

CORPORATE GOVERNANCE AND ADR EFFECTS ON EARNINGS QUALITY IN THE BRAZILIAN CAPITAL MARKETS

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Abstract

The value relevance of accounting information has been tested in many studies, however, there are little evidence from Brazil about the content information in earnings and the improvement of its relevance according to adoption of better corporate governance practices and the cross listing on the NYSE. This study aims to verify the impact of earnings interactively with corporate governance levels of BOVESPA and ADR listing on the NYSE on firms' market value measured by market-to-book ratio. Our sample is composed by 231 public companies' listed and unlisted on special segments of governance at BOVESPA and on the NYSE from 2000 up to 2006, totalizing 1.253 observations. Methodologically, we present results of different estimation procedures such as Pooled Ordinary Least Squares (POLS) and panel data with Random Effects (RE) and Fixed Effects (FE) following Breusch-Pagan and Hausman Tests to indicate the best estimators. The results indicate that: i) BOVESPA's corporate governance levels improve the content information of accounting earnings reported and enhance the coefficients; ii) earnings of firms' which trade ADR on the NYSE are not relevant but, have positive coefficients and; iii) the content information in earnings of firms listed on Level 2 and level New Market are more relevant from firms on Level 1 or unlisted. This paper contributes with the discussion about accounting information relevance to the market, investors, regulators and practitioners, as well as, the role of corporate governance to improve information quality.

Keywords: Earnings; Corporate Governance; ADR; Market to book ratio; Accounting

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1. Introduction and Research Design

The relevance of accounting information in capital markets has demanded researchers' attention in search of a cause-effect relationship between tangibles and intangibles firm's characteristics and the market value of assets traded in financial markets. These investigations resulted in the evolution of empirical research in accounting and finance (WATTS; ZIMMERMAN, 1979; LEV, 1989; KOTHARI, 2001).

Seminal studies regarding accounting information and capital market started in the 70s and 80s (BALL; BROWN, 1968; BEAVER, 1968; BEAVER *et al.* 1979), while Lev (1989) and Watts and Zimmerman (1990) argued that these studies represent the cornerstone of research on the role of accounting information in the capital markets.

According to Sloan (2001), financial accounting is the primary source of information for creditors, lenders and shareholders. These agents use some benchmarking based on accounting ratios which capture firms' performance to evaluate the quality of

executives' investment decisions to assure the return of capital borrowed.

However, capital markets have developed rules and additional mechanisms (certifications, covenants and contractual arrangements) to ensure protection for capital suppliers, such as financial institutions, investors and shareholders, which may be considered as pieces of corporate governance system (HART, 1995).

Our definition of corporate governance is based on Shleifer and Vishny (1997), Bushman and Smith (2001) and Bushman *et al.* (2004) studies which define corporate governance as a set of internal and external mechanisms to avoid shareholder expropriation by managers, to improve earnings quality and to protect the return of capital borrowed by lenders. Thus, while accounting contributes to reduce informational asymmetry between firm and market, corporate governance may improve the informativeness of reported accounting information with less distortion, prevailing conservatism, reducing earnings manipulation and increasing its relevance.

Sloan (2001, p. 336) affirms that “it is clear that corporate governance and financial accounting are inexorably linked”. In the same way, Collins and DeAngelo (1993, p. 213) state that “accounting information plays a role in the corporate governance process through which managerial inefficiency is discovered and punished”.

Another issue regards on ownership concentration and legal system in Brazil (Code Law), some researchers found different evidence among countries with code law systems and dispersed capital markets.

In Brazil, according to Lopes and Walker (2008) the major governance conflict is ownership concentration which provides potential disputes between controlling and minority shareholders in opposition to the traditional view of agency problems between managers and shareholders.

Usually, agents of the market follow accounting earnings or earnings per share (EPS) as a measure of firm’s efficiency and so their informational content (BEAVER, 1968; SARLO NETO *et al.*, 2005). Considering that earnings are calculated by accounting properties of accrual basis (or accrual accounting), it results in intertemporal differences, called accruals, that in their recognition, as discussed by Lopes and Martins (2005) it provides the content information of accounting.

However, Lopes and Walker (2008, p. 7) suggest that “the poor Brazilian accounting and governance regime can present high quality earnings if they have the appropriate incentives”.

In Brazil, there is a lack of evidences focused on earnings impact on market value or shares price and whether corporate governance could improve earnings quality (LOPES, 2002; ALMEIDA; SOUSA, 2008; MALACRIDA *et al.*, 2008; DALMÁCIO; REZENDE, 2008). As a consequence, we present the following research question: Is there a relationship between market value of public companies and the content information of earnings in the Brazilian capital markets? Consequently, how does BOVESPA’s corporate governance levels and ADR listing on the NYSE improve its relevance?

This study aims to verify the Brazilian capital markets in the view of public companies listed at BOVESPA, the nature of the information contained in earnings and what impact this variable has on the market value measured by market-to-book ratio. Additionally, we verify whether if there is an increment in information content when taken into account different BOVESPA’s corporate governance levels and ADR negotiation at NYSE.

We opted to use market-to-book ratio because of its characteristics which capture firms’ growth opportunities (HAND, 2001) and accounting earnings for its characteristics to recognize information about firms future cash flow (DECHOW, 1994; KOTHARI, 2001).

In this regard, accounting information in the corporate governance process increases investor’s usefulness to evaluate managerial performance

(COLLINS and DeANGELO, 1990). Thus, our hypothesis is: H1: The market value of public companies measured by market-to-book ratio reacts positively to the informational content in accounting earnings, and increases earnings coefficient according to the corporate governance levels of BOVESPA and when firms have ADR traded at NYSE.

This hypothesis (H1) is warranted for a better understanding of earnings in relation to the market expectations and to the possibility of explaining firms’ growth opportunities recognized by accruals which capture future cash flow, motivating the use of market-to-book ratio, because the relation between shares price and earnings has been much investigated (SLOAN, 1996; DECHOW and DICHEV, 2002; BARTH *et al.*, 2001). However, these studies did not consider an environment such as the Brazilian capital market with a low protection to minority shareholders, ownership concentration and weak enforcement. Generally, evidences are from developed capital markets such as the United States of America and in the United Kingdom.

Thus, firms signaling to the market improvement in their structures by deciding to adopt a BOVESPA’s corporate governance level⁵⁵ or to listing ADR on the NYSE. Consequently, firms’ need to adjust their structures to provide better quality of reported accounting information and the protection of shareholder rights.

In this research, we applied OLS regressions and Panel Data with fixed and random effects to identify the best estimator. Our sample has 1.253 observations from 2000 until 2006. The period was selected to avoid the recent crisis in the United States of America that reflected in all stock exchanges around the world, and this period allows us to have more firms in the sample.

Our results indicate that corporate governance levels provide increment in information content of accounting earnings when analyzing coefficients. Conversely, the results for ADR, show that there is an increment, but not statistically significant.

The sequence of this paper is divided into: 2 – Literature Analysis showing related researches, 3 – Methodology, which presents methodological procedures, sample selection, econometric models and descriptive statistics; 4 - Analysis of Results, and; 5 - Conclusions and suggestions for future research.

2. Literature Analysis and Theoretical Background

Ross (1983), Kothari (2001), Penman (2001), Singh (2003) and Lopes and Martins (2005) state that the content information in accounting variables impact capital markets. Consequently, new designs in researches provided alternative analyses about the

⁵⁵ Bovespa provide three levels of Corporate governance: level 1, level 2 and new market which will be discussed in next topic.

impact of accounting information on assets values traded in the developed and emerging markets' capital markets.

According to Kothari (2001), more studies are necessary on the capital markets based on efficient-market hypothesis to discover the effect and reaction by the market of accounting information. Furthermore, Singh (2003) emphasizes the importance of more studies on capital markets of emerging countries, which often differ from developed markets due to corporate governance structure, ownership concentration, legal systems and the level of development of financial markets.

Sloan (1996) analyzed how the stock prices reflect the information contained in different properties of earnings: accruals and cash flow. His main results show that: i) accruals are less persistent than cash flow to explain earnings; ii) when there are abnormal returns of stock prices, accruals behave differently, which is seen as the accruals anomaly.

In Brazil, earnings quality is studied, mainly, focused on earnings management, conservatism and value relevance (MARTINEZ, 2001; LOPES, 2002; CARDOSO *et al.*, 2008). According to Lopes (2002) and Singh (2003), there is a lack of researches in accounting and finance in developing countries. These researches suggest that the possibility of the results may be different from those found in countries with developed capital markets.

Brazilian financial market is interesting to investigate due to their structure with high ownership concentration and major emphasis on shareholder equity, rather than, earnings (LOPES, 2002), where, for the agency theory, agent and principal is the same person, a condition which might diminish the importance of accounting as a source of information by reducing informational asymmetry (LEV, 1989; KOTHARI, 2001; LOPES and MARTINS, 2005).

Lopes and Martins (2005) discuss that the value relevance of accounting information, from the economic and informational perspectives, is its ability to predict future cash flows, however, the stock prices vary as expectations of future cash flows change. This gives reason for the use of market-to-book ratio which captures information more than accounting system.

In this way, the presence of accruals is one of the key features of the accounting model and the verification of its irrelevance highlight the usefulness of accounting in the context of the capital markets (LOPES, 2002). Moreover, if earnings do not explain the firms' growth opportunities there is an erroneous common thought about prediction characteristics of earnings.

Another point that needs observation is the corporate governance structure of firms. When public companies decide to be listed in capital markets, they increase their exposure in the market, and consequently, their political costs. Thus, the accounting information disclosed by firms may have more relevance for investors and economic agents, also, the exposure and adoption of corporate

governance practices require a further increase in accountability.

Shleifer and Vishny (1997) also emphasize the importance of accounting numbers since internal and external contracts are incomplete and accounting takes place to reduce the uncertainties on the risk of earnings manipulation or fraud (SILVEIRA, 2002).

Nevertheless, accounting information systems are unable to explain the change in stock prices in a timely fashion due to the complexity of business or the diversity of business (BUSHMAN *et al.* 2004). However, financial accounting systems clearly can be a direct source of information to managers and investors about investment opportunities (Bushman and Smith, 2001, p. 294).

For that reason, these incentives shape the properties of accounting numbers disclosed according to the firms' governance structure and the environment to which they compete. In respect of the environment, it is considered economic condition, the GAAP (Generally Accepted Accounting Principles) and external mechanisms. Consequently, in the Brazilian case, the decision to listing on a Bovespa's corporate governance level (Level 1, Level 2 or New Market) and to trade ADR on the NYSE influences the firm's internal structure.

As a consequence, the high quality of financial statements reduces the need for additional governance mechanisms, conversely, the low quality of disclosed accounting information increases the need for additional mechanisms to protect investors (BUSHMAN *et al.*, 2004; BUSHMAN and PIOTROSKI, 2006).

In the Brazilian Capital Markets, shares are traded at BOVESPA (São Paulo Stock Exchange) which developed three special listing segments of corporate governance according to Corporate Law and rules from Brazilian Stock Exchange Commission (CVM). Briefly, the main characteristics of each corporate governance levels, according to the BOVESPA website⁵⁶ are presented as follows:

- **Level 1:** Improve disclosure and disperse shares among market; Maintenance of a free-float of at least 25% of the capital; Public offerings have to use mechanisms to favor capital dispersion; Improvement in quarterly reports, including the disclosure of consolidated financial statements and special audit revision; Monthly disclosure of trades involving equities issued by the company on the part of the controlling shareholders; Disclosure of an annual calendar of corporate events.
- **Level 2:** Adopt additional corporate governance practices and minority shareholders rights; Establishment of a two-year unified mandate for the entire Board of Directors, which must have five members at least, of which

⁵⁶ These information are available on www.bovespa.com.br

at least 20% (twenty percent) shall be Independent Members; Disclosure of annual balance sheet according to standards of the US GAAP or IFRS; In case majority shareholders sell their stake, same conditions granted to them must be extended to common shareholders, while preferred shareholders must get, at least, 80% of the value/conditions (tag along); Voting rights granted to preferred shares in circumstances such as incorporation, spin-off and merger and approval of contracts between the company and other firms of the same holding group, when deliberated at general meeting; Obligation to hold a tender offer by the economic value criteria, in case of delisting or deregistration process; Admission to the Market Arbitration Panel for resolution of corporate disputes.

- **Level New Market:** Only common shares (voting shares); Public share offerings have to use mechanisms to favor capital dispersion and broader retail access; Maintenance of a minimum free float, equivalent to 25% of the capital; Same conditions provided to majority shareholders in the disposal of the Company's Control will have to be extended to all shareholders (Tag Along); Establishment of a two-year unified mandate for the entire Board of Directors, which must have five members at least, of which at least 20% (twenty percent) shall be Independent Members; Disclosure of annual balance sheet, according to standards of the US GAAP or IFRS; Improvements in quarterly reports, such as the requirement of consolidated financial statements and special audit revision; Obligation to hold a tender offer by the economic value criteria, in case of delisting or cancellation of registration as publicly-held company; Compliance with disclosure rules in trades involving securities issued by the company in the name of controlling shareholders; Some of these obligations must be approved at the General Shareholders Meetings and included in the corporate bylaws.

Although, in Brazil, listed firms may adopt voluntarily corporate governance mechanisms and not disclose them to the market, or decide to adopt a special segment of Bovespa's corporate governance which the market realizes as a "seal" of governance quality. This seal, on the signaling theory perspective, indicates to the agents a high quality of governance practices, but it does not always occur (CARDOSO et al., 2008).

Lopes and Walker (2008), probably to avoid these problems with firms which do not follow the rules of Bovespa's corporate governance levels, developed a Brazilian Corporate Governance Index with four dimensions (disclosure, board composition and functioning, and control-ownership structure and shareholders rights). The results indicate that the quality of corporate governance contributes to improving the quality of the profit for the points

discussed: value relevance, conservatism, timeliness and earnings management.

For these reasons highlighted in the literature, this study will examine the impact of earnings on market-to-book ratio, because this ratio captures different expectation from the market while accounting does not (HAND, 2001; CARDOSO, 2008).

3. Methodology

Lopes and Martins (2005, p. 60) affirm that "the value relevance of accounting numbers is investigated from the information perspective, through the impact of them on share prices traded in capital markets".

In this study, accounting earnings is the explanatory variable scaled by total assets in t-1 and market-to-book ratio, the dependent variable in our regression model. We use dummy variables to separate corporate governance levels and firms that negotiate ADRs and interactive dummy variables between them to capture joint effects.

We applied econometric models based on Pooled Ordinary Least Square (OLS) and panel data techniques with random effects (RE) and fixed effects (FE). The option to use these three estimation methods is to avoid inconsistent and biased estimators (KENNEDY, 2003; WOOLDRIDGE, 2001).

Panel data techniques allow for the capturing of idiosyncratic and unobserved factors for each firm (WOOLDRIDGE, 2001). Therefore, this procedure control considers heterogeneity of firms' characteristics such as operating cycle, volatility of accruals, cash flow and earnings, size and accounting choices.

In this way, to choose the best estimator among OLS, RE and FE, we did the following steps: 1) Applied Breusch-Pagan test to check the best estimator between OLS and RE, if the test indicates RE the best estimator, we subsequently did the next step; 2) Hausman test to determine the appropriate estimator between FE and RE (KENNEDY, 2003; WOOLDRIDGE, 2001). Thus, we present the econometric model based on accounting earnings for the three methods used:

$$mtb_{i,t} = \beta_0 + \beta_1 \text{earn}_{i,t} + \beta_2 \text{earn} * \text{adr}_{i,t} + \beta_3 \text{earn} * \text{L1}_{i,t} + \beta_4 \text{earn} * \text{L2}_{i,t} + \beta_5 \text{earn} * \text{Lnm}_{i,t} + \beta_6 \text{ADR}_{i,t} + \beta_7 \text{L1}_{i,t} + \beta_8 \text{L2}_{i,t} + \beta_9 \text{Lnm}_{i,t} + \epsilon_{i,t}$$

where:

$mtb_{i,t}$ = Market-to-book ratio (market value of firm divided by shareholders equity) for firm i in period t;

$\text{earn}_{i,t}$ = earnings lagged by total assets in t-1 for firm i in period t;

$\text{earn} * \text{adr}_{i,t}$ = Interactive dummy variable between earnings and ADR for firm i in period t;

$\text{earn} * \text{L1}_{i,t}$ = Interactive dummy variable between earnings and Level 1 of Bovespa for firm i in period t;

$\text{earn} * \text{L2}_{i,t}$ = Interactive dummy variable between earnings and Level 2 of Bovespa for firm i in period t;

$\text{earn} * \text{Lnm}_{i,t}$ = Interactive dummy variable between earnings and Level New Market for firm i in period t;

ADR_{i,t} = dummy variable which equals 1 if the firm *i* has ADRs listed on the NYSE in period *t* and 0, otherwise;
 L1_{i,t} = dummy variable which equals 1 if the firm *i* is listed at Level 1 at Bovespa in period *t* and 0, otherwise;
 L2_{i,t} = dummy variable which equals 1 if the firm *i* is listed at Level 2 at Bovespa in period *t* and 0, otherwise;
 Lnm_{i,t} = dummy variable which equals 1 if the firm *i* is listed at Level New Market at Bovespa in period *t* and 0, otherwise;
 ε_{i,t} = error term for firm *i* in period *t*.

We expect that the use of interactive dummy variables capture the content information in earnings and the relevance and earnings' coefficient response increase according to the corporate governance levels and for firms which trade ADRs at NYSE.

In this study, value relevance is considered the statistical significance of variables and earnings coefficient response is the increment of estimators for each interactive dummy variable, the reason is that each Bovespa's Corporate Governance Level requires more governance mechanisms or disclosure and the participation in ADR programs that need adjustment in firms' structures.

The limitation in this study concerns estimation procedures used, period of sample selection, the

measure used for the development of variables and by the possibility that earnings may be manipulated, but it is out of scope of analysis.

3.1. Sample Selection and Descriptive Statistics

The sample was obtained from the Economática's software in a period from 2000 to 2006. We selected 231 public companies which traded shares at São Paulo Stock Exchange (BOVESPA) over this period, totalizing 1,253 observations.

The use of unbalanced panel data econometric procedure allows us to aggregate more firms, since some firms do not have variables over all period. We emphasize that the unbalanced panel data allows more generalization about findings and reduce the risk of biases on the sample selection, due to firms entries and exits, mergers and acquisitions in the Brazilian Capital Markets.

The descriptive statistics of variables is presented as follow:

Table 1. Descriptive Statistics

Variables	Obs.	Mean	Std. Dev.	Min.	Max.
Mtb	1253	1.5370	3.8536	-19.7103	73.8654
earn _{i,t}	1253	0.3120	3.1600	-58.7368	76.1510
earn*adr _{i,t}	161	0.0349	0.1235	-1.2933	0.8686
earn*L1 _{i,t}	105	0.0607	0.8349	-0.7403	28.4060
earn*L2 _{i,t}	25	0.0053	0.0641	-0.9154	0.6875
earn*Lnm _{i,t}	49	0.0094	0.0740	-0.6334	1.0066

mtb_{i,t} = Market-to-book ratio for firm *i* in period *t*; earn_{i,t} = earnings lagged by total assets in *t*-1 for firm *i* in period *t*; earn*adr_{i,t} = Interactive dummy variable between earnings and ADR for firm *i* in period *t*; earn*L1_{i,t} = Interactive dummy variable between earnings and Level 1 for firm *i* in period *t*; earn*L2_{i,t} = Interactive dummy variable between earnings and Level 2 for firm *i* in period *t*; earn*Lnm_{i,t} = Interactive dummy variable between earnings and Level New Market for firm *i* in period *t*.

The descriptive statistics shows some characteristics of public companies of the Brazilian Capital Markets, such as companies on average have a market value 1.5 times higher than equity, some companies have negative value due to uncovered liabilities (negative equity).

Public Companies listed at level 2 and New Market have lower earnings standard deviation,

followed by firms that have ADRs traded on NYSE and listed at level 1, respectively. Firms that are not listed have higher average and standard deviation, this occurs because the Ibovespa index is composed from the major public companies.

Table 2 shows the correlation between variables as follow:

Table 2. Correlation Matrix

Variables	mtb	earn	earn*adr _{i,t}	earn*L1 _{i,t}	earn*L2 _{i,t}
Mtb	1				
earn _{i,t}	0.4076	1			
earn*adr _{i,t}	0.0654	0.0143	1		
earn*L1 _{i,t}	0.3679	0.2584	0.0328	1	
earn*L2 _{i,t}	0.1179	0.0123	0.0600	-0.0060	1
earn*Lnm _{i,t}	0.1966	0.0112	0.0266	-0.0093	-0.0105

mtb_{i,t} = Market-to-book ratio (market value of firm divided by shareholders equity) for firm *i* in period *t*; earn_{i,t} = earnings lagged by total assets in *t*-1 for firm *i* in period *t*; earn*adr_{i,t} = Interactive dummy variable between earnings and ADR for

firm *i* in period *t*; $earn*L1_{i,t}$ = Interactive dummy variable between earnings and Level 1 for firm *i* in period *t*; $earn*L2_{i,t}$ = Interactive dummy variable between earnings and Level 2 for firm *i* in period *t*; $earn*Lnm_{i,t}$ = Interactive dummy variable between earnings and Level New Market for firm *i* in period *t*;

Correlation matrix shows that there is a higher association for firms' earnings for the whole sample and for firms listed on level 1 with market-to-book ratio. Another high association in the sample is between independent variables earnings of the entire sample and firms listed in level 1, possibly due to the large public companies with growing earnings and interactive dummy variable.

When applying the methodology to analyze value relevance (relevance) of accounting information that is the ideal, additional techniques are used to mitigate problems of multicollinearity and heteroscedastic.

We use additional techniques to mitigate problems with multicollinearity and heteroskedasticity. Firstly, independent variables were scaled by the total assets in period *t*-1 to reduce the level of accruals and operating cash flow that might still be present in total assets in period *t*. Secondly, we run robust regression in all estimation (POLS, RE and FE) to mitigate heteroskedasticity problems (WOOLDRIDGE, 2001). Thirdly, multicollinearity in POLS regression was verified by VIF (Variance Inflation Factor) statistics

which showed no problems and obtained 2.5 points. Kennedy (2003) suggests multicollinearity problems arise when VIF passes 10 points, however, up to 5 is acceptable.

4. Empirical Results and Discussion

The results that will be shown as follows evidenced the properties of earnings for firms listed on Bovespa corporate governance levels and firms which trade ADR on NYSE. As we discussed earlier, two points will be analyzed in the regressions: i) the relevance of independent variables by their statistical significance and; ii) the impact of independent variables on market-to-book ratio measured by the coefficients (betas).

The use of interactive dummy variables allow us to capture different properties of earnings according to the level of corporate governance at Bovespa and the effect of trading ADR on NYSE. The following table 4 shows the results of regressions:

Table 4. Results for POLS, RE and FE Regressions

Coefficients on 1 st line; [t statistic] between brackets on 2 nd line. *, **, ***, significant at 0.01, 0.05 e 0.10, respectively.				
$mtb_{i,t} = \beta_0 + \beta_1 \text{earn}_{i,t} + \beta_2 \text{earn}*\text{adr}_{i,t} + \beta_3 \text{earn}*L1_{i,t} + \beta_4 \text{earn}*L2_{i,t} + \beta_5 \text{earn}*Lnm_{i,t} + \beta_6 D_ADR_{i,t} + \beta_7 D_L1_{i,t} + \beta_8 D_L2_{i,t} + \beta_9 D_Lnm_{i,t} + \varepsilon_{i,t}$				
Regressors/Technique	Obs	POLS	RE	FE*
earn _{<i>i,t</i>}	1253	0.402 [1.51]	0.387 [1.55]	0.385*** [1.91]
earn*adr _{<i>i,t</i>}	161	1.588* [3.18]	1.093** [2.19]	0.502 [1.00]
earn*L1 _{<i>i,t</i>}	105	1.316* [4.93]	1.311* [5.23]	1.303* [6.46]
earn*L2 _{<i>i,t</i>}	25	7.721 * [3.87]	9.702* [4.07]	10.665* [2.97]
earn*Lnm _{<i>i,t</i>}	49	10.847* [3.37]	10.091* [2.87]	2.062*** [1.75]
Adr	161	-0.143 [-0.78]	-0.175 [-0.77]	-0.832 [-0.75]
L1	105	-0.099 [-0.69]	0.136 [0.96]	0.486* [3.98]
L2	25	-0.661 [-0.87]	-2.227*** [-1.83]	-4.790*** [-1.94]
Lnm	49	-0.420 [-0.39]	-0.102 [-0.09]	0.833 [0.45]
constant		1.187* [9.66]	1.243* [7.04]	1.373* [11.53]
R ²		29.43%	29.12%	29.85%
F (prob.)		0.000	0.000	0.000
Breusch-Pagan (Chi ²)		0.000		
Hausman (Chi ²)			0.020	

Obs.: $mtb_{i,t}$ = Market-to-book ratio (market value of firm divided by shareholders equity) for firm *i* in period *t*; $earn_{i,t}$ = earnings lagged by total assets in *t*-1 for firm *i* in period *t*; $earn*\text{adr}_{i,t}$ = Interactive dummy variable between earnings and ADR for firm *i* in period *t*; $earn*L1_{i,t}$ = Interactive dummy variable between earnings and Level 1 for firm *i* in period *t*; $earn*L2_{i,t}$ = Interactive dummy variable between earnings and Level 2 for firm *i* in period *t*; $earn*Lnm_{i,t}$ = Interactive dummy variable between earnings and Level New Market for firm *i* in period *t*; $D_ADR_{i,t}$ = dummy variable which equals 1 if the firm *i* has ADRs listed on the NYSE in period *t* and zero otherwise; $D_n1_{i,t}$ = dummy variable which equals 1 if the

firm i is listed on level 1 in period t and zero otherwise; $D_{n2,t}$ = dummy variable which equals 1 if the firm i is listed on level 2 in period t and zero otherwise; $D_{nm,t}$ = dummy variable which equals 1 if the firm i is listed on level new market in period t and zero otherwise.

The appropriated estimator to analyze among POLS, RE and FE is fixed effects. The Breusch-Pagan Tests reject the null hypotheses which compares POLS and RE (p-value 0.000). To the next step, it is necessary to compare RE and FE, and according to the Hausman Test, the null hypotheses (H_0) is rejected because unobservable factors (error term) are not correlated with the explanatory variables (p-value 0.02).

The explanatory power measured by R^2 was very close for all estimation techniques, but even greater for fixed effects at 29.85%. The slope coefficient of earnings ($earn_{i,t}$) is positive (0.385) and statistically significant at 10% only for the fixed effects model which suggest that the market realizes the information of growth opportunities recognized in earnings.

The results on table 4, for firms listed on levels 1 and 2 were statistically significant at 1%, however, stronger slope coefficients for corporate governance levels, mainly, for level 2 (10.665). The earnings coefficient for firms listed on level new market was 2.062, positive and greater when compared to firms of whole sample. These evidences show that the market recognizes the positive information contained in earnings of public companies.

An interesting point is the higher earnings response coefficient for firms listed on level 2 (10.665) when compared for other levels new market and Level 1, 2.062 and 1.303, respectively. One possible interpretation given there are preferred shares and firms which have, basically, the same requirements from the new market level, might indicate a higher payment of dividends and disclosure of the firms. Moreover, higher dividends payments are a substitutive effect for agency costs of controlling.

On the other hand, cross listing show a positive coefficient (0.502), however, less than Bovespa corporate governance levels and not statistically significant for firms with ADR traded on the NYSE.

5. Conclusions

In this paper we investigated the value relevance of content information in earnings in the Brazilian Capital Markets and how BOVESPA corporate governance levels and cross listing of firms which trade ADR on the NYSE improve earnings impact on firms' value measured by market-to-book ratio.

Our findings show that earnings are more relevant for firms listed in level 2, followed by levels new market and level 1. In this way, these results support the hypothesis that corporate governance improves earnings quality and relevance to the market. On the other hand, despite the positive coefficient for firms which trade ADR on the NYSE does not suggest any conclusive answer for this fact which needs more studies.

The evidences of earnings relevance and its higher slope coefficients demonstrate that the market recognizes the content information in earnings and the firm's growth opportunities. Our findings corroborate part of results from Lopes and Walker (2008) in respect to earnings quality, mainly, value relevance using corporate governance levels rather than an index of corporate governance quality.

As a consequence, public companies listed in corporate governance levels provide more relevance of accounting information, possibly, for some reasons: i) these firms have less agency costs (JENSEN and MECKLING, 1976), ii) the enforcement to disclosure more information to the market; iii) more exposure to the market by increasing the firms political cost (WATTS and ZIMMERMAN, 1990).

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