

CORPORATE GOVERNANCE AND CORPORATE INVESTMENT: AN EXPLORATORY RESEARCH IN THE BRAZILIAN PUBLICLY TRADED COMPANIES LISTED IN BOVESPA

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Abstract

This paper aims to study the influence of Corporate Governance practices in the institutional decision to invest. It was developed a Governance Index (iGov), a descending rank was prepared and a test was applied to check if the companies in the first 25% of this rank have the highest number of institutional investors among their biggest investors than the companies of the last 25%. For the validation of iGov it was tested if the companies with the best marks present highest Returns, lowest Capital Cost, highest Market Value, highest Competitiveness within the sector, lowest Beta, highest EVA[®] and lowest Share concentration. It has been proved that the best Corporate Governance practices do not have any statistical relation with the presence of more Institutional Investor.

Keywords: Corporate Governance, Corporate Investment, Brazilian Companies

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1. Introduction

The theme Corporate Governance is being more and more relevant in Brazil as the Brazilian Capital Market develops. The number of investors is increasing and also is the volume of resources negotiated in the Stock Exchange (Bovespa, 2008). The higher the development of the stock market, the better and greater is the impact in the country's economy.

Not only is the number of investments rising, but the demand of investors when choosing where to invest their resources is also increasing. Companies with good Governance practices, according to Shleifer and Vishny (1997) have shown to be more attractive to these investors by presenting a higher transparency level in the disclosure of information, consequently with higher protection for the minority shareholder, essential characteristics when making the decision on where to invest.

In the year 2000, Bovespa created the Corporate Governance stamp which classifies companies listed according to the demands of Governance practices. This has been a try of the stock market to stimulate the investment in the best ranked companies and thus develop the stock market as a whole.

According to Bovespa (2008), "the basic assumption is that the adoption of good Corporate Governance Practices by the companies, gives more credibility to the stock market and, as a consequence increases the confidence and disposition of the investors in acquiring the their shares, paying a better price for them, reducing the cost of capturing investors".

Within this context, this work intends to broaden the analysis of Governance practices, beyond the Bovespa Stamp, presenting a Governance rank, from an Index called iGov, created under premises that are presented in item 3.3.1. Moreover, it aims to check if companies with better positions in this rank have presented a greater number of institutional investors.

After classifying the companies in the rank, we intend to verify which are the ones that present better Returns, lower Capital Cost, Higher Market Value, higher competitiveness within its sector, lowest Beta, higher EVA[®] and smaller shares concentration, aiming to verify the adherence to the index developed with the literature, as Shleifer and Vishny (1977). It is expected that companies with better Governance (higher positions in the rank) present all these characteristics.

2. Theoretical Framework

With the development of the modern company, according to Jensen and Meckling (1976), management and proprietorship has been separated and agency conflicts have arisen. To minimize these conflicts and to increase shareholder's protection (supplier of resources) against the administrators (decision-makers) the implementation of control mechanisms has been necessary

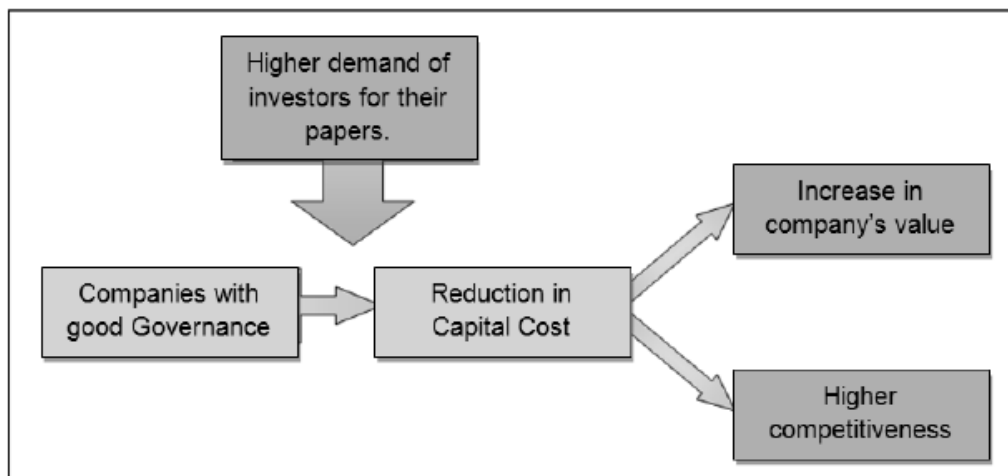
According to Silveira (2004), these mechanisms can be understood as "The minimization of the losses caused by the conflict of interests between decision makers and suppliers of resources depends on the presence of a set of internal and external mechanisms that align the interests of the management to the ones of all shareholders. This set of mechanisms of incentive and control is called Corporate Governance".

Silveira (2004) also states that the demand for shares of companies with the best practices of Corporate Governance is higher, because these companies present a better economic performance. Besides, these companies achieve a reduction in their

cost of capital (Lang and Lundholm, 1996; Shleifer and Vishny, 1997; La Porta et al, 1998; Black, 2001; CVM, 2002; Bushman and Smith, 2001; 2003; Bhojraj and Sengupta, 2003; Gompers et al, 2003; Vieira and Mendes, 2004; Black et al, 2006; Leal and Carvalhal-da-Silva, 2005; Lopes and Walker, 2008) and consequently an increase in their value (La Porta et al, 1998; 2002; Black, 2001; Klapper and Love, 2002; Bauer et al, 2003; Barontini and Siciliano, 2003; Gompers et al, 2003; Brown and Caylor, 2004; Farber, 2005; Black et al, 2006; Leal and Carvalhal-da-Silva, 2005; Larcker et al, 2007) occurs, thus with a higher competitiveness (operational performance (Jensen and Meckling, 1976; Klapper and Love, 2002; Gompers et al, 2003; Brown and Caylor, 2004; Larcker et al, 2007) in its sector, as shown in Figure 1.

Given this, starting from the premise that the shareholder aims to maximize profits, one can understand that companies with better Governance practices present a higher possibility of better returns and because of this tend to be a more attractive investment.

Figure 1. Benefits of the Corporate Governance



Source: Silveira, 2004 (Adapted).

In Brazil there have been many attempts to identify which are the companies with the better practices. One of them was the creation of the Corporate Governance Bovespa Stamp which classifies the companies listed in this stock exchange in three Governance levels: Level 1, Level 2 and New Market.

In 1999, the Corporate Governance Brazilian Institute (IBGC) was created with the following purpose: "to be the reference in Corporate Governance, contributing to the sustainable performance of the organizations and influencing the agents in our society towards more transparency, fairness, and responsibility".

Therefore, companies with the best Corporate Governance practices could present better results and in doing so, attract a higher number of investors with better resources, fostering the development of the Brazilian Stock Market.

Corporate Governance may be understood as the set of mechanisms for protection of the investor, meaning the guarantee that the investment made in a certain company will be allocated to what has been agreed upon and with a higher probability of return on the investment.

With the premise that investors are averse to risk, it is possible to believe that they will invest their resources in companies that minimize the risk for

their investment, and therefore look for companies with good Governance practices.

One of the main characteristics of the protection for investor's capital is the separation of proprietorship from management, which can minimize the conflicts of interests, taking into account that the manager, who receives incentives for a better performance will search for what the rational investor wants: to maximize the company's profits. For this, it is needed that the control mechanisms and alignment of interests are efficient to guarantee the interest of the manager in making decisions which aim to improve the company's profits and not to act in his sole interest.

To Silveira (2004) the Corporate Governance mechanisms can be "the administration council, the proprietorship structure and control, the remuneration policy, the capital structure, the competition in the market of the products, in the manager's job opportunities, the existence of a market of hostile takeovers and the disclosure of periodic reports by these companies".

The implementation of Corporate Governance mechanisms in Brazil, is a recent practice, taking into account that the creation of the Bovespa Stamps only occurred in 2000 and these Stamps are the first attempt of certified Governance for Brazilian companies.

The effect of Governance good practices meets some challenges in the Brazilian market such as the high interest rates, the exchange rate instability and high volatilities in the stock exchanges, the economic and political instability. According to Lopes (2008), "there is indisputable evidence that Brazil has a weak

institutional environment. Anderson (1999) provides an interesting overview. Despite being focused on the bond market, he presents some evidence on the functioning of financial markets as a whole in Brazil. According to him, high inflation, volatile real-sector activity, underdeveloped institutions, and an interventionist state characterize Brazil. Despite these factors, the vitality of Brazilian financial markets shows that's firms imaginatively design financial contracts to address difficulties in the economic environment. He also shows that, as expected, companies rely little on external financing and ownership concentration is very high".

Lopes (2008), also states that investors in Brazil, have little protection regarding their investments. The Brazilian companies present a high concentration of ownership and the presence of the State as controller of big companies: "Investors in Brazil received very little protection; institutions were primitive and legal enforcement very poor. Despite the relative macroeconomic stability, institutions in Brazil during this period did not support capital markets development. Investors' response to such inimical conditions was to maintain a high level of ownership concentration for the few firms that actually went public. Companies with better growth opportunities chose to issue ADRs in the US to raise funds and signal more credibility. The consequence of this situation is an anemic equity market, with most firms relying on private credit deals to raise finance".

In Graph 1, one can observe one of the challenges previously mentioned the oscillation of the volatility of the Ibovespa index and also its great amplitude.

Graph 1. Volatility of Ibovespa



Source: Economática®

Thus, the presented challenges may be responsible for the low influence of the Governance practices in the institutions decision to invest.

The Corporate Governance Bovespa Stamps were created by the São Paulo Stock Exchange as an attempt to motivate the companies to develop

protection mechanisms to protect the investor and in doing so, to motivate the consistent development of the stock market in Brazil.

According to Bovespa, "the New Market and differentiated levels of Corporate Governance – Level 1 and Level 2 – are special segments of the listing

which have been developed with the aim to present a negotiation environment that would stimulate, at the same time, the investor's interest and the appreciation

of the companies". Table 1 the main differences between the levels are presented.

Table 1. Differences between the levels

Demand	New Market	Level 2	Level 1	Traditional
Minimum % of free float	At least 25% of free-float	At least 25% of free-float	At least 25% of free-float	No rules
Characteristics of the shares issued	Allows only the existence of ON shares	Allows the existence of ON and PN shares (with additional rights)	Allows the existence of ON and PN shares	Allows the existence of ON and PN shares
Administration Council	At least 5 members, of which at least 20% are independent	At least 5 members, of which at least 20% are independent	At least 3 members (according to the law)	At least 3 members (according to the law)
Financial Yearly Demonstrations by International Standards	US GAAP or IFRS	US GAAP or IFRS	Optional	Optional
Tag-along granting	100% for ON shares	100% for ON shares 80% for PN shares	80% for ON shares (according to the law)	80% for ON shares (according to the law)
Adoption of Market Arbitration Chamber	Compulsory	Compulsory	Optional	Optional

Source: Bovespa, 2008.

In Level 1, the companies must basically supply information to shareholders and not have founders shares. Founders shares are bonds issued by a company without face value and negotiated in the bonds market. They guarantee their owners the right of credit consisting in the participation in the annual profits of the issuing company (Assaf Neto, 2006).

The companies that intend to be in Level 2, besides complying with Level 1 demands, must meet further requirements.

The New Market is the Level for companies that are issuing shares and already comply with the more rigorous Governance rules, according to Bovespa (2008), "These commitments refer to supplying information that facilitate the follow up and checking of the management and company's controllers' decisions and the adoption of societal rules that better balance the rights of all shareholders, regardless of its condition of controller or investor".

The different demands for each level were taken into account for the creation of the IGov, according to item 3.3.1, with a better ranking of the companies complying with the demands of the most demanding level.

Therefore, we intend to take into consideration the main Governance mechanisms for the construction of the proposed index for the analysis of the sampled companies as the main attraction to institutional investors.

3. Methodology

3.1. HYPOTHESIS

The companies better ranked in Corporate Governance attract a higher number of institutional investors. Being:

H₀₁: Companies better ranked in Corporate Governance attract a higher number of institutional investors.

The companies with higher Governance level present better Returns, lower Capital cost, higher Market value and competitiveness in the sector, smaller Beta, higher Economic Value Added (EVA[®]) and lower concentration of shares. Being:

H₀₂: The companies with higher ranking in the Corporate Governance present better Returns (R), lower Capital Cost (Kd), higher Market value (VM), higher competitiveness in the sector (Co), Smaller

Beta (β), higher Economic Value Added (EVA[®]) and lower concentration of shares (Conc).

3.2. Sample

182 Brazilian companies listed in Bovespa with had data for all variables, were analyzed for the period of January, 1st 2007 to December 31st of 2007.

3.3. Variables

3.3.1. Corporate Governance Index (IGov)

For the building of the Corporate Governance ranking the participation of the Companies in the market indexes ISE – (Company Sustainability Index), Ibovespa (Bovespa Index), IGC (Corporate Governance Index) were considered. In addition, marks were given to the companies with ADR's (American Depositary Receipt), accounting demonstrations in IFRS (International Financial Reporting Standards) or US Gaap (United State Generally Accepted Accounting Principles), Corporate Governance Bovespa (New Market, Level 1 and Level 2) and level of Shareholding Concentration.

It has been attributed binary marks of "0" or "1" for each item:

- Company included in the Ibovespa in 2007;
- Company included in the ISE in 2007;
- Companies with ADRs issued during 2007;
- Companies with demonstration in IFRS or USGAAP during 2007;
- Companies with less than 50% of the capital in possession of a single shareholder, during 2007;
- Companies without fines imposed by Bovespa for not complying with the requirements of the Corporate Governance Stamp during 2007.

It was attributed a Mark of "0", "1", "2" or "3" for the companies with Corporate Governance Bovespa Stamp for each level (no level, Level 1, Level 2, New Market) in 2007.

3.3.2. Return (R)

It is considered Return the profit expected on the capital employed in the company's shares, according to Ross *et al.* (2002). The return of the Companies, during 2007 was calculated according to **Ошибка! Источник ссылки не найден.**

$$R_{it} = \frac{P_{it}}{P_{i(t-1)}}$$

In which:

P = Price of the share

(t - 1) = first day of the year 2007

t = the last day of the year 2007

i = Company

3.3.3. Total Capital Cost (CC)

The company's capital cost is given by the remuneration demanded by the total of creditors (third-parties capital) and shareholders (own capital) over the capital supplied by them, according to Silveira (2004).

The Own Capital Cost (Ke) was obtained using the CAPM model (*Capital Asset Pricing Model*) as it is the most accepted model in the market and because it presents extensive theoretical fundamentals, according to Lambert *et al.* (2005 in Alencar, 2007) through the use of **Ошибка! Источник ссылки не найден.**

$$Ke_{it} = R_f + \beta \times (R_M - R_f)$$

In which:

Ke = Expected Return or Own Capital Cost

Rf = Return of free risk asset

R_M = Market Return

β = Beta of the Company "i"

The third-parties Capital Cost (Kd) of each company is understood by Lopo *et al.* (2001 in Lima 2007) as being "the cost of financing given to the companies" and by Assaf Neto (2003) as being defined according to the companies' liabilities which is in agreement with **Ошибка! Источник ссылки не найден.**, proposed by Funchal *et al.* (2007):

$$Kd_{it} = \frac{\text{Financial Expense}_{it}}{\text{Total Debt}_{it}}$$

Being the Total Debt calculated by **Ошибка! Источник ссылки не найден.**

$$\text{Total Debt}_{it} = \text{Debentures CP and LP}_{it} + \text{Financing}_{it}$$

In which:

CP = Short term

LP = Long term

Thus, the Total Capital Cost will be obtained by **Ошибка! Источник ссылки не найден.**

$$CC_{it} = Ke_{it} + Kd_{it}$$

3.3.4. Market Value (MV)

The Market Value of a company is given by the prices at which buyers and sellers in the market are willing to negotiate their shares. In this research, the MV was divided by the size of the company, using its Total Net Equity.

The Market Value was calculated from **Ошибка! Источник ссылки не найден.**, according to Ross *et al.* (2002):

$$VM_{it} = \frac{\text{Share_Price}_{it} \times \text{Number_of_Shares}_{it}}{E_{it}}$$

In which:
E = Equity

3.3.5. Competitiveness in the Sector (Co)

The ROA (Return on Assets) was, in this study, considered a performance variable of each company in the sample and compared to the same variable of average performance of the economic sector in which this company is classified based on the 20 categories of Economática®.

The ROA as a measure of economic performance was validated by Brito and Vasconcelos (2004). Thus, the Competitiveness (Co) was considered as the Return on Assets of the company in relation to the Return of the economic sector comprising it, to evaluate the ratio of financial performance of the company with the sector that comprises it. The (Co) will be calculated according to Equation 7:

$$Co_{it} = \frac{ROA_{it}}{ROA_Sector_{it}}$$

In which:
ROA = Return on Assets
Being the ROA calculated by Equation 8, according to Ross et al (2002):

$$ROA_{it} = \frac{LL_{it}}{AT_{i(t-1)}}$$

In which:
LL = Net Profit
AT = Total Assets

The sector's ROA was obtained by the simple average of the ROA of the companies classified in this sector, according to Equation 9:

$$ROA_{SEt} = \frac{\sum_{i=0}^n ROA_{SEit}}{n_{SE}}$$

In which:
SE = Economic Sector
n = number of companies

3.3.6. Beta (β)

The Beta is the measurement of risk, directly related with the Return. The β was calculated from the

CAPM model, according to Equation 10, following Ross et al (2002).

$$\beta_{it} = \frac{Cov(R_{it}, R_{Mt})}{\sigma^2(R_{Mt})}$$

In which:
Cov (R_{it} , R_{Mt}) = Co-variance between the Return of the Company "i" and the Market Return "M".
 $\sigma^2(R_{Mt})$ = Variance of the Market Return

3.3.7. Economic Value Added (EVA®)

The Economic Value Added is a measure of performance that indicates how much wealth the company is able to generate to the shareholders. To Assaf Neto (2003), "the formulation of EVA^{\circledast} , as suggested, reflects the economic profit of the company, that is the result for the shareholder that exceeded the minimum expected return of the own capital invested". The EVA^{\circledast} was calculated through Equation 11, according to Assaf Neto (2003).

$$EVA_{it}^{\circledast} = LL_{it} - (Ke \times E)_{it}$$

3.3.8. Concentration of Shares

To measure the Concentration of Shares, the percentage of shares owned by the biggest shareholder of each company in the sample was considered.

3.4. Statistical Tests

3.4.1. Chi² Test

The Chi² Test, associated with a contingency table, was used in this research to verify if the presence of Institutional Investors in the first quartile (Q1) of the Corporate Governance ranking is statistically bigger than the one of the last quartile (Q4), according to H_{01} being the companies ranked in the descending order of IGov.

The Contingency Table is adequate for the analysis of the ratio between two variables of nominal scale, in the case of this study, the analysis of the ratio between the IGov and the presence of institutional investors in the distribution of shares.

The Odds-ratio which measures which is the chances of the presence of institutional investors in the distribution of shares of the companies better

ranked by the IGov, may be represented according with Equation 12:

$$OR = \frac{\frac{obs_{00}}{obs_{01}}}{\frac{obs_{10}}{obs_{11}}}$$

In which:
 OR = Odds-ratio
 obs = Observations
 0 = does not fulfill condition
 1 = fulfill condition

Being the conditions:
 X₀ = High Governance
 X₁ = Non-institutional

3.4.2. Logistic Regression

The Logistic Regression associated to the Odds-ratio, was used to test which are the chances of companies with higher IGov to present more institutional

$$\log istic(IGov_{it} = \alpha + \beta_1 R_{it} + \beta_2 CC_{it} + \beta_3 VM_{it} + \beta_4 Co_{it} + \beta_5 Beta_{it} + \beta_6 EVA_{it}^{\otimes} + \beta_7 Conc + e$$

Being the IGov tested in two ways:

- High (1) and Low (0) IGov:
 - High: companies in the first quartile of the ranking;
 - Low: companies in the 2nd, 3rd and 4th quartiles of the ranking.
- High (1) and Low (0) IGov:
 - Companies with IGov higher than or equal to 5;
 - Companies with IGov smaller than 5.

investors among their main shareholders. This test is done according to Equation 13:

$$\log istic(IGov_{it} = \alpha + \beta_1 pn_t + e)$$

Being:

pn = are there non-institutional investors in the distribution of shares?

α = regression intercept

β = regression angular coefficient

e = error

The Logistic Regression was used to check if the ranking created from the IGov is adherent to the already existent Corporate Governance literature showing that the companies with the best Governance practices have higher Return (R), smaller Capital Cost (CC), higher Market Value (VM), higher Competitiveness within the sector (Co0, smaller Beta (β), higher Economic Value Added (EVA[®]) and smaller Concentration of Shares (Conc), following to H₀₂, according to Equation 14:

4. Results

4.1. PRESENTATION AND ANALYSIS OF TESTS RESULTS

4.1.1. CHI²TEST

The Chi² test was used to test H₀₁ in the Contingency table and the results are shown in Table 2, where the H₀ mentioned in the table refers to the hypothesis that the ratios between IGov and Institutional Investment are due to chance.

The Chi² tests of tables 2 and 3 are adequate, because none of the expected counts is smaller than 5. Besides, H₀, that says that the counts observed and expected are due to chance, was rejected with 95% reliability, in Table 2, because p (0.036) is higher than 0.05 and in Table 3 with 90% reliability because p (0.0636) is higher than 0,10.

Table 2: Contingency Table IGov x Institutional Investors

		Shareholding Composition		
		There are no Non-institutional [0]	There are Non-institutional [1]	Total
Low IGov [0]	Count	24	15	39
	Expected	19.1	19.9	
	Line %	61.54%	38.46%	43,33%
	Row %	54.55%	32.61%	
High IGov [1]	Count	20	31	51
	Expected	24.9	26.1	
	Line %	39.22%	60.78%	56.67%
	Row %	45.45%	67.39%	
Total		44	46	90
		48.89%	51.11%	100.00%
Chi ² (ns = 0,05)	gl	Critical value	Value	<i>p</i>
	1	3.8415	4.4072	0.036

It is possible to reject H₀ at 5% (*p* > ns).

The Chi² Test was used to test H₀₁ in the Contingency Table and the results are shown in Table 3, where the H₀ mentioned in the table refers to the hypothesis that the ratios between the Bovespa stamps and Institutional Investments are due to chance.

The ratios are weak in Table 3, but even so, present statistical ratio. Meaning that, according to tests there is an association between the IGov (Table 2) and the Stamps (Table 3) and the fact that there are institutional investors among the 5 main shareholders.

But, this ratio contradicts H₀₁ because in the companies with higher IGov there is around 61% of non-institutional investors and only 39% of institutional investors, as shown in Table 2. The same ratio is checked when testing the Bovespa stamps, with 64% of non-institutional investors and only 36% of institutional, as shown in Table 3.

4.1.2. Logistic Regression

The Logistic Regression was used to test H₀₁ and the results are shown in Table 4, referring to the Contingency Tables 2 and 3, in which the ratio between Institutional Investment, IGov and Bovespa Stamps was tested..

This regression corresponds to the test of Contingency Tables 2 and 3, in which the Odds-Ratio (OR) was calculated, which corresponds to the chances of the ratios presented in the tables to occur. Testing the IGov ratio with the presence of Institutional Investors, it was verified that the OR is 2.48 (with 95% reliability), meaning that the chance of a company with high IGov to have at least 1 non-institutional investor in its distribution of shares is 2.48 times higher than one with a low IGov. A Logistic Regression with Coefficients was also made, just to confirm the findings. The Stamps test found an OR of 1.75, representing the same ratio described above, but with only 90% reliability.

Table 3: Contingency Table BOVESPA Stamps x Institutional Investors

		Shareholding Composition		Total
		There are no Non-institutional	There are no Non-institutional	
		[0]	[1]	
No stamp [0]	Count	51	51	102
	Expected	44.8	57.2	
	Line %	50.00%	50.00%	56.04%
	Row %	63.75%	50.00%	
With Stamp [1]	Count	29	51	80
	Expected	35.2	44.8	
	Line %	36.25%	63.75%	43.96%
	Row %	36.25%	50.00%	
Total		80	102	182
		43.96%	56.04%	100.00%
Chi ² (ns = 0,05)	gl	Critical value	Value	<i>p</i>
	1	3.8415	3.4409	0.0636

It is possible to reject H₀ at 10% (*p* > ns).

Table 4. Contingency Table Logistic Regression

Variables	(I)	(II)	(III)	(IV)
<i>pn</i>	0.91 (2.08)**	2.48 (2.08)**	0.56 (1.85)*	1.75 (1.85)*
<i>α</i>	-0.18 (-0.60)	-	-0.56 (-2.43)**	-
<i>Pseudo R</i> ²	0.0361	0.0361	0.0139	0.0139
<i>LR Chi</i> ²	4.44	4.44	3.46	3.46
<i>P > Chi</i> ²	0.0351	0.0351	0.0628	0.0628
<i>N</i>	90	90	182	182

- First line of each variable; β or Odds-ratio.
- Second line – z statistics between brackets.
- *, **, ***, to 10%, 5% e 1% respectively of P-value.
- I: Logistic Regression with Coefficients Contingency Table 2.
- II: Logistic Regression with Odds-ratio Contingency Table 2.
- III: Logistic Regression with Coefficients Contingency Table 3.
- IV: Logistic Regression with Odds-ratio Contingency Table 3.

The Logistic Regression was used to test H₀₂ and the results are shown in Table 5, referring to the igov adherence test split by quartiles, of igov classified as High if equal or higher than 5 and Low if smaller than

5 and the comparison of the results of the igov – Bovespa Stamps adherence test.

The Regressions “I” and “II” of Table 5 was done to test the adherence of the igov, considering

High igov the ones in the first quartile of the sample organized in a descending order and Low igov the remainder. In this case, only the variables R, CC and Conc presented statistical relevance, although weak, with R presenting coefficients with sign opposite to the expected one. The model has shown to be adequate, because $P > \chi^2$ resulted in 0.0000.

The Regressions “III” and “IV” of Table 5, the positioning of High and Low igov was changed, being considered High the marks over 5 (inclusive) and Low the marks under 5. This was done just to confirm the results above. The model has also shown to be adequate, with $P > \chi^2$ equal to 0.0000. The ratios

found were similar being R, CC, Conc and EVA[®] have shown to be relevant, presenting signs opposite to the expected ones for R and for EVA[®].

The Regressions “V” and “VI” were used to compare the results of the igov with the Certified Governance (Bovespa stamps) checking if the results of the index created are compatible with the stamps, thus the adherence of igov. The results showed to be compatible and the model was adequate with $P > \chi^2$ equal to 0.0000. Only R and Conc presented statistical relevance, with R presenting the sign opposite to the expected one, which has also happened to igov.

Table 5. Logistic Regression of the Variables

Variable	(I)	(II)	(III)	(IV)	(V)	(VI)
R_t	-1.17 (-3.47)***	0.31 (-3.47)***	-0.81 (-3.08)***	0.45 (3.08)***	-0.68 (-2.96)***	0.51 (-2.96)***
CC_t	-0.47 (-1.99)**	0.63 (-1.99)**	-0.38 (-2.16)**	0.68 (-2.16)**	-0.05 (-0.32)	0.96 (-0.32)
VM_t	-0.0004 (-0.54)	0.99 (-0.54)	-0.0006 (-0.59)	0.99 (-0.59)	-0.0008 (-0.68)	0.99 (-0.68)
Co_t	0.02 (0.28)	1.02 (0.28)	0.05 (0.74)	1.05 (0.74)	0.06 (0.85)	1.06 (0.85)
β_{at}	0.07 (0.30)	1.07 (0.30)	-0.12 (-0.58)	0.89 (-0.58)	0.05 (0.28)	1.05 (0.28)
$EVA_t^{\text{®}}$	$-6.69e^{-12}$ (-0.15)	1 (-0.15)	$-4.04e^{-10}$ (-2.36)**	1 (-2.36)**	$-4.31e^{-11}$ (-0.83)	1 (-0.83)
$Conc_t$	-6.15 (-4.78)***	0.002 (4.78)***	-4.77 (-4.55)***	0.008 (4.55)***	-3.84 (-4.37)***	0.02 (-4.37)***
α	2.01 (3.43)***	-	1.83 (3.55)***	-	1.60 (3.46)***	-
<i>Pseudo R</i> ²	0.2631	0.2631	0.2243	0.2243	0.1726	0.1726
<i>LR Chi</i> ²	56.80	56.80	53.72	53.72	43.08	43.08
<i>P > Chi</i> ²	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<i>N</i>	182	182	182	182	182	182

- First line of each variable; β or Odds-ratio.
- Second line – z statistics between brackets.
- *, **, ***, to 10%, 5% e 1% respectively of P-value.
- I: Logistic Regression with Coefficients High IGOV (1st quartile) or Low (other quartiles).
- II: Logistic Regression with Odds-ratio High IGOV (1st quartile) or Low (other quartiles).
- III: Logistic Regression with Coefficients High IGOV (higher or equal to 5) or Low (lower than 5).
- IV: Logistic Regression with Odds-ratio High IGOV (higher or equal to 5) or Low (lower than 5).
- V: Logistic Regression with the Stamp Coefficients.
- VI: Logistic Regression with Stamp Odds-ratio.

In Tables 6, 7 and 8 it is possible to see the Descriptive Statistics of the variables in this study. Table 6 shows the companies included in the sample according to its IGov marks. It is noted that the great

majority of companies is concentrated in the smaller marks and that only 1% achieved the topmost index mark.

Table 6. IGov Distribution

IGov	1	2	3	4	5	6	7	8	9
Company	21%	29%	6%	7%	9%	16%	8%	3%	1%

The same relation can be seen in Table 7, in which the sampled companies are distributed according to the Bovespa stamps. One can note that

the great majority of the companies have no stamp and only 24% are concentrated in the highest Governance level of the Brazilian Stock Exchange.

Table 7. Distribution of Stamps

Stamp	0	1	2	3
Company	56%	15%	5%	24%

Table 8 shows the descriptive statistics of the variables used in this study. The data that calls for attention are the high Standard Deviation values in the Market Value and consequently, the high Deviations

of the EVA[®]. This is due to the fact that there are companies with very high VM and companies with negative VM, what evidences the great differences in size and value of the Bovespa listed companies.

Table 8. Descriptive Statistics

Variable	Average	Standard deviation	Minimum	Maximum
IGov	4	2	1	9
R	0,70	1,12	-0,95	8,11
CC	1,19	3,53	-6,84	43,36
VM	2515,34	32913,46	-206,42	444014,60
Co	0,99	2,57	-15,07	17,07
beta	0,64	1,04	-4,55	3,08
EVA [®]	-2,12e ⁺⁰⁸	9,04e ⁺⁰⁹	-4,40e ⁺¹⁰	1,10e ⁺¹¹
Conc	0,40	0,23	0,06	0,99

Table 9 shows the correlations between variables. Some of them presented ratios inverse to the expected, as is the case of Return, EVA[®] and VM which presented negative correlations with the IGov,

which contradicts the literature presented and is also shown in the Regressions of the models of the study in Table 5.

Table 9. Correlation between Variables and IGov

	IGov	R	CC	VM	Co	beta	EVA [®]	Conc
IGov	1.0000							
R	-0.2868	1.0000						
CC	-0.0964	0.5721	1.0000					
VM	-0.0849	-0.0484	-0.0228	1.0000				
Co	0.0505	-0.1211	0.0224	-0.0233	1.0000			
beta	0.1588	-0.3349	-0.5005	-0.0385	0.0973	1.0000		
EVA [®]	-0.0885	0.4577	0.7986	0.0032	-0.0200	-0.3505	1.0000	
Conc	-0.4574	-0.0479	-0.0906	0.0827	0.0497	-0.0443	-0.0873	1.0000

Confirming the data in Table 9, Table 10 shows the Correlation between the problem's variables and the Bovespa stamps. One can also note that the Return also is negative, as well as the EVA[®] and Market

Value, which also contradicts the literature. This shows that the results of IGov are compatible with the stamps and this can also be noted in Table 5.

Table 10. Correlation between Variables and Bovespa Stamps

	Stamp	R	CC	VM	Co	beta	EVA [®]	Conc
Stamp	1.0000							
R	-0.2468	1.0000						
CC	-0.0899	0.5721	1.0000					
VM	-0.0676	-0.0484	-0.0228	1.0000				
Co	0.0783	-0.1211	0.0224	-0.0233	1.0000			
Beta	0.1365	-0.3349	-0.5005	-0.0385	0.0973	1.0000		
EVA [®]	-0.0851	0.4577	0.7986	0.0032	-0.0200	-0.3505	1.0000	
Conc	-0.3325	-0.0479	-0.0906	0.0827	0.0497	-0.0443	-0.0873	1.0000

5. Conclusion

This research investigated the ratio between Institutional Investment and Corporate Governance, by creating one index (IGov) and comparing it with the only attempt of certified Governance in Brazil, the Bovespa stamps.

The 5 biggest shareholders of each company of the sample were identified and classified as institutional or not. Then, these companies were organized in a ranking according to the IGov marks and, through the Chi² test, the relation between the presence of institutional investors and the IGov was due to chance and if there would be more of these investors in the distribution of shares of the companies with better marks. Then, Logistic Regressions were made for the calculation of the Odds-ratio for this relation to occur. Besides, it was also tested through Logistic Regressions, the adherence of IGov with the main variables that, according to the theory presented, are affected by the good Governance practices.

After all tests, the statistical relation between the IGov and Institutional investments for the Bovespa listed companies, during 2007 was checked and found to be irrelevant. The tests provided evidences that the non-institutional investment is mainly found in companies with better IGov rating. This can be explained, and may be a suggestion for future researches, by the weak protection to minority shareholders, which according to Lopes (2008) may be looking for in the companies with best Governance practices a better protection for their investments and these shareholders may be mainly non-institutional ones.

The results of IGov were compatible with the Bovespa stamps as can be noted in item 4.1.1. The smaller presence of institutional investors among the companies with higher IGov could also be due that these investors may have better backing, meaning better conditions to break by their own means the

informational asymmetry, while the non-institutional ones need, due to their smaller resources that this asymmetry is broken voluntarily by the companies through the adoption of Governance mechanisms.

Another observation was the lack of statistical relation, or even a weak relation, of the variables that may be affected by good Governance practices. The Logistic Regressions have shown that the results with the IGov tests are compatible with the certified Governance (Bovespa stamps). Such result may be due to the fact that investors in Brazil are more inclined with the search for higher Returns, in shorter terms, besides the very high volatility of the Stock Exchange. This may favor speculative movements instead of long-term investments, for those who really wish to be shareholders of the company. With a view to this, it is possible that investors look for less solid companies in the market, because these may realize price movements in a higher range in shorter periods, because the price volatility of these companies could be greater than the one of the companies with the best Governance practices.

Nevertheless, this research has shown that the Corporate Governance theme in Brazil motivates several unanswered questions to arise. This may be due to the fact that the diffusion of good practices is still new in Brazil and that the Brazilian Stock Market is under development and the companies are still fitting into the new reality.

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