

РАЗДЕЛ 1  
НАУЧНЫЕ ИССЛЕДОВАНИЯ  
И КОНЦЕПЦИИ

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SECTION 1  
ACADEMIC  
INVESTIGATIONS  
& CONCEPTS

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CORPORATE GOVERNANCE AND EXECUTIVE REMUNERATION  
IN BRAZIL

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**Abstract**

Executive remuneration has gained importance both in the academic and corporate fields, especially with the outcome of the scandals involving executives from large North-American corporations in the 2000's. In the international literature, there are many studies about executive remuneration and how it relates to agency theory and corporate governance. However, there are a few studies about executive remuneration in the Brazilian market, and most of them are qualitative. One of the great problems of research in this area is the difficulty in obtaining data about executive remuneration in Brazil. These data, when available, are very aggregated and not very clear. The objective of this paper is to analyze the determinants of executive remuneration in Brazil, and the relation between executive remuneration and corporate governance. This research is original in Brazil, bringing a great contribution to the literature of corporate governance. Our results indicate that companies with bad governance tend to pay greater remuneration to their executives. Moreover, companies paying greater remuneration perform worse in the future. In other words, paying more to executives does not result in better profitability in the future.

**Keywords:** Corporate Governance, Executive Compensation, Brazil

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**1. Introduction**

Corporate governance has gained importance in both the academic and the corporate world recently. In Brazil, the increase of foreign investments in the

capital markets, and growth in the number of IPOs in recent years were key factors for the adoption of best corporate governance practices. The adoption of more rigid governance practices can be observed through initiatives such as the successful creation of

the Novo Mercado by the Brazilian stock exchange (BM&FBovespa).

In the international literature, there are many studies on executive compensation and governance practices in different countries and their relationship with the value and performance of firms. However, very little has been published on the relationship between corporate governance and executive compensation in Brazil. In general, Brazilian studies on executive compensation are qualitative research.

The discussion of executive compensation can be viewed as an agency problem arising from a system in which corporate executives are hired, monitored and rewarded by the board, rather than by the owners of the company. According to Jensen and Murphy (1990), the agency theory predicts that executive compensation policy should be designed in order to generate the right incentives to maximize the welfare of shareholders.

The executive compensation affects not only the costs of a company but also its performance. Compensation can be used as an instrument to create incentives for executives to work for the best result of the company. But often that is not what it is observed in Brazilian companies.

One of the great difficulties of research in this area in Brazil is the difficulty of obtaining executive compensation data. The information, when disclosed, is unclear and very aggregated (with no split between the remuneration of board members and executive directors). Moreover, few companies disclose what portion of remuneration is fixed and what is variable.

This paper analyzes the determinants of executive compensation in Brazil. More specifically, the main objective is to examine the relation between executive compensation and quality of corporate governance practices. Some of the questions the study seeks to answer are: (a) what are the determinants of executive compensation? (b) do firms with good governance pay higher salaries to their executives? (c) does the composition of the board of directors influence executive compensation? (d) do firms that pay higher salaries to their executives have superior performance? This research is original in Brazil, bringing a great contribution to the literature of corporate governance.

Our results indicate that, controlling for various firm characteristics, firms with poor governance practices tend to pay higher salaries to their executives. In addition, companies that pay higher executive compensation have poorer future performance, that is, paying more for executives do not translate into better future profitability in Brazil.

## 2. Literature Review

Discussions concerning the evolution of corporate governance and executive compensation have been particularly intense in recent decades. The executive compensation has become an object of debate in academia. In the literature, we find many studies that analyze executive compensation in different perspectives, ranging from accounting issues to economic and financial issues related to strategy and organizational behavior.

The debate over executive compensation has intensified after the corporate scandals in the U.S., which led to profound changes in legislation. One of the hallmarks of these changes was the publication of the Sarbanes-Oxley Act, signed in July 2002, which arose in response to the distrust of investors after the financial scandals and accounting abuses uncovered in recent years.

According to Hill (2006), this series of corporate scandals was responsible for questioning the efficiency of executive compensation schemes based on the results of companies as a way of aligning the interests of shareholders and executives. A well-designed compensation system should align the interests between the board, executive management, shareholders and minimize agency problems.

Most studies of executive compensation are concentrated in developed countries. This may be related to the fact that there is greater availability of information in these countries. Initial studies related executive compensation to firm performance.

Murphy (1999) argues that much of the controversy related to the excessive compensation of executives reflects the notion that top executives of a company determine their salaries. In fact, in many companies, the final word on remuneration is made by external board members, who are aware of conflicts of interest that exist in this process. But, according to the authors, there is no doubt that senior executives exert some influence over the level and structure of their remuneration.

Berle and Means (1932) were the first to argue that the CEO can control or influence the board to get levels "excessive" pay. Many studies have examined the relationship between corporate governance and executive compensation. Later, some authors began to study executive compensation as a possible agency problem and how it relates to aspects of corporate governance (Murphy (1999)). Jensen and Murphy (1990) argue that compensation and stock ownership are the effective ways of aligning the interests of executives and shareholders. Jensen et al. (2004) argue that executive compensation can act as a powerful tool in reducing agency conflicts, but if poorly managed, can generate agency costs and destroy firm value.

A large body of empirical work on executive compensation has examined the relationship between CEO pay, firm size and profitability (Garen, 1994). Jensen and Murphy (1990) analyzed 50 years of relationship between company performance and compensation of CEOs and concluded that this relationship was weak and had been declining over time. In this study, they also found that the level of CEO pay was not high enough to attract the best executives.

There are many studies on the relation between executive remuneration and firm profitability (Jensen and Murphy (1990), Garen (1994), Core, Holthausen and Larcker (1999), Kato and Long (2005), Firth et al. (2006)). Most studies find that companies with poor governance practices tend to pay more to its executive officers, and that executive compensation is negatively related to firm value and performance.

As mentioned earlier, in Brazil, there are few relevant studies involving executive compensation, because, until 2009, the Brazilian Securities and Exchange Commission (CVM) required that companies disclose only the total amount of executive compensation. Quantitative studies on executive compensation in Brazil are limited to analyzing only a small sample of Brazilian companies with ADRs.

Funchal (2005) examined the determinants of executive compensation in Latin American companies that have ADRs. They find that the company's performance and corporate governance do not influence executive compensation. Moreover, firm size is positively related to executive compensation.

Camargo and Helal (2007) analyzed the influence of corporate governance on performance and compensation of executives of Brazilian companies with ADRs. The authors concluded that three components of corporate governance (number of internal board members, age, and tenor of board members) influence executive compensation.

### 3. Data and Methodology

Our sample covers a total of 199 Brazilian companies listed on BM&FBovespa with financial and corporate data available. We note that our sample is much higher than that of previous studies on executive compensation in Brazil, which generally examine only firms with ADRs.

We analyzed the period from 2003 to 2007 to check if there was any significant change in corporate governance and executive compensation since the launch of Novo Mercado by BM&FBovespa. Corporate data on executive

compensation and corporate governance practices are collected from CVM. The economic and financial information of companies come from Economática.

The quality of corporate governance is measured by the characteristics of the board of directors and by the corporate governance index (CGI), developed by Leal and Carvalho da Silva (2007). The CGI is a questionnaire with 24 questions measuring the quality of governance in four dimensions: transparency, board, ownership and control structure and shareholder rights. The great advantage of CGI is that it can be answered objectively through public data, which allows evaluating the governance practices of a large number of companies without biased qualitative interviews or questionnaires.

We run panel regressions of executive compensation as a function of firm characteristics such as corporate governance and financial variables. The panel technique allows us to analyze the relationship between executive compensation and governance in both cross-section (among 199 companies) and temporal (2003-2007) dimensions.

We estimate four models to assess the relationship between executive compensation and governance. These models, in fact, become 12, because we run regressions with 3 different dependent variables. The difference between the models is basically the choice of governance variables used. The first model includes the CGI, which attempts to measure governance practices as a whole. The second model uses the four sub-indices of CGI, to verify whether the remuneration is linked to specific practices of governance (transparency, board, control and ownership structure and shareholder rights). In the third model, we tested the CGI, as the first model, but with the inclusion of three dummy variables that identify the origin of the controlling shareholder. The fourth model includes only variables related to the board of directors.

As mentioned, these regressions are 4 models with 3 different dependent variables: total executive compensation, average individual executive compensation and average executive compensation by sales.

We assess several methods of panel models (common, fixed and random effects) through the Hausmann test. Test results (not reported) show that models estimated by fixed effects are more appropriate. The models are estimated according to the following equations. It is noteworthy that all models are adjusted for autocorrelation and heteroskedasticity.

$$REM_{i,t} = \gamma_0 + \gamma_1 CGI_{i,t} + \gamma_2 SALE_{i,t} + \gamma_3 P/B_{i,t} + \gamma_4 ROA_{i,t} + \gamma_5 RET_{i,t} + \gamma_6 DEVROA_{i,t} + \gamma_7 DESRET_{i,t} + u_{i,t}$$

$$REM_{i,t} = \gamma_0 + \gamma_1 SI1_{i,t} + \gamma_2 SI2_{i,t} + \gamma_3 SI3_{i,t} + \gamma_4 SI4_{i,t} + \gamma_5 SALE_{i,t} + \gamma_6 P/B_{i,t} + \gamma_7 ROA_{i,t} + \gamma_8 RET_{i,t} + \gamma_9 DEVROA_{i,t} + \gamma_{10} DEVRET_{i,t} + u_{i,t}$$

$$REM_{i,t} = \gamma_0 + \gamma_1 CGI_{i,t} + \gamma_2 FOR_{i,t} + \gamma_3 GOV_{i,t} + \gamma_4 INST_{i,t} + \gamma_5 SALE_{i,t} + \gamma_6 P/B_{i,t} + \gamma_7 ROA_{i,t} + \gamma_8 RET_{i,t} + \gamma_9 DEVROA_{i,t} + \gamma_{10} DEVRET_{i,t} + u_{i,t}$$

$$REM_{i,t} = \gamma_0 + \gamma_1 CEO_{i,t} + \gamma_2 NUMEXE_{i,t} + \gamma_3 INTDIR_{i,t} + \gamma_4 EXTDIR_{i,t} + \gamma_5 VOT_{i,t} + \gamma_6 TOT_{i,t} + \gamma_7 SALE_{i,t} + \gamma_8 P/B_{i,t} + \gamma_9 ROA_{i,t} + \gamma_{10} RET_{i,t} + \gamma_{11} DEVROA_{i,t} + \gamma_{12} DEVRET_{i,t} + u_{i,t}$$

where REM is the executive remuneration (total remuneration, average individual remuneration and average remuneration by sales) of firm  $i$  in year  $t$ , CGI is the corporate governance index by Leal and Carvalho da Silva (2007), SI1 is the CGI sub-index related to transparency, SI2 is the CGI sub-index related to the board of directors, SI3 is the CGI sub-index related to ownership structure, SI4 is the CGI sub-index related to shareholder rights, INST is a dummy variable that indicates if the largest shareholder is an institutional investor, GOV is a dummy variable that indicates whether the largest shareholder is the Government, FOR is a dummy variable that indicates whether the largest shareholder is a foreigner, CEO is a dummy variable indicating whether the CEO sits on the board of directors, NUMEXE is the number of directors and officers, INTDIR is the percentage of internal directors on the board, EXTDIR is the percentage of directors elected by minority shareholders, VOT is the percentage of voting shares held by the controlling shareholder, TOT is the percentage of total shares held by the controlling shareholder, SALE is the logarithm of company sales, P/B is the price-to-book ratio, ROA is the return on assets (operating profit divided by total assets), DEVROA is the standard deviation of ROA over the past five years, RET is the return on company shares over the past 12 months, and DEVRET is the standard deviation of RET in the last 5 years.

Next, we analyze whether firms that pay higher wages have better future performance. We run panel models where the dependent variable is ROA in  $t+1$ ,  $t+2$  and  $t+3$  (1, 2 and 3 years in the future) and the independent variable is the compensation on  $t$ . We test with 3 types of remuneration (total, average individual and average by sales). The models are adjusted for autocorrelation and heteroskedasticity.

$$ROA_{i,t+1} = \gamma_0 + \gamma_1 REM_{i,t} + \gamma_2 CGI_{i,t} + \gamma_3 SALE_{i,t} + \gamma_4 P/B_{i,t} + \gamma_5 ROA_{i,t} + u_{i,t}$$

$$ROA_{i,t+2} = \gamma_0 + \gamma_1 REM_{i,t} + \gamma_2 CGI_{i,t} + \gamma_3 SALE_{i,t} + \gamma_4 P/B_{i,t} + \gamma_5 ROA_{i,t} + u_{i,t}$$

$$ROA_{i,t+3} = \gamma_0 + \gamma_1 REM_{i,t} + \gamma_2 CGI_{i,t} + \gamma_3 SALE_{i,t} + \gamma_4 P/B_{i,t} + \gamma_5 ROA_{i,t} + u_{i,t}$$

#### 4. Results

Table 1 shows the descriptive statistics of the variables used in this study. On average, the total executive remuneration is R\$ 7.23 million per year,

which equates to an average remuneration per executive of \$460,000 and a remuneration per sales of 2.24%. These figures include the remuneration of both board members and executive officers.

**Table 1.** Descriptive Statistics

Descriptive statistics of the variables used in this study from 2003 to 2007. The definition of each variable is shown in Section 3.

Variable	Mean	Median	Std Dev	Min	Max
REM (R\$ million)	7.23	3.60	14.89	0.01	170.00
REM/NUMEXE (R\$ million)	0.46	0.33	0.50	0.00	3.31
REM/SALE (%)	2.24	0.20	1.80	0.00	20.43
CGI	4.93	5.00	1.76	0.00	8.75
SI1	6.25	7.50	2.57	0.00	10.00
SI2	5.45	6.00	2.47	0.00	10.00
SI3	3.29	3.96	2.55	0.00	8.57
SI4	4.56	4.00	2.38	0.00	10.00
CEO	0.35	0.00	0.48	0.00	1.00
NUMEXE	13.67	12.00	7.47	5.00	80.00
INTDIR	0.15	0.14	0.14	0.00	0.67
EXTDIR	0.19	0.10	0.27	0.00	1.00
VOT (%)	59.31	57.35	26.01	5.50	100.00
TOT (%)	41.06	36.00	23.31	5.00	100.00

FOR	0.18	0.00	0.39	0.00	1.00
GOV	0.11	0.00	0.31	0.00	1.00
INST	0.09	0.00	0.28	0.00	1.00
SALE	7.87	2.71	17.24	0.09	205.40
P/B	2.18	1.50	2.67	0.10	26.50
ROA (%)	5.82	5.00	8.08	-50.00	45.60
RET (%)	50.12	33.01	89.11	-95.00	1.036.36
DEVROA (%)	4.64	3.56	4.92	0.10	53.50
DEVRET (%)	44.45	38.20	37.17	12.50	555.80

In general, Brazilian companies have median corporate governance practices (average CGI of 4.93), with a large variation among companies (CGI ranges from 0.00 to 8.75). The analysis of CGI sub-indices reveals that, in general, the practices of transparency and board are better than those of ownership structure and shareholder rights.

On average, 35% of CEOs are board members, 15% of the board is composed by insiders, 19% of the board is elected by minority shareholders, and the largest shareholder owns 59.31% of the votes and 41.06% of cash flow. These results are consistent with the Brazilian literature (Leal and Carvalho da Silva (2007)). We also note that, on average, 18% of companies are controlled by foreign investors, 11% are controlled by the Government, and 9% are controlled by institutional investors.

Then we sort the companies according to the three dependent variables: total compensation, average individual remuneration and average remuneration by sales. Once ordered, the sample was divided into two subgroups: firms with lower remuneration and firms with higher remuneration. Then we calculate the average of the variables to see if there is significant difference between the half of the companies that pay higher remuneration and the half of the companies that pay less remuneration.

Table 2 shows the results. It may be noted that large companies tend to pay higher remuneration (both total and average individual). However, in the case of remuneration per sales, we note that large firms pay lower remuneration.

**Table 2.** Executive Remuneration and Firm Characteristics

Average value of variables after classifying the companies according to total remuneration, individual remuneration, and remuneration per sales. The sample is divided into 2 groups (companies with lower and higher remuneration) and we perform a difference-in-means test to assess whether there is statistical difference between both groups. \*\*\*, \*\*, and \* indicate difference statistically significant at 1%, 5% and 10%, respectively.

Variable	Total Remuneration		Average Individual Remuneration		Remuneration per Sales	
	Firms with Low Pay	Firms with High Pay	Firms with Low Pay	Firms with High Pay	Firms with Low Pay	Firms with High Pay
REM	0.67	20.53***	0.72	20.34***	2,86	15,50***
REM/NUMEXE	0.07	1.04***	0.06	1.11***	0,21	0,74***
REM/SALE	2.14	0.34**	1.21	0.38**	0,02	2,44***
CGI	4.48	5.63***	4.58	5.31***	5,55	4,77***
SI1	5.31	7.28***	5.46	7.07***	7,41	6,05***
SI2	4.78	6.47***	4.92	6.09***	6,33	5,61**
SI3	3.41	3.46	3.51	3.11	3,21	2,69
SI4	4.43	4.93**	4.50	4.58	4,82	4,50
CEO	0.42	0.32**	0.41	0.35	0,32	0,30
NUMEXE	11.28	19.26***	11.95	16.24***	15,25	16,59
INTDIR	0.17	0.12***	0.16	0.14	0,14	0,15
EXTDIR	0.21	0.19	0.22	0.17	0,09	0,23***
VOT	58.02	52.75	57.36	54.90	59,94	62,72
TOT	41.39	38.07	41.46	38.99	41,91	36,68
FOR	0.14	0.23**	0.12	0.2n3***	0,24	0,09***
GOV	0.09	0.08	0.11	0.03***	0,17	0,06**
INST	0.16	0.02***	0.17	0.02***	0,06	0,07
SALE	5.10	13.49***	5.95	9.49***	20,77	2,86***
P/B	1.76	3.28***	1.90	3.32**	2,03	2,49
ROA	3.52	7.38***	3.82	7.83***	4,87	5,61
RET	63.26	51.66	50.36	49.41	40,37	82,52***
DEVROA	5.72	4.55	5.80	4.91	3,59	7,03***
DEVRET	65.65	37.83***	66.70	38.36***	41,43	57,45*

Firms with better governance practices (higher CGI) have higher total compensation and higher average individual compensation. However, we find that firms with poor governance practices pay a higher percentage of its revenues in the form of executive remuneration.

Since company size and corporate governance are positively related in Brazil (Leal and Carvalho da Silva (2007)), it is necessary to examine the remuneration on a relative basis. The results in Table 2 indicate that poor governance practices are associated with higher remuneration. This behavior also occurs in the CGI sub-indices, particularly in transparency and board of directors.

Firms that pay higher remuneration also have higher ROA. However, this higher profitability is not statistically significant when we look at remuneration per sales. Moreover, there is a positive relationship between value (P/B), total compensation and average individual

compensation. But this relation is not significant when we analyze the compensation per sales.

Regarding the shareholder origin, foreign-owned companies tend to pay higher total and individual compensation and lower compensation per sales. Companies controlled by institutional investors pay lower total and individual earnings. SOEs are the ones who pay less remuneration (both absolutely and relatively).

Table 3 reports the regression results of the four models specified for total executive compensation. All models have high explanatory power (all adjusted R<sup>2</sup> are larger than 0.9). The coefficient of the CGI is negative and statistically significant at 1% in both models I and III. The results indicate that, controlling for various firm's characteristics, companies with poor governance practices tend to pay higher total compensation to their executives.

**Table 3.** Total Remuneration and Corporate Governance

Fixed-effects panel models where the dependent variable is the total remuneration. The definition of each variable is shown in Section 3. The p-values, adjusted for auto-correlation and heteroscedasticity, are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at 1%, 5% and 10%, respectively.

Variable	I	II	III	IV
CGI	-0.01*** (0.00)		-0.02*** (0.00)	
S11		0.02*** (0.00)		
S12		-0.01*** (0.00)		
S13		0.01*** (0.00)		
S14		-0.02*** (0.00)		
CEO				0.10*** (0.00)
NUMEXE				0.01*** (0.00)
INTDIR				0.00 (0.36)
EXTDIR				-0.01*** (0.00)
VOT				0.01*** (0.00)
TOT				-0.01*** (0.00)
FOR			-0.27*** (0.00)	
GOV			-0.12*** (0.00)	
INST			-1.10*** (0.00)	
SALE	0.01*** (0.00)	0.02*** (0.00)	0.01*** (0.00)	0.04*** (0.00)
P/B	0.01*** (0.00)	0.01*** (0.01)	0.01*** (0.00)	0.01 (0.15)
ROA	0.01*** (0.00)	0.01*** (0.00)	0.04*** (0.00)	0.00** (0.03)
RET	-0.01*** (0.00)	-0.02*** (0.00)	-0.03*** (0.00)	0.01 (0.13)
DEVROA	0.00** (0.02)	0.00 (0.53)	0.00*** (0.00)	0.00** (0.04)
DEVRET	0.00*** (0.00)	0.00* (0.32)	0.00*** (0.00)	0.00*** (0.00)
R <sup>2</sup> adj	0.93	0.93	0.96	0.94

However, not all governance practices have a negative relationship with total compensation. Model II indicates that the sub-indices related to board and shareholder rights are negatively related to total compensation, but transparency and ownership structure have a positive relationship with total compensation. Model III also indicates that family businesses tend to pay higher total compensation compared to companies controlled by foreigners, Governments and institutional investors.

The results of model IV indicate other relationships between governance and total compensation. It may be noted that the total compensation increases when: a) the CEO serves on the board of directors; b) there are many directors and officers, and c) the voting shares of the controlling shareholder is high. Although positive, there is no significant relationship between total compensation and percentage of internal directors.

Moreover, model IV indicates that the total compensation decreases when: a) there is a high percentage of directors elected by minority shareholders, and b) the controlling shareholder's stake in the company's is high. The coefficients of variables SALE, P/B and ROA are positive and statistically significant at 1%. This result indicates that larger, more profitable and well evaluated companies pay higher total compensation.

Overall, the results of the four models show the agency conflict related to executive compensation, indicating that firms with worse governance practices tend to pay higher total compensation to their executives.

After we run the panel models for total compensation, we run the same models for average individual compensation. The results are reported in Table 4 and are quite similar to those in Table 3. The results indicate that firms with poor governance practices pay higher average individual remuneration to their executives.

**Table 4.** Average Individual Remuneration and Corporate Governance

Fixed-effects panel models where the dependent variable is the average individual remuneration. The definition of each variable is shown in Section 3. The p-values, adjusted for auto-correlation and heteroscedasticity, are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at 1%, 5% and 10%, respectively.

Variable	I	II	III	IV
CGI	-0.01* (0.10)		-0.01*** (0.00)	
SI1		0.02*** (0.00)		
SI2		-0.01*** (0.00)		
SI3		0.01*** (0.00)		
SI4		-0.02*** (0.00)		
CEO				0.07*** (0.00)
NUMEXE				-0.06*** (0.00)
INTDIR				0.00** (0.02)
EXTDIR				-0.01*** (0.00)
VOT				0.01*** (0.00)
TOT				-0.01*** (0.00)
FOR			-0.18*** (0.00)	
GOV			-0.46*** (0.00)	
INST			-1.13*** (0.00)	
SALE	0.01*** (0.00)	0.06** (0.03)	0.02*** (0.00)	0.01*** (0.00)
P/B	0.02*** (0.00)	0.01*** (0.00)	0.01*** (0.00)	0.01*** (0.00)
ROA	0.01*** (0.00)	0.01*** (0.00)	0.01*** (0.00)	0.00* (0.09)
RET	-0.05*** (0.00)	-0.06*** (0.00)	-0.01* (0.10)	-0.00* (0.09)
DEVROA	0.00* (0.10)	0.00 (0.88)	0.00*** (0.00)	0.00 (0.12)
DEVRET	0.00*** (0.00)	0.00* (0.07)	0.00*** (0.00)	0.00*** (0.00)
R <sup>2</sup> adj	0.92	0.92	0.95	0.93

There are two differences compared to previous results. First, the number of executives, which is positively related to total compensation, has a negative relationship with average individual compensation. Therefore, the greater the number of directors and executive officers, the highest total compensation, but the lowest average individual compensation.

Second, there is a statistically positive relationship between average individual compensation and percentage of inside directors. In the case of total compensation, the relationship is

positive but has no statistical significance. Therefore, one can conclude that the greater the number of internal directors, the higher the average individual compensation, suggesting a problem of agency in determining executive compensation.

Finally, we run the models for the average remuneration per sales. In general, the results are identical to those obtained for total compensation and average individual compensation, indicating that firms with poor governance practices pay higher relative remuneration to their executives.

**Table 5.** Average Remuneration per Sales and Corporate Governance

Fixed-effects panel models where the dependent variable is the average remuneration per sales. The definition of each variable is shown in Section 3. The p-values, adjusted for auto-correlation and heteroscedasticity, are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at 1%, 5% and 10%, respectively.

Variable	I	II	III	IV
CGI	-0.03*** (0.01)		-0.01*** (0.00)	
SI1		0.01** (0.02)		
SI2		-0.01** (0.04)		
SI3		0.02*** (0.03)		
SI4		-0.02*** (0.00)		
CEO				0.03** (0.04)
NUMEXE				0.00 (0.48)
INTDIR				0.00 (0.28)
EXTDIR				-0.01** (0.05)
VOT				0.01** (0.05)
TOT				-0.01* (0.08)
FOR			-0.11** (0.02)	
GOV			-0.04* (0.07)	
INST			-0.72* (0.06)	
SALE	-0.80*** (0.00)	-0.78*** (0.01)	-0.49* (0.10)	-0.38* (0.10)
P/B	0.02*** (0.00)	0.02*** (0.00)	0.01** (0.03)	0.01* (0.10)
ROA	0.00* (0.09)	0.01* (0.08)	0.01** (0.03)	0.00* (0.09)
RET	-0.02* (0.06)	-0.26* (0.07)	-0.11* (0.10)	-0.00* (0.09)
DEVROA	0.04 (0.20)	0.04 (0.18)	0.01 (0.88)	0.02 (0.45)
DEVRET	-0.01* (0.06)	-0.01* (0.08)	0.00* (0.09)	-0.01* (0.06)
R <sup>2</sup> adj	0.98	0.98	0.98	0.98

There is a reversal in the direction of the relationship between sales and remuneration. The coefficient of SALE is positive for total and average individual compensation, but is negative to compensation per sales. This result is consistent

with that of Table 2, which shows that the bigger the company, the lower remuneration relative to sales.

After showing that firms with worse governance practices tend to pay higher



compensation to their executives, we turn to analyze whether firms that pay higher remuneration have better future performance.

Table 6 shows the results of panel models using future ROA as dependent variables. The

results indicate that companies that pay higher remuneration (total and per sales) have poorer future performance, ie the fact of paying more for executives does not translate into better future profitability.

**Table 6.** Executive Remuneration and Future Performance

Fixed-effects panel models where the dependent variable is the ROA in the following 1, 2 and 3 years. The definition of each variable is shown in Section 3. The p-values, adjusted for auto-correlation and heteroscedasticity, are shown in parentheses. \*\*\*, \*\*, and \* indicate statistical significance at 1%, 5% and 10%, respectively.

Variable	ROA 1 year			ROA 2 years			ROA 3 years		
	I	II	III	I	II	III	I	II	III
REM	- 0.99** (0.04)			- 0.78** * (0.00)			- 1.09** * (0.01)		
REM/NUMEX E		-0.03 (0.93)			-0.14 (0.28)			-5.23 (0.24)	
REM/SALE			- 1.26** * (0.00)			- 1.11** * (0.00)			- 1.28** * (0.00)
CGI	-0.15 (0.33)	-0.17 (0.54)	0.12 (0.35)	0.10* (0.10)	0.16* (0.10)	0.14* (0.09)	0.13 (0.25)	0.19 (0.17)	0.15* (0.08)
SALE	- 1.53** (0.05)	-1.60 (0.36)	-0.87 (0.28)	- 0.82** * (0.01)	-1.02* (0.10)	-0.91** (0.02)	0.99 (0.15)	0.33 (0.76)	0.63 (0.29)
P/B	0.03 (0.79)	0.01 (0.99)	0.06 (0.59)	0.01 (0.93)	-0.01 (0.83)	0.00 (0.96)	-0.07** (0.02)	0.12** * (0.00)	0.08** * (0.00)
ROA	0.09** (0.04)	0.08 (0.33)	0.09** (0.04)	-0.02 (0.16)	-0.02 (0.34)	-0.01 (0.28)	0.12** * (0.01)	0.16** * (0.00)	0.10** * (0.00)
R <sup>2</sup> adj	0.64	0.64	0.68	0.82	0.82	0.82	0.91	0.90	0.91

These results are consistent with international literature (Core, Holthausen and Larcker (1999)), who finds a negative relationship between executive compensation and accounting and financial results. The explanation comes from agency theory. Companies with poor governance have major agency problems; executives at firms with greater agency problems receive greater compensation; and firms with higher agency conflicts have worse performance.

## 5. Conclusions

This paper analyzes the determinants of executive compensation in Brazil. More specifically, we examine whether there is a relationship between executive compensation and quality of corporate governance practices.

Our results indicate that firms with poor governance practices tend to pay higher salaries to their executives. We note that companies with better governance practices have higher total compensation and higher individual compensation. However, when analyzing the relative

compensation per sales, we find that firms with poor governance practices pay a higher percentage of its revenues as executive remuneration.

In addition, companies that pay higher remuneration have poorer future performance, ie the fact of paying more for executives does not necessarily translate in better future performance in Brazil. Overall, we show that companies with poor governance pay higher compensation to their executives and have worse performance.

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