

Earnings management by classification shifting and corporate governance in Brazil

Gerenciamento de resultados por mudança de classificação e governança corporativa no Brasil

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Abstract: Classification shifting is a new approach of earnings management, which verifies when there is a deliberate change in the classification of items in the income statement for the year, withdrawing items from core earnings and assigning for special items. As corporate governance reduces opportunistic behavior of the manager, this paper aims to verify the influence of corporate governance in earnings management by classification shifting. For this purpose, 236 publicly-traded companies listed in Brasil, Bolsa, Balcão (B3) between 2005 and 2016 were analyzed. As a metric for earnings management, the classification shifting proposed by McVay (2006) was used, and as metrics of corporate governance, the differentiated levels of corporate governance provided by B3 were used. findings show that earnings management by classification shifting happens in Brazil, and corporate governance, measured by the differentiated levels of corporate governance of B3, is a factor that reduces the classification shifting, thus, governance is able to change the behavior of the manager. Therefore, corporate governance is a relevant attribute for companies vis-à-vis investors, because it ensures the trust and transparency of the disclosed information.

Keywords – Classification Shifting; Earnings Management; Corporate Governance.

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Resumo: A mudança de classificação é uma nova abordagem de gerenciamento de resultados, que verifica quando há uma alteração deliberada na classificação de itens na demonstração de resultados do exercício, retirando itens do resultado principal do negócio e atribuindo a itens especiais. Como a governança corporativa reduz o comportamento oportunista do gestor, este artigo tem como objetivo verificar a influência da governança corporativa no gerenciamento de resultados por mudança de classificação. Para tanto, foram analisadas 236 companhias abertas listadas na Brasil, Bolsa, Balcão (B3) entre 2005 e 2016. Como métrica para o gerenciamento de resultados, utilizou-se a mudança de classificação proposta por McVay (2006) e, como métricas de governança corporativa, foram utilizados os níveis diferenciados de governança corporativa fornecidos pela B3. Os resultados mostram que o gerenciamento de resultados por mudança de classificação acontece no Brasil, e que a governança corporativa, medida pelos níveis diferenciados de governança corporativa de B3, é um fator que reduz a mudança de classificação, assim, a governança é capaz de mudar o comportamento do gestor. Portanto, a governança corporativa é um atributo relevante para as empresas vis-à-vis os investidores, pois garante a confiança e a transparência das informações divulgadas.

Palavras-chave – Mudança de Classificação; Gerenciamento de Resultados; Governança Corporativa.

Introduction

The function of accounting is to provide credible information to investors and stakeholders, so they can make assertive decisions. However, managers often use accounting opportunistically by manipulating accounting numbers (Scott, 2012). This type of manipulation is called earnings management, which is a practice that can be explained by agency theory, since managers could make decisions in their own interest instead of maximizing decisions for the benefit of investors (Jensen & Meckling, 1976).

According to McVay (2006), the literature commonly adopts two concepts of earnings management: by accruals and by operational activities. However, the author proposes a new approach of earnings management, which verifies when there is a deliberate change in the classification of items in the income statement for the year, which is defined as classification shifting. This type of earnings management differs from the others because it does not change net income (McVay, 2006).

According to the literature, managers manipulate results by changing their classification when they change, for example, normal expenses as unusual, special, significant, exceptional, abnormal or extraordinary items. These items are considered transient, non-persistent and non-recurring.

Although the magnitude of the profit is not affected, the misclassification of expenses is misleading to users of the financial statements, as different components of the income statement have different informational content that is relevant to profitability or profit forecasting. Incorrect classification of expenses is misleading to users of the financial statements because different components of the income statement have different informational content that is informative for assessing profitability or predicting future earnings.

The large presence of earnings management and the low level of information are characteristic of countries with low investor protection (DeFond *et al.*, 2007; Leuz *et al.*, 2003), suggesting that, in countries such as Brazil, the earnings management by classification shifting could be frequent. In order to mitigate this problem, the literature points out that reputation (Cao *et al.*, 2012; Garrett *et al.*, 2014), corporate social responsibility (Hong & Andersen, 2011, Kim *et al.*, 2012), culture (Elias, 2004; Hashim, 2012) and corporate governance (González & García-Meca, 2014; Shen & Chih, 2007) would be factors capable of decreasing the managers' engagement in opportunistic earnings management practices.

In this sense, corporate governance concentrates practices and mechanisms that aim to decrease informational asymmetry, due to conflicts between managers and shareholders or between majority and minority shareholders (Wang & Campbell, 2012), which imply a reduction in the cost of capital. In 2000, Brasil, Bolsa, Balcão - B3 created differentiated levels of corporate governance - Level 1, Level 2 and New Market (Novo Mercado in Portuguese) - in order to ensure equality in the Brazilian capital market and to provide greater transparency and trust for investors. For each level, companies are committed to comply with certain corporate governance practices, in which New Market is the most demanding level. Thus, the companies listed in this level would be those with the best corporate governance practices (Srouf, 2005).

Therefore, the present study aims to verify the influence of corporate governance in earnings management by classification shifting. For this purpose, 236 publicly-traded companies listed in Brasil, Bolsa, Balcão - B3 between 2005 and 2016 were analyzed. As a metric for earnings management, the

classification shifting proposed by McVay (2006) was used, and as metrics of corporate governance, the levels of corporate governance provided by B3 were used (Martinez, 2011).

Two important findings were obtained with the analysis of the present study. First, it is observed that the earnings management by classification shifting happens in Brazil, which corroborates the study of Behn *et al.*, (2013), who verified the existence of this type of earnings management in a sample of 40 countries. Second, it is noticed that corporate governance, measured by the differentiated levels of corporate governance of B3, is a factor that reduces the classification shifting, thus, governance is able to change the behavior of the manager (Haw *et al.*, 2011; Zalata & Roberts, 2015). In this way, corporate governance is a relevant attribute for companies vis-à-vis investors, because it ensures the trust and transparency of the disclosed information.

The main importance of the study is due to the non-existence of Brazilian studies adopting the earnings management by classification shifting, considering that, in emerging markets, this practice may prove to be prominent. In addition, the earnings management by classification shifting is difficult to detect by the auditing and has a significant impact on the interpretation of analysts and the perception of investors (Haw *et al.*, 2011). Consequently, identifying factors that mitigate this type of earnings management is relevant to the Brazilian capital market.

In addition, the literature is not conclusive about the relationship between earnings management and corporate governance (Cunha & Piccoli, 2017; Erfurth & Bezerra, 2013; Lin & Hwang, 2010; Susanto & Pradipta, 2016; Zalata & Roberts, 2015). Largely due to the various metrics used. Thus, demonstrating that the differentiated levels of corporate governance of B3 are able to mitigate earnings management is pertinent, since it represents a simple metric and easy access to the stakeholders, helping them to make precise decisions, as well as showing reliability for such users.

Literature Review

Earnings management and corporate governance

The relevance of earnings management is due to its potential effect on financial statements, which in turn can influence stakeholder decision making (Stolowy & Breton, 2003). This fact occurs because the earnings management can modify the perception of investors, making them make erroneous decisions from manipulated information. Most of the time, the earnings management is an intentional alteration of the accounting earnings in order to meet a particular motivation. In this sense, the management artificially manages the earnings for purposes other than those of expressing the latent reality of the business (Martinez, 2001).

According to Healy and Whalen (1998), earnings management occurs when managers use judgments during the preparation of financial reports and in the structuring of transactions in order to alter the respective financial statements, misleading some stakeholders about the economic performance of firm or influencing the contractual results that depend on the accounting numbers reported.

Earnings management stems from the existence of at least two alternatives for which no accounting standard has been enacted (Hendriksen & Van Breda, 1999). Thus, the presentation of financial information not consistent with that made by the firm, does not detract from accounting principles (Erfurth & Bezerra, 2013). Thus, creative accounting, associated with earnings management (Santos & Grateron, 2003), is based on the existence of subjectivity, flexibility and omission of accounting standards to present earnings as desired by the managers.

In general, the practice of earnings management implies in the increase or decrease of the earnings at the discretion and motivation of the management. In recent times, the most recurrent practice of earnings management is by accruals (Mazzioni *et al.*, 2015).

The engagement in practices of earnings management has different implications, such as impressing capital investors, reducing tax debts, improving contract negotiation, allowing good management evaluation, among others (Matsumoto & Parreira, 2007). Similarly, motivations are also distinct, which include capital market motivations, contractual motivations and regulatory incentives, political costs (Matsumoto & Parreira, 2007) and CEO reputation (Godfrey *et al.*, 2003).

If the firms have higher level of earnings management, then they have lower accounting information quality presented in the financial statements (Sunder, 1997). According to McVay (2006), the

literature addresses two concepts of earnings management: management by accruals and manipulation by operational activities; these concepts aim to modify the company's net income or even cash flow, as the manipulation of operational activities, as known as real earnings management, because this manipulation is expenses cuts that have an expectation of generating value.

However, there is the possibility of engaging in earnings management without change net income or cash flow, this type of earnings management is known as classification shifting (McVay, 2006). This other concept of earnings management is based on the manipulation of informational content, since the elements of the income statement are intentionally modified (Haw *et al.*, 2011).

McVay (2006) states that managers would remove items that make up the core earnings and attribute to special items, which are considered temporary or irrelevant. McVay (2006) argues that investors, in general, observe core earnings because it represents the actual activity of the firm and is used for firm valuation, so investors would be misled by management making wrong decisions because informational content of the financial statements was manipulated.

It is noteworthy that the change of classification occurs under different generally accepted accounting principles (GAAPs). Most previous research is based on US GAAP and IFRS-based research is missing. IFRSs are accounting standards that provide general guidance for the preparation of financial statements, with the aim of improving comparability and understandability. However, because of the principled characteristic of these standards, managers have much more flexibility in making accounting choices that can create opportunities for earnings management.

Lin and Hwang (2010) emphasize that corporate governance is a factor that is able to minimize the practice of earnings management, although there are some inconsistencies about this relationship (García-Meca & Sánchez-Ballesta, 2009). The relationship between earnings management and corporate governance occurs because corporate governance represents a set of mechanisms that contribute to the monitoring the managers (Cunha & Piccoli, 2017), limiting them and/or punishing them in certain accounting practices.

Corporate governance can be defined as a set of mechanisms in order to ensure to capital providers return on their investments (Shleifer & Vishny, 1997). Thus, the mechanisms act as protection to external investors in relation to the possibility of expropriation by internal investors (La Porta *et al.*, 1998).

In addition, corporate governance emerges as a set of control mechanisms that can reduce agency costs, arising from conflicts of interest between owners and managers and between majority and minority shareholders (Silveira & Barros, 2007), which are part of the agency theory (Jensen & Meckling, 1976). Thus, governance uses ex-ante mechanisms in an attempt to avoid or minimize ex-post costs (Dami *et al.*, 2007).

According to the Brazilian Institute of Corporate Governance (IBGC, 2014, p.19), *Instituto Brasileiro de Governança Corporativa* in Portuguese, governance comprises a “system which companies and other organizations are directed, monitored and encouraged” involving a broad set of stakeholders, which includes partners, Board of Directors, and other interested parties. Transparency, fairness, accountability and corporate responsibility are basic principles for the development of governance practices (IBGC, 2014).

In 2000, the São Paulo Stock Exchange (BM&FBovespa), renamed Brasil, Bolsa, Balcão - B3, created the special listing segments known as differentiated levels of corporate governance – New Market, Level 2 and Level 1 - in order to highlight to the market the effort made by firms to improve the relationship with investors and to raise the valuation potential of their assets (Mazzioni *et al.*, 2015).

The differentiated levels of corporate governance are aimed to firms whose shares are traded on the stock exchange, which voluntarily commit to the adoption of practices beyond what is legally required in an attempt to improve the quality of accounting and financial information and to improve the relationship between risk and return to investors (Moura *et al.*, 2016). Another objective related to the adoption of differentiated levels of corporate governance refers to the reduction of informational asymmetry between investors and others stakeholders, due to the expectation of high transparency and reduction of the cost of capital (Almeida *et al.*, 2010).

The literature has shown that corporate governance can improve investors' perception of firm performance (Almeida-Santos *et al.*, 2011) and that the best practices of corporate governance can

contribute to reliable financial statements, enhancing the share value (Erfurth & Bezerra, 2013). In this context, studies have shown that efficient corporate governance mechanisms are able to reduce the practice of earnings management (Cunha & Piccoli, 2017, Haw *et al.*, 2011, Lin & Hwang, 2010, Zalata & Roberts, 2015).

Hypothesis development

Previous studies show that corporate governance - as proxy in the absence of CEO duality, existence of audit committee, independence of directors, among others - is a factor capable of reducing practices of earnings management (Lin & Hwang, 2010). However, this relationship presents inconsistencies (García-Meca & Sánchez-Ballesta, 2009).

In the Anglo-Saxon context, which has common law system, corporate governance has a negative relationship with earnings management (Xie *et al.*, 2003; Davidson *et al.*, 2005; Iqbal & Strong, 2010; Sun *et al.*, 2010; Hazarika *et al.*, 2012; Zalata & Roberts, 2015). Countries with these characteristics have high national governance and investor protection (La Porta *et al.*, 1998; Leuz *et al.*, 2003), contributing to a more influential corporate governance.

In the Asian context - most of countries have the mixed legal system - corporate governance does not present a conclusive result regarding the relationship with earnings management. On the one hand, some studies show a positive relationship (Chen *et al.*, 2007; Liu & Lu, 2007; Shen & Chih 2007; Lo *et al.*, 2010; Wang & Campbell, 2012; Susanto & Pradipta, 2016), while other studies have found a negative relationship (Jaggi & Tsui, 2007; Siregar & Utama 2008; Haw *et al.*, 2011).

In the Latin context, which has civil legal system, is also verified that there is inconsistency regarding the relationship between corporate governance and earnings management. Some studies show that corporate governance is able to reduce earnings management (Iturriaga & Hoffmann, 2005; Prencipe & Bar-Yosef, 2011; Barros *et al.*, 2013; Gonzalez & García-Meca, 2014; Cunha & Piccoli, 2017). Other researches, in turn, have shown inconsistencies, whether due to the use of various metrics for earnings management and corporate governance, or by failure to observe consistent results over time (Martinez, 2011; Erfurth & Bezerra, 2013; Mazzioni *et al.*, 2015).

Therefore, the extensive literature has investigated the relationship between earnings management and corporate governance. The analysis developed relies on the mechanisms of corporate governance, such as structure and concentration of ownership, shareholder identity, board of directors (size, independence and activity), CEO duality, CEO turnover, audit quality, among others (González & García-Meca, 2014; Hazarika *et al.*, 2012; Iqbal & Strong, 2010; Lin & Hwang, 2010). Each of these corporate governance mechanisms has a distinct impact on practices of earnings management.

The differentiated levels of corporate governance developed by B3 consider aspects such as the characteristics of the shares issued, the percentage of shares in free float, the public distribution of shares, the composition of the board of directors, the fence to accumulation of positions, financial statements, the additional disclosure of information, among others.

In general, corporate governance mechanisms seek to reduce informational asymmetry and opportunistic behaviors by managers, thus improving the quality of accounting information (González & García-Meca, 2014; Shen & Chih, 2007). A negative relationship is expected between corporate governance and earnings management, because the higher the earnings management the lower the quality of accounting information, and corporate governance would act to minimize or retain the opportunistic behaviors of managers. The present study, based on the literature, develops the following hypothesis.

H₁: Corporate governance reduces the practice of earnings management by classification shifting.

Method

The study sample comprised 236 companies listed in Brasil, Bolsa e Balcão - B3, which correspond to those that present information to measure the variables under study, highlighting the existence of small variation in sample size due to missing observations depending on the model used.

The accounting and corporate governance information was obtained from the Compustat Global database and from the B3 website for the accounting periods between 2005 and 2016. As the initial period, it was considered the year of adoption of International Financial Reporting Standards (IFRS) at the international level, although Brazil has begun to mandatory adopt IFRS in 2010, this period was used,

Earnings management by classification shifting and corporate governance in brazil

since the main objective of IFRS is to improve the quality of accounting information (Yip & Young, 2012), thus, it is controlled by this effect.

In order to verify the hypothesis, the earnings management by classification shifting was measured according to McVay (2006). First, it is used the core earning model to measure the unexpected change in core earnings, according to Equation 1.

$$CE_{it} = \beta_0 + \beta_1 CE_{it-1} + \beta_2 ATO_{it} + \beta_3 ACC_{it-1} + \beta_4 ACC_{it} + \beta_5 \Delta S_{it} + \beta_6 N_ \Delta S_{it} + \varepsilon_{it} \quad (1)$$

The unexpected change in core earnings (UE) represents the difference between the core earnings (CE) and the residue (ε_{it}) of Equation 1. Table 1 presents the description of the variables presented in Equation 1.

Variables		Measurement
Core earnings	CE	$\frac{(S - COGS) - SGA}{S}$
Asset Turnover Ratio	ATO	$\frac{(OA-OL)_t - (OA-OL)_{t-1}}{2}$
Operating Accruals	ACC	$\frac{(IB - CFO)}{S}$
Percent Change in Sales	ΔS	$\frac{(S_t - S_{t-1})}{S_{t-1}}$
Negative Percent Change in Sales	N_ ΔS	When ΔS is negative, so N_ ΔS is equal to: $\frac{(S_t - S_{t-1})}{S_{t-1}}$ When ΔS is positive, so N_ ΔS is equal to 0

Note: S: sales; COGS: cost of goods sold, SGA: selling, general, and administrative expenses; OA: operating assets (total assets less cash and short-term investments); OL: operating liabilities (total assets less total debt, less book value of common and preferred equity, less minority interests); IB: net income before extraordinary items; CFO: cash flows from operations.

Table 1. Measurement of the unexpected change in core earnings

Source: McVay (2006).

In order to verify if managers engage in earnings management by classification shifting, it is analyzed the relationship between unexpected change in core earnings (UE) and income-decreasing special items (IDS), according to Equation 2. If income-decreasing special items (IDS) presents a

positive relationship with unexpected change in core earnings (UE), so the managers engage in earnings management classification shifting, transferring items from core earnings to special items (McVay, 2006).

$$UE_{it} = \beta_0 + \beta_1 IDSI_{it} + \varepsilon_{it} \quad (2)$$

The present study seeks to analyze the effect of corporate governance in the earnings management by classification shifting. To that end, corporate governance (CG) is measured through the differentiated levels of corporate governance of B3, so companies at one of these levels would tend to engage less in earnings management. Equation 3 demonstrates the model that seeks to reject or not the research hypothesis.

$$UE_{it} = \beta_0 + \beta_1 IDSI_{it} + \beta_2 CG_{it} + \beta_3 IDSI_{it} \times CG_{it} + \sum \beta_n Controls_{it} + \varepsilon_{it} \quad (3)$$

Income-decreasing special items (IDSI) are expected to be positively related to the unexpected change in core earnings (UE). This relationship shows that managers engage in earnings management by classification shifting. In turn, it is expected that the interaction between IDSI and corporate governance (CG) presents a negative relation with UE. Thus, companies listed in differentiated levels of corporate governance would present controls that would restrict the earnings management by classification shifting by managers. As control variables, we used size (SIZE), growth (GROW), return on assets (ROA), leverage (LEV), market-to-book (MTB) and IFRS adoption (IFRS). Table 2 presents the description of the variables of Equation 3.

Earnings management by classification shifting and corporate governance in Brazil

Variables		Measurement
Unexpected change in core earnings	UE	Difference between CE and the residual (ε_{it}) in Equation 1
Income-decreasing special items	IDSI	When Special Items (SI) is negative, so IDSI is equal to: $\frac{(SI * (-1))}{S}$ When SI is positive, so IDSI is equal to 0
Corporate Governance	DLCG	It is represented by two dummies variables: (1) NM: it is 1 when firms are listed in New Market segment of B3 and 0, otherwise (2) DLCG: it is 1 when firms are listed in Differentiated Levels of Corporate Governance (Level 1, Level 2 and New Market) and 0, otherwise
Size	SIZE	Natural logarithm of Total Assets
Growth	GROW	Change in Sales
Return on Assets	ROA	Net Income before Extraordinary Items divided by Total Assets
Leverage	LEV	Total Debts divided by Total Assets
Market-to-Book	MTB	Market Value of Equity divided by the Book Value of Equity
IFRS adoption	IFRS	Dummy variable, which is 1 between 2010 and 2016, and 0, otherwise.

Table 2. Dependent, independent and control variables

Source: Prepared by the authors.

For robustness analysis, we observe the effect of corporate governance on other earnings management metrics, so we used manipulation by accruals (Dechow & Dichev, 2002) and manipulation by operational activities (Roychowdhury, 2006). The manipulation by accruals or accruals quality is measured according to Equation 4.

$$\Delta WC_{it} = \beta_0 + \beta_1 CFO_{it-1} + \beta_2 CFO_{it} + \beta_3 CFO_{it+1} + \varepsilon_{it} \quad (4)$$

The accruals quality (AQ) represents the residual (ε_{it}) of Equation 4, in which, the higher the residual value, the lower is the accruals quality.

In turn, the manipulation by operational activities (MOA) is composed of three attributes. The first proxy is the sales manipulation (SM) that is measured by Equation 5.

$$CFO_{it} = \beta_0 + \beta_1 1/A_{it-1} + \beta_2 S_{it} + \beta_3 \Delta S_{it} + \varepsilon_{it} \quad (5)$$

The sales manipulation (SM) represents the residuals (ϵ_{it}) of Equation 5 multiplied by -1, in which, the higher the value of the residuals, the greater is the manipulation by operational activities, considering SM.

The second proxy is the reduction of discretionary expenditure (RDE), which is calculated by Equation 6.

$$DISE_{it} = \beta_0 + \beta_1 1/A_{it-1} + \beta_2 S_{it} + \epsilon_{it} \quad (6)$$

The reduction of discretionary expenses (RDE) represents the residuals (ϵ_{it}) of Equation 6 multiplied by -1, in which, the higher the value of the residuals, the greater is the manipulation by operational activities, considering RDE.

The third proxy is the overproduction (OP), which is determined by Equation 7.

$$PROD_{it} = \beta_0 + \beta_1 1/A_{it-1} + \beta_2 S_{it} + \beta_3 \Delta S_{it} + \beta_4 \Delta S_{it-1} + \epsilon_{it} \quad (7)$$

Overproduction (OP) represents the residuals (ϵ_{it}) of Equation 7, in which, the higher the value of the residuals, the greater is the manipulation by operational activities, considering the OP.

According to Cohen, Dey and Lys (2008), the sum of SM, RDE and OP was calculated, which would represent a more comprehensive variable of manipulation by operational activity (MOA). Table 3 presents the variables used to measure the earnings management models, which considers manipulation by accruals and by operational activities.

Earnings management by classification shifting and corporate governance in brazil

Variáveis		Operacionalização
Change in Working Capital	ΔWC	$\frac{(\Delta RECT + \Delta INVT - \Delta AP - \Delta TXP + \Delta OA)}{A_{t-1}}$
Cash Flows from Operations	CFO	$\frac{(CFO)}{A_{t-1}}$
Change in Sales	ΔS	$\frac{(S_t - S_{t-1})}{A_{t-1}}$
Discretionary Expenses	DISE	$\frac{(XRD + XAD + XSGA)}{AT_{t-1}}$
Production costs	PROD	$\frac{(COGS + \Delta INVT)}{A_{t-1}}$

Note: $\Delta RECT$: change in receivables; ΔINV : change in inventories; ΔAP : change in accounts payable; ΔTXP : change in income taxes payable; ΔAO : change in other assets; A: total assets; S: sales; XRD: research and development expense; XAD: Advertising Expense; XSGA: selling, general and administrative expense; COGS: cost of goods sold. While XSGA has available value, XRD and XAD will be 0 if there is a missing value.

Table 3. Variables of alternative earnings management models

Source: Dechow and Dichev (2002), Roychowdhury (2006).

Thus, Equation 8 presents the relationship between corporate governance (CG) and earnings management (EM).

$$EM_{it} = \beta_0 + \beta_1 CG_{it} + \sum \beta_n Controls_{it} + \varepsilon_{it} \quad (8)$$

Earnings management (EM) consists of AQ, SM, RDE, OP and MOA. Differentiated levels of corporate governance (GC) are expected to be negatively related to earnings management metrics. It is emphasized that all the variables described in Tables 1, 2 and 3 went through the winsorization process. In addition, OLS regressions by industry and year were estimated for Equations 1, 4, 5, 6 and 7, according to McVay (2006), Dechow and Dichev (2002) and Roychowdhury (2006), for Equations 2, 3 and 8 were the Breusch-Pagan Lagrange multiplier tests and the Hausman test to verify that estimation (POLS, random effects or fixed effects) is the best fit, showing the random effects to the most appropriate estimation for the data structure.

Analysis of Results and Discussion

Relationship between corporate governance and classification shifting

This section contains the description and analysis of the data. Initially, the descriptive analysis of the data in the period between 2005 and 2016 of the companies listed in B3 is presented. Information about the unexpected change in core earnings, income-decreasing special items, size, growth, profitability, leverage, and market-to-book are described in Table 4.

Variables	Minimum	Maximum	Mean	Standard Deviation	Coefficient of Variation
UE	-2.2204	1.9465	0.0072	0.1961	-27.2361
IDS	0.0000	0.5102	0.0105	0.0359	3.4190
SIZE	2.4505	13.7103	7.4613	1.8463	0.2475
GROW	-0.9726	5.3390	0.1386	0.4298	3.1010
ROA	-0.7960	0.7185	0.0669	0.0983	1.4694
LEV	0.0000	4.5517	0.3331	0.3481	1.0450
MTB	-126.0603	137.3871	1.8287	8.1969	4.4824

Note: UE: Unexpected Change in Core Earnings; IDS: Income-Decreasing Special Items; SIZE: Firm Size; GROW: Change in Sales; ROA: Return on Assets; LEV: Leverage; MTB: Market-to-Book.

Table 4. Descriptive statistics

Source: Prepared by the authors.

Based on Table 4, the unexpected change in core earnings (UE) and the income-decreasing special items (IDS) presented a mean of -0.72% and 1.05%, respectively. Also, they have coefficients of variation of 26.9% and 3.42%. The results indicate that companies suddenly change the classification of core expenses for special items, and in general, companies would be engaging in earnings management by classification shifting, this result is consistent with McVay (2006).

Additionally, among the control variables, the market-to-book (MTB) shows a higher level of variability, indicating a strong valuation of the companies listed in B3, with a coefficient of variation of 448.2%, followed by profitability (ROA) with a variation of 146.9%.

Table 5 presents the correlation analysis of the variables of earnings management, corporate governance and control variables.

Earnings management by classification shifting and corporate governance in Brazil

	1	2	3	4	5	6	7	8	9	10
UE	1.000									
IDSI	0.010	1.000								
NM	-0.003	0.010	1.000							
DLCG	0.030	0.066***	0.714***	1.000						
SIZE	0.067***	0.126***	0.186***	0.457***	1.000					
GROW	0.113***	-0.050***	0.133***	0.118***	0.089***	1.000				
ROA	0.320***	-0.111***	0.125***	0.152***	0.150***	0.125***	1.000			
LEV	-0.023	0.021	-0.026	-0.046**	-0.023	-0.038*	-0.035	1.000		
MTB	0.018	-0.041*	0.102***	0.085***	0.039*	0.016	0.141***	-0.069***	1.000	
IFRS	-0.020	0.089***	0.051**	0.033	0.144***	-0.042*	-0.115***	-0.013	-0.006	1,000

Note: UE: Unexpected Change in Core Earnings; IDSI: Income-Decreasing Special Items; NM: New Market level; DLCG: Differentiated Levels of Corporate Governance (Level 1, Level 2 and New Market); SIZE: Firm Size; GROW: Change in Sales; ROA: Return on Assets; LEV: Leverage; MTB: Market-to-Book; IFRS: International Financial Reporting Standards . *** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

Table 5. Correlation matrix

Source: Prepared by the authors.

The results indicate that the UE variable has a positive correlation with size, growth and profitability (ROA), at a significant at the 1% level. The IDSI variable, in turn, shows a positive correlation with the differentiated levels of corporate governance, firm size and IFRS adoption, while pointing out a negative correlation with the firm's growth and profitability (ROA).

Firm size, growth and profitability are shown to be correlated with all study variables. On the other hand, leverage is negatively correlated with the differentiated levels of corporate governance and firm growth, indicating an inverse relationship between the variables.

Table 6 presents the relationship between the differentiated levels of corporate governance and the earnings management by classification shifting through regressions with robust errors and random effects.

Earnings management by classification shifting and corporate governance in brazil

Variables	Expected Sign	General	NM		DLCG	
		Modelo (a)	Modelo (b)	Modelo (c)	Modelo (d)	Modelo (e)
IDSI	+	0.2611** (0.1257)	0.2613** (0.1257)	0.5148*** (0.1631)	0.2621*** (0.1258)	0.6876*** (0.2053)
CG	-		-0.0201 (0.0241)	-0.013 (0.0243)	-0.0103 (0.0256)	-0.0036 (0.0258)
IDSI*CG	-			-0.6158** (0.2528)		-0.6760*** (0.2581)
SIZE	?	0.0019 (0.0057)	0.0029 (0.0058)	0.0025 (0.0058)	0.0030 (0.0063)	0.0030 (0.0063)
GROW	?	0.0352*** (0.0101)	0.0356*** (0.0101)	0.0349*** (0.0101)	0.0353*** (0.0101)	0.0343*** (0.0101)
ROA	?	0.8117*** (0.0569)	0.8139*** (0.0570)	0.8154*** (0.0570)	0.8129*** (0.0570)	0.8124*** (0.0570)
LEV	?	0.0071 (0.0185)	0.0068 (0.0185)	0.0069 (0.0185)	0.0068 (0.0185)	0.0055 (0.0185)
MTB	?	-0.0003 (0.0005)	-0.0003 (0.0006)	-0.0003 (0.0005)	-0.0003 (0.0006)	-0.0003 (0.0005)
IFRS	?	0.0147 (0.0096)	0.0144 (0.0096)	0.0146 (0.0096)	0.0141 (0.0097)	0.0141 (0.0097)
Intercept		-0.1013** (0.0423)	-0.1002** (0.0424)	-0.1008** (0.0424)	-0.1033** (0.0426)	-0.1065** (0.0427)
N (Obs.)		1868	1868	1868	1868	1868
χ^2		243.2746***	243.9124***	250.4497***	243.3086***	250.9015***
R ² overall		0.1100	0.1127	0.1138	0.1109	0.1125
R ² within		0.1113	0.1113	0.1147	0.1114	0.1151
R ² between		0.1683	0.1685	0.1672	0.1669	0.1662

Model (a): $UE_{it} = \beta_0 + \beta_1 IDSI_{it} + \Sigma \beta_n Controls_{it} + \varepsilon_{it}$

Models (b) and (d): $UE_{it} = \beta_0 + \beta_1 IDSI_{it} + \beta_2 CG_{it} + \Sigma \beta_n Controls_{it} + \varepsilon_{it}$

Models (c) and (e): $UE_{it} = \beta_0 + \beta_1 IDSI_{it} + \beta_2 CG_{it} + \beta_3 IDSI_{it} * CG_{it} + \Sigma \beta_n Controls_{it} + \varepsilon_{it}$

Note: UE: Unexpected Change in Core Earnings; IDSI: Income-Decreasing Special Items; NM: New Market level; DLCG: Differentiated Levels of Corporate Governance (Level 1, Level 2 and New Market); SIZE: Firm Size; GROW: Change in Sales; ROA: Return on Assets; LEV: Leverage; MTB: Market-to-Book; IFRS: International Financial Reporting Standards. Values in parentheses indicate the robust error term. *** significant at the 1% level; ** significant at the 5% level; * significant at the 10% level.

Table 6. Regression of Earnings Management by Classification Shifting

Source: Prepared by the authors.

All models proposed were significant at a significance level of 1%, with a mean explanatory power of 11.23%. Although R² has shown little representativeness, previous studies have shown close

explanatory levels (Chen *et al.*, 2007; González & García-Meca, 2014; Iqbal & Strong, 2010; Martinez, 2011).

As expected, the coefficients of the income-decreasing special items (IDSI) were significant and positive in all proposed models. This indicates that companies listed in Brazil manage their earnings by classification shifting, not implying a change in the net income. These results show that managers inflate the core earnings by moving opportunistically from core expenditures to sporadic expenditures such as special items (McVay, 2006), discontinued operations (Barua *et al.*, 2010) and tax expenditures (Robinson, 2010).

The IDSI coefficients in models (c) and (e) become more representative, when the interactive variable between corporate governance and special items is considered, thus, corporate governance through differentiated levels of B3 is relevant.

In order to evaluate the effect of governance on earnings management by classification shifting, it is necessary to observe the interactive variable, since in this type of earnings management the relationship between the unexpected change in core earnings and the special items is analyzed. Thus, the findings show that earnings management is negatively influenced by firms listed in the differentiated levels of corporate governance. This result does not reject the hypothesis of the research (H_1).

The negative relationship between corporate governance and earnings management was also found in British firms (Iqbal & Strong, 2010, Zalata & Roberts, 2015), Indonesian firms (Siregar and Utama, 2008), Chilean firms (Iturriaga & Hoffman, 2005), East Asia firms (Haw *et al.*, 2011) and Latin America firms (Gonzalez & García-Meca, 2014). In Brazil, evidence is aligned with previous studies (Barros *et al.*, 2013; Cunha & Piccoli, 2017). However, in Brazil, there is no evidence of the relationship between corporate governance and earnings management by classification shifting. Thus, based on the findings, the hypothesis H_1 .

Hence, firms listed in differentiated levels of corporate governance tend to manage less earnings by classification shifting, where the core expenses are moved to special items, not implying a change in net income (McVay, 2006). As a consequence, the accounting information quality presented by listed firms in differentiated levels of corporate governance in the financial statements would be greater,

Earnings management by classification shifting and corporate governance in brazil

indicating that investors and stakeholders, in general, can make more precise decisions, showing reliability of the accounting numbers.

Additionally, profitability (ROA) and growth (GROW) directly affect the earnings management by classification shifting (McVay, 2006). Zalata and Roberts (2015, 2017) found that profitability, measured by ROA, influences, in fact, the earnings management by classification shifting. This result may suggest that firms with strong performance, although they may be less interested in managing earnings based on accruals, they could be more likely to be involved in manipulation by classification shifting.

Mazzioni *et al.* (2015) has found evidence that business performance is able to positively influence the earnings management by accruals. Thus, both type of earnings management - accruals and classification shifting - have a positive influence on business performance.

Robustness analysis

For robustness analysis, regression analysis was performed estimating the effect of differentiated levels of corporate governance (NM and DLCG) on earnings management by accruals (Dechow & Dichev, 2002) and by manipulation of operational activities (Roychowdhury, 2006). The results are in Table 7.

Variables	Expected Sign	SM		RDE		OP		MOA		AQ	
		NM	DLCG	NM	DLCG	NM	DLCG	NM	DLCG	NM	DLCG
CG	?	0.003	-0.011	-0.031†	-0.031†	-0.050*	-0.056*	-0.072†	-0.101*	0.047*	0.045*
		0.012	0.013	0.015	0.015	0.018	0.018	0.036	0.037	0.010	0.011
SIZE	?	0.002	0.004	0.018*	0.018*	0.014*	0.016*	0.037*	0.041*	-0.003	-0.007†
		0.003	0.003	0.002	0.003	0.004	0.004	0.007	0.008	0.003	0.003
GROW	?	0.016*	0.011†	0.000	0.000	0.034*	0.035*	0.051*	0.050*	0.134*	0.137*
		0.006	0.005	0.002	0.003	0.005	0.005	0.011	0.010	0.012	0.012
ROA	?	-0.319*	-0.323*	0.197*	0.183*	-0.472*	-0.470*	-0.564*	-0.564*	0.080	0.091‡
		0.030	0.029	0.016	0.016	0.028	0.028	0.057	0.057	0.049	0.048
LEV	?	0.019	0.027‡	0.012	-0.003	0.008	0.012	0.051‡	0.049‡	-0.020	-0.014
		0.013	0.016	0.009	0.007	0.013	0.016	0.028	0.026	0.019	0.018
MTB	?	-0.003*	0.000	0.000	0.000†	0.000	0.000	-0.001†	0.000	0.000	0.000
		0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000

Earnings management by classification shifting and corporate governance in brazil

IFRS	?	0.004	0.001	-0.001	0.002	0.013*	0.012†	0.017	0.012	-0.047*	-0.044*
		0.005	0.005	0.003	0.003	0.005	0.005	0.010	0.010	0.010	0.010
Intercept		-0.006	-0.013	-0.136*	-0.133*	-0.070*	-0.074*	-0.240*	-0.246*	-0.054*	-0.040‡
		0.021	0.021	0.019	0.019	0.027	0.027	0.055	0.054	0.021	0.021
N (Obs.)		1924	1958	2003	2090	1978	1976	1938	1960	1843	1867
χ^2		166.03*	151.26*	221.73*	206.95*	388.45*	391.87*	182.88*	174.77*	205.71*	205.18*
R ² overall		0.173	0.163	0.049	0.055	0.196	0.202	0.118	0.115	0.101	0.099
R ² within		0.061	0.050	0.105	0.094	0.160	0.162	0.084	0.078	0.085	0.085
R ² between		0.153	0.213	0.076	0.071	0.201	0.203	0.098	0.101	0.199	0.168

Models: $EM_{it} = \beta_0 + \beta_1 CG_{it} + \sum \beta_n Controls_{it} + \varepsilon_{it}$

Note: SM: Sales Manipulation; RDE: Reduction of Discretionary Expenditure; OP: Overproduction; MOA: Manipulation by Operational Activities; AQ: Accruals quality; NM: New Market level; DLCG: Differentiated Levels of Corporate Governance (Level 1, Level 2 and New Market); SIZE: Firm Size; GROW: Change in Sales; ROA: Return on Assets; LEV: Leverage; MTB: Market-to-Book; IFRS: International Financial Reporting Standards. Values in parentheses indicate the robust error term. * significant at the 1% level; † significant at the 5% level; ‡ significant at the 10% level.

Table 7. Regression of other types of earnings management

Source: Prepared by the authors.

Similar to the findings shown in Table 6, all models were significant at 1% level, with mean R² of 12.7% for both groups (NM and DLCG), with a minimum of 4.9% and a maximum of 20.2%.

Firms listed in differentiated levels of corporate governance (DLCG) may, in fact, influence the earnings management in different ways. The manipulation by operational activities - reduction of discretionary expenditure, overproduction and the comprehensive measure of manipulation by operational activities - is negatively influenced by corporate governance. This result is in line with the evidence pointed out in Table 6. On the other hand, corporate governance positively affects the earnings management by accruals.

As demonstrated by Martinez (2011), Erfurth and Bezerra (2013) and Mazzioni *et al.* (2015), the relationship between corporate governance and earnings management presents inconsistencies in a Latin American context. It was expected that the earnings management by accruals and operational activities would be the same as those observed in earnings management classification shifting. The possible justification lies in the metrics and in the definition of earnings management, however classification

shifting, manipulation of operational activities and manipulation by accruals refer to earnings management, each one has a different focus.

Conclusion

This study aims to verify the influence of corporate governance in the earnings management by classification shifting in the firms listed in B3. The sample comprises 236 firms during the period between 2005 and 2016. To measure the earnings management, the McVay (2006) model was used, while the differentiated levels of governance of B3 were used as metric of corporate governance. The findings indicated that earnings management is influenced by corporate governance.

Initially, the results shown that Brazilian companies manage their earnings by classification shifting, indicating that the core earnings are being transferred to the special items (McVay, 2006), but can also be used as discontinued operations and tax expenditure (Barua *et al.*, 2010; Robinson, 2010), overshadowing the real operating income.

Earnings management, measured by classification shifting (McVay, 2006), indicated negative relationship with corporate governance. Thus, the hypothesis H₁ - corporate governance negatively influences the earnings management – is not rejected. As reported by agency theory (Jensen & Meckling, 1976), corporate governance is able to minimize agency conflicts arising from the existence of informational asymmetry as well as earnings management.

Corporate governance literature shows that strong corporate governance improves the monitoring of managerial discretion over accounting choices. However, most of these studies have investigated the role of governance in a highly regulated environment through accounting standards such as the treatment of accruals. In addition, few studies have been conducted in markets based on IFRS.

In the robustness analysis, the earnings management by operational activities (Roychowdhury, 2006) also showed similar result. These findings are convergent with national and international evidence (Barros *et al.*, 2013; Cunha & Piccoli, 2017; González & García-Meca, 2014; Haw *et al.*, 2011; Iturriaga & Hoffman, 2005; Iqbal & Strong, 2010; Siregar & Utama, 2008; Zalata & Roberts, 2015).

The main contribution of this paper is that, in Brazilian context, there is no previous studies that analyzed earnings management by classification shifting, and it was found similar results to international evidence. In Brazil, some studies have analyzed the relationship between earnings management and corporate governance under the use of other type of earnings management (Barros *et al.*, 2013; Cunha & Piccoli, 2017 & Martinez, 2011). The result of this paper reinforces that the practice of earnings management can be reduced when firms have the best practices of corporate governance.

Therefore, these findings are relevant for B3 and investors, because it demonstrates that efforts made by B3, to ensure that firms adopt best practices of corporate governance and respond to the interests of majority and minority shareholders, is able to alter the opportunistic behavior of managers, thus increasing, the quality of accounting information. It should be emphasized that this effect can be due to the specific objectives of corporate governance, based on the principles that govern it (IBGC, 2014), motivations related to the capital market and motivations arising from the agreements between firms and stakeholders (Healy & Whalen, 1998).

As a limitation, it is pointed out the metrics of corporate governance. Regarding the corporate governance metrics, only the differentiated levels of corporate governance of B3 were used, and corporate governance does not have a broadly defined concept and metric.

As demonstrated by the robustness analysis, there is a difference between the metrics of earnings management with corporate governance, thus, for future research, it is suggested an analysis that identifies, for example, the existence of differences in the effect of corporate governance on earnings management – by accruals, operational activities and classification shifting –, trying to identify and explain the existence of different relationships. Use other more robust corporate governance measures to verify whether the relationship is consistent with the literature, seeking to confirm whether or not market measures are reliable for investors to use. In addition, it is suggested to increase the sample of research and observe factors such as national culture and legal system that, along with corporate governance, can affect the earnings management.

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