one reported by Silva (2004), where companies with high concentration of voting rights in the hands of the controller have low payout, and is consistent with the minority shareholders' expropriation hypothesis, "since the concentration control tends to diminish the company value" (p. 351).

Regarding the control variables, results indicate that the cash flow coefficients (Φ) and size ($\text{Ln } T$) were positive and relevant at 1% level, as indicated by the asymptotic probability value for the t -test. The growth opportunities coefficients ($\text{Ln } Q$) and the indebtedness coefficient ($\text{Ln } E$) were negative and also relevant at 1% level. The observed growth rate variable (ΔR) showed a coefficient opposed to the one indicated through the theoretical foundation, but was not relevant. The dummy variables for companies (i) impacted by financial stress (ii) pertaining to a regulated sector (energy, oil, gas, and water), (iii) of the manufacturing sector, and (iv) with different controlling shareholder nature were not relevant in the sample studied.

The negative coefficient for growth opportunities ($\text{Ln } Q$) and the positive one for the cash flow measure (Φ) are consistent with the forecast of the pecking order hypothesis. Deshmukh (2005) suggests that the variable Q can also be considered as a asymmetric information proxy in companies where growth opportunities are hard to evaluate. In that way, companies with good investment opportunities (which, according to the theory, would present a larger asymmetry of information, because the information on such opportunities is usually considered as strategic and is not promptly informed to the market) pay smaller dividends. Being so, the result would also be consistent with the pecking order

hypothesis. However, in the context of the research, it becomes hard to accept that proposal because more transparent companies had a higher Q in average.

Looking for the strength of the results, specification III of **Table 7** was estimated using the Huber/White robust matrix for variances and covariances. However, neither change of signal nor forecast relevancies were perceived. Finally, we notice that **Tables 6** and **7** show almost the same variables, which indicates reliable and consistent results.

5. Conclusions

In the sample of the companies studied, considering the median, the average payout index was 40.9%. That value falls down to 33.4% when we include companies that do not pay dividends but, nevertheless, it remains above the legal minimum, confirming the trend of an increase in the direct shareholders remuneration, perceived by other authors. The companies with less asymmetric information (that issue ADRs and/or adhered to Bovespa's governance levels) presented a higher average payout index, but the difference was not statistically significant.

Regarding the dividends payout determinants, results indicate that there is a positive relation with the cash flow and company size, but negative with the growth opportunities, with the insider property and with the issuing of ADRs at NYSE.

Companies issuing ADRs have less asymmetric information. The negative relation is consistent with the signaling hypothesis, but inconsistent with the pecking order one. After control by the asymmetry of information, the *insider property* (the controlling shareholders) was negative vis-à-vis the dividends payout, a result that is not consistent with the agency cost monitoring hypothesis, but consistent with the minority shareholders expropriation one (Silva, 2004). Likewise, the dividends relationship, negatively with growth opportunities and positive with the cash flow, was consistent with the pecking order hypothesis.

It was not possible achieve relevant results through the use of Bovespa's corporate governance levels as proxy variables of asymmetric information, nor through the use of the presence of institutional investors as company shareholders. A possible explanation might be that the corporate governance is a relatively new mechanism and the participation of institutional investors is not significant enough to influence the company's decision making. Besides, the companies adhering to the governance levels might define a larger payout index because they precisely are not concerned with a market sub-evaluation, as forecasted in the pecking order hypothesis.

Lastly, it is suggested that new studies include the possibility of using other proxy variables for the asymmetric information. Proxies that would allow supporting or not the pecking order theory in determining the policy of dividends, as indicated by Deshmukh (2005) in the United States, or that allow confirming or rejecting the signaling hypothesis, which has been defended by some recent works in this area in Brazil. It is also suggested to analyze (i) the possibility, depending upon the market, of groups of companies that define their policies of dividends consistently with one or the other of those hypotheses, and (ii) the repurchase impact on the results.

6. References

- Baker, H. K.; Smith, D. M. (2006): In search of a residual dividend policy [*Em busca de uma política de dividendos residuais*]. *Review of Financial Economics* **15**, 1-18.
- Bhattacharya, S. (1979): Imperfect information, dividend policy, and "the bird in the hand" fallacy [*Informação imperfeita, política de dividendos e a falácia do "pássaro na mão"*]. *Bell Journal of Economics* **10** (Spring), 259-270.
- Black, F. (1976): The dividend puzzle [*O enigma dos dividendos*]. *Journal of Portfolio Management* **2**, 5-8.
- Decourt, R. F.; Procianny, J. L.; Pietro Neto, J. (2007): As variações nas distribuições dos proventos em dinheiro sinalizam variações nos lucros futuros? [*Do variations in cash dividends distribution signalize variations in future profits?*]. *XXXI Enanpad (Anais...)*. Rio de Janeiro/RJ: ANPAD.
- Deshmukh, S. (2005): The effect of asymmetric information on dividend policy [*O efeito da assimetria de informações sobre a política de dividendos*]. *Quarterly Journal of Business & Economics* **44** (1-2), 107-127.
- Correia, L. F.; Amaral, H. F. (2002): O impacto da política de dividendos sobre a rentabilidade de títulos negociados na Bovespa no período de 1994 a 2000 [*The impact of the dividends policy on the yield of securities negotiated at Bovespa in the period from 1994 to 2000*]. *XXVI Enanpad (Anais...)*. Rio de Janeiro/RJ: ANPAD.
- Easterbrook, F. H. (1984): Two agency-cost explanations of dividends [*Duas explicações de dividendos através de custos de agência*]. *American Economic Review* **74** (4/sep), 650-659.
- Espitia-Escuer, M.; Ruiz-Cabestre, M. E. (1995): El valor informativo de los dividendos sobre los beneficios futuros en el mercado de capitales español [*The informative value of dividends on future benefits in the Spanish capital market*]. *Revista Española de Financiación y Contabilidad* **24** (82/ene-mar), 201-220. <http://www.aeca.es/pub/refc/articulos.php?id=0406>, 31/03/2008.
- Fama, E. F.; Jensen, M. C. (1983a): Separation of ownership and control [*Separação de propriedade e controle*]. *Journal of Law and Economics* **26**, 301-325.

- Fama, E. F.; Jensen, M. C. (1983b): Agency problems and residual claims [*Problemas de agência e reivindicações residuais*]. **Journal of Law and Economics** 26, 327–349.
- Fama, E. F.; French, K. R. (2001): Disappearing dividends: changing firm characteristics or lower propensity to pay [*Dividendos minguantes: mudança nas características da empresa ou menor propensão a pagar*]. **Journal of Financial Economics** 60, 3–43.
- Garret, I.; Priestley, R. (2000): Dividend behavior and dividend signaling [*Dividendos: seu comportamento e o que sinalizam*]. **Journal of Financial and Quantitative Analysis** 35 (2/jun), 173-189.
- Gordon, M. J. (1959): Dividends, earning, and stock prices [*Dividendos, retorno e preços de ações*]. **Review of Economics and Statistics** s/vol (May), 99-105.
- Heineberg, R.; Procianny, J. L. (2003): Aspectos determinantes do pagamento de proventos em dinheiro das empresas com ações negociadas na Bovespa [*Determining aspects of cash dividends payout in companies with stock negotiated at Bovespa*]. **XXVII Enanpad (Anais...)**. Rio de Janeiro/RJ: ANPAD.
- Iquiapaza, R. A.; Bressan, A. A.; Barbosa, F. V. (2005): Dividendos: plano Real, imposto de renda e sinalização nas empresas listadas na Bovespa - 1986 a 2003 [*Dividends: The Real plan, income tax and signaling in companies listed at Bovespa - 1986 to 2003*]. **5º Encontro Brasileiro de Finanças (Anais...)**. São Paulo/SP: SBFIN.
- Jensen, M. C.; Meckling, W. (1976): Theory of firm: managerial behavior, agency costs and ownership structure [*Teoria da empresa: comportamento gerencial, custos de agência e estrutura de propriedade*]. **Journal of Financial Economics** 3 (Oct), 305-360.
- Kalay, A. (1982): Stockholder-bondholder conflict and dividend constraints [*O conflito entre acionistas e credores de obrigações e a restrição de dividendos*]. **Journal of Financial Economics** 10, 211-233.
- La Porta, R.; Lopez-de-Silans, F.; Shleifer, A.; Vishny, R. W. (2000): Agency problems and dividend policies around the world [*Problemas de agência e políticas de dividendos em todo o mundo*]. **Journal of Finance** 55 (1), 1-33.
- Leal, R. P. C.; Saito, R. (2003): Finanças corporativas no Brasil [*Corporate finances in Brazil*]. **RAE-eletrônica** 2 (2/jul-dez). <http://www.rae.com.br/electronica/index.cfm?FuseAction=Artigo&ID=1469&Secao=FINANÇAS&Volume=2&Numero=2&Ano=2003>, 31/03/2008.
- Lease, R. C.; John, K.; Kalay, A.; Loewenstein, U.; Sarig, O. (2000): **Dividend policy: Its impact on firm value** [*A política de dividendos: seu impacto no valor-de-empresa*]. Boston: Harvard Business School Press.
- Lintner, J. (1956): Distribution of incomes of corporations among dividends, retained earnings, and taxes [*Distribuição dos resultados de corporações entre dividendos, lucros retidos e impostos*]. **American Economic Review** 46 (2/May), 97-113.
- Loss, L.; Sarlo Neto, A. (2003): Política de dividendos, na prática, é importante? [*Is the dividends policy important in practice?*]. **Revista Contabilidade e Finanças USP** s/vol. (edição comemorativa/out), 39–53.
- Loss, L.; Sarlo Neto, A. (2006): O inter-relacionamento entre políticas de dividendos e de investimentos: estudo aplicado às companhias brasileiras negociadas na Bovespa [*The Inter-relationship between dividends policies and investment: A study applied to Brazilian companies listed at Bovespa*]. **Revista Contabilidade e Finanças USP** s/vol. (40/jan-abr), 52–66.
- Miller, M. H.; Modigliani, F. (1961): Dividend policy, growth and the valuation of shares [*Política de dividendos, crescimento e valorização de ações*]. **Journal of Business** 34, (4/Oct) 411-433.
- Miller, M. H.; Rock, K. (1985): Dividend policy under asymmetric information [*Política de dividendos sob informação assimétrica*]. **Journal of Finance** 40 (4/Sep), 1031-1051.
- Mota, D. C.; Eid Junior, W. (2007): Dividendos, juros sobre capital próprio e recompra de ações: um estudo empírico sobre política de distribuição no Brasil [*Dividends, interests over own capital and stock repurchase: An empirical study on distribution policy in Brazil*]. **XXXI Enanpad (Anais...)**. Rio de Janeiro/RJ: ANPAD.
- Mougoué, M.; Rao, R. P. (2003): The information signaling hypothesis of dividends: evidence from cointegration and causality tests [*A hipótese de sinalização de informações através de dividendos: evidências de testes de cointegrações e de causalidade*]. **Journal of Business Finance & Accounting** 30 (3-4/Apr-May), 441-478.
- Myers, S. C. (1984): The capital structure puzzle [*O enigma da estrutura de capital*]. **Journal of Finance** 39, 575-592.
- Myers, S. C.; Majluf, N. S. (1984): Corporate financing and investment decisions when firms have information that investors do not have [*Finanças corporativas e decisões de investimento quando as empresas têm informações que os investidores não têm*]. **Journal of Financial Economics** 13, 187-221.
- Nissim, D.; Ziv, A. (2001): Dividend changes and future profitability [*Mudanças no dividendos e lucratividade futura*]. **Journal of Finance** 56 (6/Dec), 2111-2133.
- Procianny, J. L. (1996): Dividendos e tributação: o que aconteceu após 1988-1989 [*Dividends and taxation: What happened after 1988-1989*]. **Revista de Administração** 31 (2/abr-jun), 7-18.
- Rozeff, M. (1982): Growth, beta and agency costs as determinants of dividend payout ratios [*Crescimento, beta e custos de agência como determinantes das taxas de pagamento de dividendos*]. **The Journal of Financial Research** 5, 249-259.
- Short, H.; Zhang, H.; Keasey, K. (2002): The link between dividend policy and institutional ownership [*A ligação entre política de dividendos e propriedade institucional*]. **Journal of Corporate Finance** 8 (2), 105-122.
- Silva, A. L. C. (2004): Governança corporativa, valor, alavancagem e política de dividendos das empresas brasileiras [*Corporate Governance, value leverage and dividends policy at Brazilian companies*]. **Revista de Administração** 39 (4/out-dez), 348-361.

- Silva, J. C.; Brito, R. D. (2005): Testando as previsões de *trade-off* e *pecking order* sobre dividendos e dívida no Brasil [*Testing the trade-off and pecking order forecasts over dividends and debt in Brazil*]. **Estudos Econômicos** 35 (1/jan-mar), 37-79.
- Silva, J. C.; Lima, M. R.; Brito, R. D. (2005): Sobre o crescimento da remuneração direta aos acionistas: economia de impostos ou mudanças nas características das firmas [*On the growth of direct remuneration to shareholders: Tax savings or changes in the company characteristics*]. **5º Encontro Brasileiro de Finanças (Anais...)**. São Paulo/SP: SBFIN.
- Smith, C. W.; Watts, R. L. (1992): The investment opportunity set and corporate financing: dividend and compensation policies [*O conjunto de oportunidades de investimento e as finanças corporativas: dividendos e políticas de compensação*]. **Journal of Financial Economics** 32, 263-292.