SIMON SAYS: DO FIRMS SET THE INDUSTRY STANDARD EARNINGS OR ARE THE FIRM'S STANDARD EARNINGS SET BY THE INDUSTRY?

Pedro Borges Junior
Mestrando da Universidade Federal do Espírito Santo. Endereço: Av. Fernando Ferrari, 314, Centro de Ciências Jurídicas e Conômicas – Campus Goiabeiras
Telefone: 27 98847-1146 CEP: 29075-910 – Vitória/ES - Brasil –
pedro.borges.junior@outlook.com

Alfredo Sarlo Neto
Professor da Universidade Federal do Espírito Santo. Endereço: Av. Fernando Ferrari, 314, Centro de Ciências Jurídicas e Conômicas – Campus Goiabeiras
Telefone: 27 99973-1446 CEP: 29075-910 – Vitória/ES - Brasil - supersarloneto@gmail.com

Paulo Victor Gomes Novaes
Professor da Universidade Federal do Espírito Santo. Endereço: Av. Fernando Ferrari, 314, Centro de Ciências Jurídicas e Conômicas – Campus Goiabeiras
Telefone: 27 99708-7790 CEP: 29075-910 – Vitória/ES - Brasil – pvgnovaes@hotmail.com

Donizete Reina
Mestre em Contabilidade pela Universidade Federal de Santa Catarina - UFSC
e Professor da Universidade Federal do Espírito Santo – UFES. Rua Amélia Tartuce Nasser, 60, Jd. Da Penha, Telefone: 27 98101-3007 CEP: 20.060110. donizete.reina@ufes.br

ABSTRACT

Managers have to deal with numerous contracts to maintain growth and the competitiveness of companies. To do so, there is a chance they recur to manipulation of accounting numbers to keep covenants, reporting results that meet the expectations of investors and analysts or to maintain the company's position within the industry in which it competes. Thus, the objective of this research is to find whether or not companies engages in earnings management to match their earnings with either the industry's leader's earnings or the industry's earnings mean. To investigate the question, we used the modified Jones model and the Herfindahl of the industries on BM&FBOVESPA. The research is quantitative-descriptive, with a sample of 450 companies-year between the years 2010 and 2013. By means of multiple linear regressions, the results showed that, in general, the higher the earnings management, the closer the company's earnings are of those of the leaders of concentrated sectors. For companies that are highly concentrated or unconcentrated industries, accounting earnings tend to move away from the industry average. Earnings management can jeopardize the decisions of various stakeholders. Also, for each percent that *logat* increases, the distance between the firm's earnings and its target's decreases 0.816%. For some reason, the interaction of the dummy variable and the mean discretionary accruals is significant at 5%; besides many other results. Further, this paper investigates a question economicaly inherent to business: a competition. The conclusion is that, in general, the greater the discretionary accruals, i.e. the greater the earnings management, the closer the firm's earnings will be from the earnings of the leading firm, for moderately concentrated industries.

Keywords: Earning Management. Competition. *Accruals* Discretionaries.

Área temática: Mercado Financeiro, de Crédito e de Capitais (MFC).

1 INTRODUCTION

Managers have many contracts to deal with to keep up growth and competitiveness. Although they face many market forces that compel them to engage in activities that can be considered non ethical, like earnings management, they have economic reasons to do so, like keeping up with the competitors, for instance.

Earnings management concerns many stakeholders, since it might be a sign of hidden situations that are not of the best interests of the shareholders, for example (Brown, Hillegeist and Lo, 2009; Richardson, Sloan, Soliman and Tuna, 2005; Wang and Campbell, 2012). Also, managers may turn the firm into a takeover target, expropriate the investors' investments or, in a worst manner, lead the company to bankruptcy.

But why do managers engage in earnings management? One possible reason is that they have to show they can keep up with the industry, or else they show their inability to stand on the game (Grullon and Michaely, 2007). Other reasons include, but is not limited to, dividend policy (Daniel, Denis, & Naveen, 2008), the governance structure (Matsumoto, 2002) the degree of legal protection of investors (Lang, Smith Raedy and Wilson, 2006), and to meet the analysts' forecasts (Keung, Lin and Shih, 2010). These are questions that the manager has to face in order to show its usefulness.

Competition also plays an important role as incentive for earnings management. Companies that have low production growth in competitive markets are more likely to manage their earnings (Januszewski, Köke and Winter, 1999). Firms also manage earnings to match the earnings of the industry they are in order to stay on competition (Datta, Iskandar-Datta and Singh, 2013) or to maintain the control of the market and block new contestants (Hou and Robinson, 2006).

So if competition is an important incentive for firms to engage in earnings management, it is possible that they manage their earnings to reach a goal, either established by analysts or, more specific, by the industry they are in, or to match the earnings set by a leading firm. Besides this possibility, there is the concentration of industry problem. If there are companies that needs to protect their empire from new entrants, they might manage their earnings altogether. So concentration of market can also be a market side incentive.

Researches about earnings management aim to answer four questions: if companies engage in earnings management, how they do so, why they do so and the consequences of doing so. The paper aims to answer the following question: do firms engage in such activities in order to reach a leading target, or if the industry sets, somehow, the standard earnings? (i.e. if, how and why).

The objective of this study is to find whether or not companies engages in earnings management to match their earnings with either the industry's leader's earnings or the industry's earnings mean. In order to achieve that purpose, it has been calculated the distance between the managed earnings of the leading firms and their competitors in the same industry or, if the industry is unconcentrated, between the firms' managed earnings and the industry's earnings mean.

In general, the greater the discretionary accruals, i.e. the greater the earnings management, the closer the firm's earnings will be from the earnings of the leading firm, for moderately concentrated industries. In the case of companies in unconcentrated and highly concentrated firms, the further the firm's earnings will be from the industry's earnings mean.

As earnings management can be harmful for investors' capital decisions for it is a misleading practice, and there are many interest groups that might get their objectives jeopardized by firms' distress earnings, this paper tries to comprehend if some other company's earnings or the industry's earnings, in the very presence of competition, can be a reason for such practice and for what purpose should they recur to it. It contributes to link financial decision based on accounting data with financial researches about how the companies behave.

The paper is set as follows: this very section, 1, that introduces the paper. Section 2, theoretical, gives an overview of the current research on earnings management and competition and how they are correlated. Section 3 presents and discusses the sample and methodology. The 4th section deals with the findings and the relation with theory. Section 5 concludes and makes the final considerations, as well suggestions for future research.

2 THEORETICAL
2.1 Earnings management
Firms engage in earnings management for many reasons: to avoid reporting bad-news, to keep up with other companies in an industry, to enhance manager's compensation and many others. Although it might mislead investor's decisions, this action has many incentives to come to place, even if it risks the financial supply that public companies seek on capital markets. The question is whether companies manage their earnings altogether or if they follow a leader firm—or a group of leading firms—on an industry so the rest of the firms have a target to achieve by managing their earnings.

The relevance of a transaction is an imperfect correlation between the economical substance of it and its characteristics, despite of whether the manager influences it or not. When the firm tries to enhance the imperfection of such correlation by reducing or just not improving its economical substance, the firm is actually managing its earnings (Gao, 2013).

Earnings are probably the most important product of accounting for the users of financial reports, which use such information for their decisions and evaluation of the firms' performance. The earnings management leads to inefficiencies of—if not unjustified—distribution of resources inside firms or withdrawn from them. It also compromises earnings quality (Gao, 2013).

The level of disclosure and thus the quality of the information provided by a firm is decided, by managers, supported by auditors, boards and the auditing committees, although this last three are not always aware of the manager's intentions. Since the objective of financial reporting is to convey the managers' private information in order to reduce information asymmetry and other agency problems, it should be expected that they would use their knowledge to report in the best interests of the stakeholders. Still, using such knowledge may create opportunities for earnings management, in order to misinform or mislead the decisions of stakeholders (Healy and Wahlen, 1998).

Such practice is harmful for investment decisions in a way that it compromises the earnings quality and the informativeness of accounting information, practitioners and regulators are suspicious about earnings management and tend to believe that it is widely practiced and thus, troublesome. Whenever the earnings management is detected they expect immediate correction, either by market or by law enforcement. Academics, on the other hand, are more optimistic: they expect that such practices are incidental, isolated to a single firm or small group; or, at least, that earnings management is an investor concern (Dechow and Skinner, 2000).

2.2 Incentives for earnings management
But what are the incentives for such practices? Besides corporate governance issues so the investor can guarantee the return for their investment, many scientific papers try to investigate what motivates firms to engage in earnings management. The market is a source of incentives. Gong, Louis and Sun (2008) find evidence that the market cannot totally anticipate the effects of post-merger announcements, whereas there is a positive association between stock-for-stock acquirer pre-merger managed earnings and post-merger announcement lawsuits.

Country characteristics contribute to provoke the will to manage earnings. Companies outside the United States are more likely to smooth their earnings and to manage towards a

target, to have low correlation with the share price and less timely recognition of losses. The degree of investors' protection also contributes for the incentives for managing earnings, for in countries with weaker protection are more likely to have companies that manage earnings (Lang et al., 2006).

The question of why companies engage in managing their earnings is intriguing, in a way that someone who is up to research such issue is to act like an investigator, a detective, to find the responsible, the motives, the targets and the earning component managed (for it all affects the earnings quality). One should investigate it as if it is actually a crime (Lo, 2008). An incentive for earnings management by managers is the companies' dividend policy, where the expected dividend levels acts as an important threshold for earnings (Daniel et al., 2008).

The corporate governance structure of a firm is also an incentive. Matsumoto (2002) studied what are the incentives for the managers to avoid reporting the bad-news, and he finds that firms with great rotation on its institutional ownership, greater reliance on claims with their stakeholders and higher value-relevance of earnings are more likely to avoid bad earnings surprises.

Another reason why firms may manage their earnings is the goal established by analysts. They play an important role on the capital market's scenario by advising which companies are the best to sink capital. Thus, they react negatively to earnings surprises and investors are able to detect earnings surprises as manipulation of the numbers (Keung et al., 2010). In the line of researches about analysts and the earnings components most managed, Athanasakou, Strong e Walker (2008) find that UK firms engage on reclassification instead of accruals management to shirk negative surprises. UK firms may either prefer to guide the forecasts, instead of trying to meet them.

One of the questions concerning earnings management is which items of earnings report is manipulated. On a research of which components or accruals are more likely to be managed, Plummer & Mest (2001) found that sales, operating and non-operating expenses are the most managed. So companies rated buy manage their earnings upward, contrasting with rated sell companies, which manage their earnings downward.

Reinforcing the findings of Plummer and Mest (2001), Roychowdhury (2006) finds that managers manipulate real activities to avoid reporting annual losses. More specifically, he finds that price discounts are used to increase sales, overproduction to report lower cost of goods sold and margins are improved by writing down discretionary expenditures. Some of his other findings include industry membership as an incentive for real activities manipulation.

To top it off, the practice of manipulating the financial report items, which can be called misreporting, in order to smooth the earnings to meet or beat a target, leads to performance shocks and makes the value of the company oscillate towards a low pricing of its stocks (Gerakos and Kovrijnykh, 2013).

2.3 Earnings management consequences

What are the consequences of earnings management for the firms, market, debt-holders and so on? The agency conflicts generated by earnings management concerns a whole bunch of stakeholders (Brown et al., 2009; Richardson et al., 2005; Wang and Campbell, 2012), like investors (Leuz, Nanda and Wysocki, 2003), market makers (Chakrabarty and Moulton, 2012), the management board (Marra, Mazzola and Prencipe, 2011; Park and Shin, 2004; Xie, Davidson III and DaDalt, 2003), audit committees (Klein, 2002; Xie et al., 2003), financial analysts (Chen, Matsumoto and Rajgopal, 2011; Lennox and Park, 2006), bondholders (Daniel et al., 2008), shareholders (Ertimur, Sletten and Sunder, 2014; Gong et al., 2008), foreign direct financiers (Lang et al., 2006), regulators (Jayaraman, 2012), auditors (Nelson, Elliott and Tarpley, 2002), and investors in general (Shen and Chih, 2005).

On a research analyzing histograms of earnings, Jacob and Jorgensen (2007) find out that one of the consequences of continuous earnings management is the decrease of earnings distribution until it reaches zero, i.e. discontinuity on distribution. Frankel and Litov (2009) find that the volatility of earnings does not predict stock returns. Also, Bartov, Givoly and Hayn (2002) show that companies don't wait for the end of the year to meet or beat the forecasts, they do it throughout the year. The abnormal returns are positively correlated with positive surprises when compared with the analysts' earnings forecast error. Firms also manage their earnings to meet the markets expectations. Market competition, as well, takes an important role as an incentive for managers to payout excessive cash, as do firms in more competitive markets. Besides competitiveness, large amounts of free cash and low investment opportunities also push firms into payouts (Grullon and Michaely, 2007). Capital markets do constrain the firms based on industry level and market competition (Riordan, 2003). Such pressures are also incentives for companies to engage in earnings management.

2.4 Competition

Product market competition also affects earnings quality, where companies within more competitive markets are more willing to disclosure better information about their activities, as those companies on more concentrated markets tend to entrench and hide themselves from competitors and politicians, in order to avoid being summoned to explain their actions to the market or to government and regulators (Cheng, Man and Yi, 2013).

Increased competitiveness leads to better conservatism practices by limiting managers' options to avoid disclosing bad-news, giving more room for more efficient contracts and better managers' decisions concerning conservatism motivated by the risk of costly liquidation of the very firm (Dhaliwal, Huang, Khurana and Pereira, 2008). Competition affects the firms' performance and leverage decisions. On an investigation on the relationship between capital structure and firm performance, Fosu (2013) finds that the competitiveness has an important role on leverage, in a way that more competitiveness increases the firms' performance.

Competition is positively correlated with production growth and good corporate governance mechanisms (Januszewski et al., 1999). So in firms inserted in low competition industries shall face low production growth and thus, more encouraged to manage firms' results. Managers may also benefit from competitiveness as it enhances their compensation. By using differences in differences, Vicente Cuñat, (2005) assessed an enhancement on performance payment schemes for executives as the competitiveness of an industry rises. Also, firms in a more competitive market earn higher returns and are riskier because they are more innovative. On the other hand, firms in less competitive (thus, concentrated) industries are isolated so they avoid risk and barrier the entrance of new firms to that market (Hou and Robinson, 2006).

As market forces collide to push companies to fight for more valuation, such struggle is correlated with lower firm values and to management incentive schemes to a certain level of competitiveness. So until firms reach a value threshold, competitiveness and management performance payment schemes rises. After such limit, the incentives shall fall, just as in a convex curve (Beiner, Schmid and Wanzenried, 2011).

2.5 Relation between earnings management and competition

The question that arises from our previous discussion about earnings management and competition is whether these two characteristics are intertwined and how. To be more precise, what is tried to be accessed is whether competition guides firms toward an earnings target, so no firm get left behind, or if there is a company or group of companies that lead the industry towards a target. Datta et al., (2013) shows that firms' market price power is inversely correlated with earnings management. They also find that firms in a high competitive market are more likely to engage in earnings management.

Another perspective of how product market competition and earnings management are related is the research made by Markarian and Santalo (2014). They find evidence that if managers are unable to access the real outputs of the firm they should be consistent with the industry's mean earnings so they can avoid the bad-news reporting side effects and increase firms value toward a market target.

Industries that crave for innovation also face motivation for earnings management. To be more specific, the lack of innovation—whereas it's important for some industries, such as pharmaceuticals—motivates earnings management in a way that a firm is encouraged to keep its earnings in a constant level (smooth earnings). The firm does so in order to avoid the effects of competition and report a situation compatible with the other firms in the same industry. It's a way of showing that the firm is not "left behind" by the lack of innovation (Roberts, 1999).

After the discussion above, the following research question is proposed: is companies' earnings management led by industry (so it's a commonly constructed behavior) or there are industry leaders that set earnings standards that are to be followed by the other industry's firms?

3 Methodology and sample

Since the objective is to find whether companies manage their earnings altogether—so there is an industry mean earning that guides firms on earnings management—or if they try to match the earnings reported by the leading firm of the industry, or the leading group, first it is necessary to find out which firms engage in earnings management. The modified Jones model (Dechow, Sloan, & Sweeney, 1995) is used to measure the amount of discretionary accruals of every firm on the sample.

Second, the Herfindahl index (Hou & Robinson, 2006) was used to assess the market share concentration. So in not concentrated industries, it is expected that they manage their earnings towards the mean of the industry. If the industry is concentrated, them it is expected that companies manage their earnings close do the leading firm of the industry. The distance between firms' earnings and the mean or the leading firm's earnings, has been used when applicable.

This is a quantitative-descriptive research that tries to capture the predicted behavior of companies by means of two estimated linear regression models. The first model tries to capture whether or not companies manage they earnings to the mean of the earnings of the very industry they are in or if they manage their earnings towards the earnings of the leading firm in the industry. The second model is estimated as a robust test for a possible bias detected during the construction of the data. This paper is characterized as a descriptive research (Cervo, Bervian and Silva 2006); which examines; notes; records and correlates facts or phenomena without manipulation, which seeks to discover, with greatest possible accuracy, the occurrence of each phenomenon, their relationship and characteristics. Köche (2003, p. 124) says that the descriptive research "[...] studies the relationships between two or more variables of a given phenomenon without manipulating them." Regarding the problem of perspective, the research is quantitative, because this type of approach, complex statistical techniques are used in both the collection and in the processing and analysis of data (Richardson, 2008).

3.1 Sample and variables

The sample consists of the companies listed on BM&FBOVESPA ranging from years 2010 and 2013, due to available data of all variables for a substantive sample (the years prior to 2010 show very few information). The data was collected from the Economática® database. The software used to set the data for the regression models was the Microsoft Excel and the regressions were run on Stata® 12. The sample comprehends 450 firm-year observations. There's another sample limitation: although some companies may not compete with other firms on the same industry due to geographical position (Water Utility firms are bound to the region

they provide their services, therefore they do not compete nation widely), they were not excluded from the sample because they negotiate stocks in the same market, so they compete, at least, for investors nation widely.

3.2 The modified Jones Model

For the first step, it's been unfold if and which firms of a given industry engage on earnings management. So the modified Jones model is used, which is not only the most used model in earnings management research, but also the one that has the greatest power in detecting it (Dechow, Sloan, & Sweeney, 1995).

To use the model, it is necessary to go through two phases: first, the total accruals of the firms in the sample must be calculated. The total accruals formula is below:

$$ACT_{i,} = (\Delta CA_{i,} - \Delta Cash_{i,t} - \Delta CL_{i,t} - \Delta STD_{i,t} - DEP_{i,t})/AT_{t-1} \tag{1}$$

Where *ACT* is total accruals; *CA* corresponds to current assets; *Cash* is cash and its equivalents. *CL* is the current liabilities, *STD* is the short term bonds; *DEP* is depreciation and *AT* is total assets. The firm is represented by *i* and the year is represented by *t*.

After building the dependent variable, the proper modified Jones model is used, which is:

$$ACT_{i,t} = \alpha_1 (1/AT_{t-1}) + \alpha_2 (\Delta REC - \Delta CREC)/ AT_{t-1} + \alpha_3 (PPE/AT_{t-1}) + \varepsilon_{i,t} \tag{2}$$

Where the new variables are *REC*, which corresponds to firm's *i* sales on year *t*; *CREC* are the accounts receivables of firm *i* in time *t*; and *PPE* are the Properties, Plants and Equipment of firm *i* in time *t*. The aim is the error of this regression, which represents the discretionary accruals, the part of the accruals that are managed by firms besides the natural accounting accrual practice.

3.3 The leading firms of each industry

In order to define what the leading companies of an industry are, the firms' market share is used. The highest market share on concentrated industries belongs to the leading firm. It is possible that there might be more than one leader, so if there are two or more leaders, then the level of concentration of the industry (given by the level of concentration on Herfindahl index), as for the leaders are the owners of the industry (i.e. the industry is concentrated on their hands) it must be checked for. Besides, as showed above, there are very competitive markets that demands innovation, which means there are no leaders on that industry and so, the firms manage their earnings altogether to try to show who is the boss or at least keep up with the pairs.

3.4 Herfindahl index

To make our results more robust, the Herfindahl index was calculated for each sample industry to find whether or not our results are aligned with the level of concentration of industries. In other words, it attempts to access the influence of industry competitiveness on the results of the step set above. It is expected alignment within the steps. The industries subsector on Frame 1 is the BM&FBOVESPA's classification. The period ranges from 2010 to 2013. The classification of each industry was equal for all years, except for Retail, which was classified as moderately concentrated in 2010, but as highly concentrated thereafter.

Frame 1 - The Herfindahl index calculation resulted in the following table, given the sample

Industries subsector	Concentration Level
Water utilities	Highly Concentrated
Food processors	Highly Concentrated
Retail*	Highly Concentrated
Retail and distribution	Highly Concentrated
Construction and engineering	Unconcentrated
Diversified	Highly Concentrated
Electric utilities	Unconcentrated
Real state	Moderately Concentrated
Holdings – diversified	Highly Concentrated
Hotels and Restaurants	Highly Concentrated
Wood and paper	Moderately Concentrated
Machines and equipments	Highly Concentrated
Diversified materials	Highly Concentrated
Transportation equipment and components	Moderately Concentrated
Media	Highly Concentrated
Chemicals	Highly Concentrated
Health	Highly Concentrated
Services	Highly Concentrated
Steel and metallurgy	Highly Concentrated
Textiles, apparel and footwear	Unconcentrated
Fixed line communications	Highly Concentrated
Transportation	Unconcentrated

* Retail was classified as Moderately Concentrated in 2010. From there on it has been classified as Highly Concentrated.

This table should be interpreted with care for some industries, like Electric Utilities, have companies that do not compete nation-widely or off-shore on their services and sales, for their field of acting is restricted to those states and countries where the companies supply their services and products, as punctuated in section 3.1. This is probably an explanation (Fosu, 2013) for why they are unconcentrated industries (exception taken into consideration: Water Utilities, for Sabesp, the water utilities company of the state of Sao Paulo, has a mean market share of 63.39% and a mean sales of BRL 10,666,214 for the period ranging from 2010 and 2013).

Highly concentrated industries have two issues: either there are too few companies competing—with a minimum of two (i.e. Cremer and Dasa, Health industry, where Dasa has a market share mean of 80.83%)—or there is a single company that holds the whole market. Such cases are of companies that sell offshore, like Weg (Machines and Equipment, with a mean market share of 54.88%).

Besides these companies may compete at different levels and markets, they are listed on BM&FBOVESPA stock market, and for that reason they compete at the same level to attract investors. That's why such industries were not controlled or received any special treatment for the models.

3.5 Research models and new variables

After collecting the discretionary accruals and the level of concentration of each industry, two more variables were created to capture the distance between firms' earnings, scaled by assets, and whether the mean earnings or the leading firms' earnings on each industry[1]. Both

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[1] Earnings are scaled by total assets because the results of the discretionary accruals were very close to zero. Thus, in order to avoid magnitude problems on the research models' results, earnings have been scaled.

models were tested as pooled, since the year changes are not to be concerned with.

The first model to be tested is the following:

$$Distll = \beta_0 + \beta_1 DA + \beta_2 LogAT + \beta_3 DbaseH + \beta_4 DBxDistDA \qquad (3)$$

Where *Distll* was calculated with Euclidean square distance and has two forms: if the industry is unconcentrated, the mean of the industry earnings is the default, so the firms' earnings distance is measured from that mean. Else, the firm with the highest market share is considered the default, so the distance of the other firms in the industry is centered on the leading firm's earnings.

DA is the discretionary accruals, as measured by the modified Jones model. *LogAT* is the logarithm of total assets. It has been used as control variable for size. *DbaseH* is a dummy variable which receives one when the industry is unconcentrated and zero otherwise. *DBxDistDA* is the interaction between the dummy and the distance between the firm's earnings scaled by total assets and the discretionary accruals as described above.

During the building of the dataset for the paper, it has been realized that some industries classified as highly concentrated has the market shared almost equally distributed among the firms. In some cases, there were only two or three firms, thus the Herfindhal index resulted in high indexes. In these situations, the default earnings was changed from the supposing leading firm to the mean of the industry. Thus, as a robust check test, the following model is estimated:

$$DistMll = \beta_0 + \beta_1 DA + \beta_2 LogAT + \beta_3 DMeanll + \beta_4 DBxMeanll \qquad (4)$$

Where *DistMll* has been calculated the same way as *Distll* from the model 3, except for the highly concentrated industries, which now follows the same treatment as the unconcentrated industries. *DMeanH* is a dummy that is calculated just as *DbaseH*, with the exception of the change done on the classification of the market share, as explained for the dependent variable. *DBxMeanDA* is the interaction between the dummy and the discretionary accruals, following *DBxDistDA*.

4 RESEARCH RESULTS

Based on the methodology presented on the previous section, and the data collected for the regression models, the table 1 with the descriptive analysis of the variable data is presented below for some discussion.

Table 1 - Descriptive analysis

VARIABLES	OBS	MEAN	STD. DEV.	MIN	MAX
Logat	450	6.550403	0.6116253	4.946614	8.236022
Da	450	-0.0493254	0.1672426	-0.97836	0.781933
Distll	450	0.0081568	0.0318428	0	0.451708
dbxdistda	450	-0.0180886	0.1068267	-0.97836	0.661668
distmll	450	0.005601	0.018609	0	0.232845

Where (1) *LogAT* is the logarithm of total assets, (2) *Da* is the discretionary accruals, (3) *Distll* is the Euclidean square distance between the firm's earnings and the target earnings. (4) DBxDistDA is the interaction between the dummy and the distance between the firm's earnings scaled by total assets and the discretionary accruals. (5) *Distmll* is a variation of *Distll* which corresponds to the change of target earnings for highly concentrated industries.

The minimum value for *Distll* and *Ditmll* is zero because of the reference set for some industries. In concentrated industries, whether it's highly or moderately concentrated, the default earnings were the ones of the firm with the highest market share. Thus, the distance between this firm and itself is zero.

As pointed above, the logarithm of total assets were used to avoid magnitude issues. The minimum and maximum value of *logat* shows that it was an ascertained decision due to the difference between its value and the other variables, even though it's still greater than them.

Second, for the first model, that tries to capture the explanation for the variation of the distance between the earnings target and the discretionary accruals, thus, earnings management. Table 2 shows the results for model 3.

Table 2 - Regression results for model 3 (Dep. Variable distll)

Variables	Coef.	Std. Err.
(1) da	-0.04635***	0.010913
(2) logat	-0.00887***	0.002335
(3) dbaseh	0.003734	0.003002
(4) dbxdistda	-0.02047	0.017414
_cons	0.062035***	0.015285
Number Obs.;	450	
R²	11.43%	
Prob > F	0.0000	

Where: (1) *Da* is the discretionary accruals, (2) *LogAT* is the logarithm of total assets. (3) *DbaseH* is a dummy variable which receives one when the industry is unconcentrated and zero otherwise. (4) *DBxDistDA* is the interaction between the dummy and the distance between the firm's earnings scaled by total assets and the discretionary accruals. *** means the variable is significant at 1% of confidence level.

The model does not have all its coefficients equal to zero, as shown by the *F* test (14.36, p-value 0.000). It can be assumed that the significant variables can explain around 10% of the distance between the firm's earnings and the target's earnings, due to the adjusted R^2 (0.1063).

The variables that have significant coefficients are *Da* and *logat*, at 1% of confidence level (p-values 0.000). That means for each unit of increase in *Da*, the distance between the firm's earnings and its target's decreases 0.04635 times. So, the greater the earnings management, the closer the firm will be to industry's leading firm or to the industry's mean, depending on the concentration level of the industry.

For unconcentrated industries, this results are aligned with Datta et al (2013), for they affirm that firms in a competitive industry are more likely to manage their earnings. So these companies in the sample try to match the industry's mean earnings, as predicted by Markarian and Santalo (2014), although it's too harsh to say that these companies' managers are truly unable to access the company's real numbers.

Also, for each percent that *logat* increases, the distance between the firm's earnings and its target's decreases 0.887%. This can be explained by the pressure larger firms suffer for keeping their contracts (Daniel, Denis, & Naveen, 2008) and the analysts coverage (Keung, Lin, & Shih, 2010), both demanding the manager to avoid reporting bad-news and to report earnings compatible with the other companies, for higher competitive industries, and towards the leading firm of the less competitive industries. Even though they might report managed earnings, they must do it with care for the market should not suspect the reported earnings are managed. So meeting the target earnings such as industry's mean or the leading firm's seems to be a way to distress this possible market's suspicion.

Like was said on section 3.5, some highly concentrated industries showed a behavior that makes them more likely to be classified as unconcentrated industries. For that reason, any intepretation of the first results for the 3rd model are biased, as it predicts companies in highly concentrated industries shall manage their earnings towards the leading firm. Hou and Robinson (2006) consider that companies in concentrated industries might avoid disclosing earnings that

might draw attention and thus obligating them to explain themselves. For that reason, the companies that are not leading the industry should not try to report earnings close to the industry's leader, which otherwise would be an expected action taken from a firm in a high competitive market.

To check if the highly concentrated industries have any issues concerning the sharing among only two or more firms, which would make them similar to unconcentrated industries at some level, the 4th model is tested. Table 3 shows the results for that model. As long as it is a minor change, it is expected that the results still holds.

Table 3 - Regression results for model 4 (Dep. Variable distll)

Variables	Coef.	Std. Err.
(1) da	-0.09395***	0.019645
(2) logat	-0.00816***	0.002327
(3) dmeanh	0.00115	0.004164
(4) dmxmeanda	0.049563**	0.021818
_cons	0.057933***	0.015817
Number Obs.:	450	
R²	11.70%	
Prob > F	0.0000	

Where (1) *Da* is the discretionary accruals, (2) *LogAT* is the logarithm of total assets. (3) *DmeanH* is a variation of *Dbaseh* which corresponds to the change of classification of industries, so companies in moderately concentrated industries are 0 and those on unconcentrated and highly concentrated receives 1. (4) *Dmxmeanda* is the interaction between the dummy and the distance between the firm's earnings scaled by total assets and the discretionary accruals. *** means the variable is significant at 1% of confidence level and ** means the variable is significant at 5% of confidence level.

The model does not have all its coefficients equal to zero, as shown by the *F* test (14.74, p-value 0.000). It can be assumed that the significant variables can explain around 10% of the distance between the firm's earnings and the target's earnings, due to the adjusted R^2 (0.109).

The variables that have significant coefficients are *Da* and *logat*, at 1% of confidence level (p-values 0.000). That means for each unit of increase in *Da*, the distance between the firm's earnings and its target's decreases 0.09395 times. So, the greater the earnings management, the closer the firm will be to industry's leading firm or to the industry's mean, depending on the concentration level of the industry. In this model, the target earnings for highly concentrated and unconcentrated industries are the earnings means of those firms in the industry. Else, the target earnings for moderately concentrated firms are the leading firm's earnings. Also, for each percent that *logat* increases, the distance between the firm's earnings and its target's decreases 0.816%. So the same interpretation of the 3rd model still holds for these variables.

For some unknown reason, the interaction of the dummy variable and the mean discretionary accruals (*dmxmeanda*) is significant at 5%. This result is strange due to the fact the dummy itself were not significant. It suggests that when the company is in an unconcentrated or highly concentrated industry, for each unit increase in discretionary accruals, the distance between the firms' earnings and their target increases 0.049563 times. This is not expected for unconcentrated industry, but fits perfectly for highly concentrated ones. Perhaps the change in the pairs of firms to make them unconcentrated industries was a wrong move and the results for the 3rd model are true and less biased as was first expected. There's no explanation so far for this result concerning assets, as well for the dummy variable.

5 CONCLUSIONS AND RECOMENDATIONS

Companies have many incentives to manage their earnings: to keep up with their covenants, to convey better statements and many other reasons. There are two sets of reasons and tested them: whether or not companies engage in earnings management towards a leading firm or if the manage their earnings to meet the industry's mean and make a stand among the other competitors.

It has been tested if firms manage their earnings toward a market target by calculating the discretionary accruals for each firm in a spam ranging from 2010 and 2013 from BM&FBOVESPA stock market and has been calculated the distance between each firms' earnings from the target set by the level of market concentration, defined by the Herfindahl index, which varies from unconcentrated to highly concentrated industries. The leaders of each concentrated industry were set based on the highest market share and for unconcentrated industries it has been set the industry's earnings mean as the target for the firms. The sample is composed of 450 year-firm observations.

In general, the greater the discretionary accruals, i.e. the greater the earnings management, the closer the firm's earnings will be from the earnings of the leading firm, for moderately concentrated industries. In the case of companies in unconcentrated and highly concentrated firms, the further the firm's earnings will be from the industry's earnings mean. These results shall be interpreted with care. Although the research question is if firms engage in earnings management in order to meet a target, the research results do not respond that question in all its extent. There are many reasons that take managers into earnings management and this paper has investigated one possible reason, namely market competition, but it cannot be affirmed that they manage their earnings intentionally towards a target, it can be argued that the more the amount of managed earnings, the closer (or further) the firm will be from the leading firm (or the industry's mean).

For further research, one could expand the data, for better sample adjustments. It's also suggested analysis in other markets for comparison between countries and legal systems, which have great influence on the choices of earnings management. On this concern, further analysis can consider the usage of corporate governance variables and cross listing firms.

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