

## Adoption of IFRS Standards and earnings quality: the profit persistence of companies listed on BM&FBovespa

Josimar Pires da Silva<sup>a</sup>; Mariana Pereira Bonfim<sup>a</sup>; Jorge Katsumi Niyama<sup>a</sup>; César Augusto Tibúrcio Silva<sup>a</sup>

<sup>a</sup>Universidade de Brasília

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### Abstract

This study was aimed at analyzing the relationship between earnings persistence of companies listed on BM&FBovespa, in comparison with IRFS Standards. The research was based on financial statements data, divided into pre-convergence (2003 to 2007), and post-convergence (2010 to 2014), resulting thus in a sample of 235 companies, with 2,350 observations. For calculation of the earnings quality proxy, the model present in the studies of Dechow and Schrand (2004), Dechow, Ge and Schrand (2010) and Perotti and Wagenhofer (2014), which considers the  $\beta$  coefficient as measure for earnings persistence. The research findings demonstrated that there was increase in earnings quality after the adoption of IFRS Standards, which is in line with the international studies in which the convergence to accounting international rules could result in increased earnings quality for companies.

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## 1 INTRODUCTION

High earnings quality are those that not only reflect with precision the current performance of the company, but also represent indication of future performance, being, as consequence, a companies' value measure (Dechow & Schrand, 2004). The high earnings quality provide information on the characteristics of a company's performance, which is relevant for users' decisions (Dechow *et al.* 2010). In general, they will be better predictors of future dividend flows, and, consequently, better predictors of the company's value. Thus, the companies that present high earnings quality would provide useful information to accounting information users, helping them in their decision-making.

The existent research has not been conclusive on whether the adoption of IRFS Standards effectively increases the quality of accounting information. Some studies indicate that the adoption of a set of principles-based accounting standards increases earnings management (Ashbaugh & Pincus, 2001; Bartov, Goldberg, & Kim, 2005; Elbannan, 2010; Jeanjean & Stolowy, 2008). However, there is also research that indicates the opposite, that is, that the adoption of principles-based standards increases the accounting information quality, decreasing earnings management (Barth, Landsman, & Lang, 2007; Chen, Tang, Jiang, & Lin, 2010; Christensen, Lee, Walker, & Zeng, 2015; Iatridis, 2010; Paananen & Lin, 2008; Yoon, 2007).

The possible justifications consist of several factors that influence the accounting policies and practices adopted by the countries, such as law system, type of capital market and social environment (Askary, 2006). According to Askary (2006), the values shared within national borders have the potential to promote and sustain significative differences in social behavior, such as accounting practices. The differences of accounting practices reflect social life manifestations of different systems. Due to that, it is possible to affirm that culture and accounting are inseparable.

Corresponding author: Phone: +55 (61) 3107-0254

E-mail: [josimarnx@yahoo.com.br](mailto:josimarnx@yahoo.com.br) (J. P. Silva); [marianapbonfim@gmail.com](mailto:marianapbonfim@gmail.com) (M. P. Bonfim); [jorgekatsumi@gmail.com](mailto:jorgekatsumi@gmail.com) (J. K. Niyama);

[cesaraugustotiburciosilva@gmail.com](mailto:cesaraugustotiburciosilva@gmail.com) (C. A. T. Silva).

University of Brasília, Darcy Ribeiro Campus, North Wing, 70.910-900, Brasília – DF, Brazil.

The Brazilian accounting, originally, has continental model characteristics (Niyama, 2010; Nobes & Parker, 2010), as well as France, Germany, Italy, Japan, Belgium, Spain, ex-communist countries (Eastern Europe), and South American countries, among others. This group of countries presents the following predominant characteristics: a) weak and not very active accounting profession; b) strong government interference with the establishment of accounting standards, mainly those of fiscal nature; c) financial statements that aim to serve creditors and governments, instead of investors; and, d) importance of banks and financial institutions, including governmental ones, as source of capital raising by companies, in detriment of resources arising from stock market.

Nevertheless, the adoption of IRFS Standards by Brazil, which had as milestone the creation of the Brazilian Accounting Pronouncements Committee (CPC), would be considered as diversion from the continental model and approach to the Anglo-Saxon model, whose characteristics, according to Niyama (2010), are: existence of a strong and active accounting profession; solid capitals market as source of capital raising; little government interference with rules definition; and investors acting as main users. These factors, mainly a strong accounting profession defining accounting standards, may result in the production of a theoretical framework that enables the issuance of financial statements representing the economic essence of the transactions. Considering these facts, it is expected that IRFS Standards results in higher accounting information quality.

Based on the context previously emphasized, and on the listed reasons, the research issue can be described through the following question: how does the adoption of IRFS Standards influence the earnings quality in Brazilian companies? Due to the issue presented, this investigation is aimed at verifying the earnings quality with the adoption of international accounting standards. The main difference of this research in relation to previous studies and, therefore, its main contribution, is the comparison between the previous and posterior periods of convergence to the international accounting standards in Brazil, from the earnings quality perspective. The previous studies, as of Pimentel and Aguiar (2012), and Santos and Cavalcante (2014), also analyzed the relationship between earnings quality and adoption of IRFS Standards, but they have not made the counterpoint between both periods.

## 2 EARNINGS QUALITY AND ADOPTION OF IRFS STANDARDS

Hail, Leuz and Wysocki (2010a, 2010b) made a research revision and verified that the benefits of the convergence depend on the company, activity scope, markets and countries that had opted for IRFS Standards. The authors highlight that several factors may influence accounting practice, and that the adoption of IRFS Standards do not assure benefits to a given country. The adoption of IRFS Standards by the United States, for instance, could have reduced or even negative effect, according to the authors.

Previous studies suggest that companies that adopt IRFS Standards generally present higher accounting quality than companies that use local GAAPs (for instance, Barth *et al.*, 2007). Besides, according to Barth, Landsman, Lang and Williams (2012), after the adoption of IRFS Standards, it was possible to verify increased quality and improvement of accounting values comparability. The benefits of capital market with adoption of IRFS Standards include the reduction of capital cost, improvement of liquidity (Daske, Hail, Leuz & Verdi, 2008; Li, 2010), increased foreign investment (Covrig, Defond & Hung, 2007) and reduction of dispersion of analysts' predictions (Byard *et al.*, 2010; Horton, Serafeim, & Serafeim, 2013; Tan, Wang, & Welker, 2011). Collectively, these studies also suggest that companies that apply IRFS Standards present higher quality in financial statements and greater comparability than those that apply national accounting standards (Landsman, Maydew & Thornock, 2012).

The implementation of IRFS Standards allows reduction of information asymmetry between informed and uninformed investors (Bushman & Smith, 2001), besides reducing the level of investors' uncertainty on the future performance of the company, therefore providing lower capital cost (Samarasekera, 2013). The reduction of uncertainty and information asymmetry would ease communication between the managers and other interested parts related, such as stakeholders, creditors, regulator and supervision authorities, and financial analysts (Iatridis, 2010). This would tend to reduce agency costs that may arise (Bushman & Smith, 2001; Healy & Palepu, 2001), and, in turn, lead to increased stock returns, which could be related to the current financial performance of the company (Gelb & Zarowin, 2002).

Additionally, the reduction of information asymmetry leads to lower costs in owners' equity issuance (Leuz & Verrecchia, 2000) and debt (Sengupta, 1998), facilitating the acquisition of financing through owners' equity and third parties (El-Gazzar, Finn & Jacob, 1999). Such reduction also helps investors to compare the value of alternative investments, which promotes the disclosure and comparability of financial statements, and also helps investors and creditors to monitor insiders' performance (Samarasekera, 2013).

Thus, the benefits of implementing IFRS Standards include the harmonization of accounting practices in all countries that opt for them, leading to greater comparability, lower transaction costs and improved international investments. International standards also assist investors to make decisions and predictions about the future performance of the company (Niyama, 2010; Nobes & Parker, 2010).

Essentially, the adoption of IRFS Standards provides a positive signal of accounting towards higher quality and greater transparency (Tendeloo & Vanstraelen, 2005). Barth *et al.* (2007), Chen *et al.* (2010) and Iatridis (2010) affirm that higher quality standards and IASB disclosure high requirements allow increase in accounting information quality, disseminated mainly in countries with mechanisms of protection to investors and strong stock market, leading to the reduction in the levels of earnings management.

Similarly, Daske and Gebhardt (2006) report that companies that adopt IRFS Standards, willingly or mandatorily, tend to present higher quality of disclosure than companies that use national standards. The provision of quality accounting disclosure would tend to reduce the possibilities of manipulation of results and increased efficiency (Baiman & Verrecchia, 1996; Kasznik, 1999; Leuz, 2003). The requirements for greater disclosure and high quality of financial information that comes from IRFS Standards imply that the adoption of these standards signalizes positively to investors, through lower costs of information asymmetry and agency (Tarca, 2004).

However, it is important to emphasize that many conclusions on the advantages of IRFS Standards implementation are result of research performed in countries where the information quality before implementation was lower, as probably occurred in Brazil. In countries where there are good quality national standards, as in the case of the United States, these advantages may not be evident or not even exist. Another relevant aspect is the cost of adopting international standards: these costs involve training, software change, regulations, etc. They may also include increase of the presence of large audit companies within the internal market. In general, these aspects were not considered as the central focus of the pieces of research previously cited, although they are relevant for discussion (Niyama & Silva, 2013).

One aspect of this discussion is related to higher earnings quality from the adoption of IFRS Standards. The high earnings quality provide information on the characteristics of the financial performance of a company, which is relevant for users' decisions (Dechow *et al.*, 2010). Earnings quality is, in general, highlighted from the analysts' perspective (Dechow & Schrand, 2004), since it is relevant for the pricing of bonds commercialized publicly.

This is still one of the most important and controversial issues in recent accounting research. According to Dechow and Schrand (2004), high earnings quality means that the numbers accurately reflect the intrinsic value of the company. Such earnings are referred to in the accounting literature as permanent earnings (Beaver, 1998; Black, 1980; Ohlson & Zhang, 1998). In other words, earnings are of high quality when the return on owners' equity is a good measure of the internal return rate of the current corporate portfolio (Dechow & Schrand, 2004).

Several studies have evidenced the relationship between earnings quality and adoption of IFRS Standards. However, the results are not always convergent: some studies indicate that the adoption of IFRS Standards results in a higher quality of Accounting information (Ashbaugh & Pincus, 2001; Barth *et al.*, 2007, Chen *et al.*, 2010; Christensen *et al.*), and, on the other hand, others indicate lower quality (Bartov *et al.*, 2005, Elbannan, 2010, Jeanjean & Stolowy, 2008, Kajimoto *et al.* & Nakao, 2015; Klann & Beuren, 2012).

The pieces of research already carried out on the adoption of international accounting standards and earnings quality in Brazil, in general, are not conclusive, or there are no differences in the investigated companies' earnings quality (Santos, Lima, Freitas, & Lima, 2011; Sousa, Sousa, & Demonier, 2016). Moreover, no empirical work was found in the Brazilian market on the subject with the same time horizon, i.e., comparing the previous and posterior period of convergence. This period demarcation, and the consideration that the post-convergence period encompasses the full IFRS adoption, can be considered the main difference of this research in relation to the others. From this evidence, concerning earnings quality and the adoption of the International Financial Reporting Standards (IFRS), it was possible to elaborate the following research hypothesis:

H1 = there is a significant and positive relationship between the adoption of IFRS Standards and the corporate Earnings Quality.

### 3 METHODOLOGICAL PROCEDURES

In this research, data from published financial statements made available to the general public on the BM&FBovespa website and extracted through the external disclosure EmpresasNet software were used. Initially, the sample comprised 494 companies from the 10 sectors of BM&FBovespa (industrial goods, construction and transportation, cyclical consumption, non-cyclical consumption, basic materials, oil, information technology, telecommunications, public utility and finance), encompassing an extension of 10 periods/years, divided into pre-convergence (2003 to 2007) and post-convergence (2010 to 2014). Years 2008 and 2009 will not be analyzed due to the proximity to the beginning of the convergence process in Brazil.

The final sample resulted in 2,350 observations (1,175 for the pre-convergence period and 1,175 for the post-convergence period) from 235 companies, since 259 companies were excluded from the sample because they did not have all the data required for the research. Regarding the earnings quality proxy, the present study is based on the work of Dechow and Schrand (2004), Dechow, Ge and Schrand (2010), besides using the profit persistence, often approached in literature.

The base for profit measurement is the net income (NI). The metric used, Persistence, is equal to the coefficient  $\beta$  of the following expression:

$$NI_{i,t} = \alpha + \beta NI_{i,t-1} + \varepsilon_{i,t} \quad (1)$$

where:

$NI_{i,t}$  = net income of period t, divided by the total assets in the beginning of period t.

$NI_{i,t-1}$  = net income of period t-1, divided by the total assets in the beginning of period t-1.

The use of persistence is justified because it is in line with the perspective on profits working as a summary metric of expected cash flows, useful for the valuation of bonds (Dechow *et al.*, 2010), having as premise that the historic accounting information has predictive value (Olson & Mossman, 2003), and company values are indicated by information brought by financial statements, especially profit (Ou & Penman, 1989). Thus, companies with more earnings persistent have more persistent earnings/cash flow, which will make them more useful in the evaluation of stock prices (Dechow & Schrand, 2004; Perotti & Wagenhofer, 2014). The earnings quality proxy is presented by  $\beta$  of the regression equation (1) so that to observe the behavior of the companies listed on BM&FBovespa regarding if the earnings quality was lower in the pre-convergence period (2003 to 2007) than in the post-convergence period (2010 to 2014).

### 4 ANALYSIS OF THE RESULTS

The data descriptive statistics of the 235 companies listed on BM&FBovespa is shown in Table 1. By means of data analysis in this table, regarding standard deviation, the post-convergence period (2010 to 2014) presented a lower value than the pre-convergence period (2003 to 2007). This indicates that the adoption of IFRS Standards led to a lower net income variability of the companies listed on the BM&FBovespa. As consequence, it is possible to consider that the reduction corroborates the conception that companies' profitability, after the adoption of international accounting standards, has become more informational, that is, principles-based accounting increases the earning quality.

**Table 1.** Sample descriptive statistics

Variable	Pre-convergence period (2003 to 2007)			Post-convergence period (2010 to 2014)		
	Mean	Median	Standard Deviation	Mean	Median	Standard Deviation
NI	0.0445	0.0403	0.1782	0.0180	0.0268	0.1326

Source: Elaborated by the authors

Regarding earnings informativeness, there is evidence that smoothed profit is more informative for high earnings quality companies (Bao & Bao, 2004), presenting better performance for both high and low profit companies (Baseri, Ranjbar, & Khademi, 2013). The change in the current price of companies' stock with greater results smoothing brings more information about their future earnings than the change in the price of companies' stock with less smoothing (Tucker & Zarowin, 2006) and more persistence (Silhan, 2014).

To analyze the normality of the residues, Jarque-Bera Test was performed, which showed a result of 0.00, thus not rejecting the null hypothesis, that is, attesting to the normality of the regression residues. Regarding the assumption of the residues homoscedasticity, White test was carried out, which has the non-existence of heteroscedasticity as null hypothesis. With a probability of 0.9999 and a chi-square distribution with 2 degrees of freedom, the null hypothesis was not rejected and the homoscedasticity was attested.

To analyze the autocorrelation of the regression residues, Durbin-Watson (DW) Test was used, which has the absence of autocorrelation as null hypothesis. The result of the DW Test showed a value of 2.221, thus being inserted in the non-rejection area of the test null hypothesis, and it was verified that the residues are not autocorrelated.

Breusch-Pagan-Godfrey Test was also performed, which corroborated the regression residues homoscedasticity (0.9985), therefore indicating that it is not possible to use the random effects model. Thus, Chow Test and Akaike, Schwarz and Hannan-Quinn information criterion was used to verify which regressive model is the most adjusted: pooled effect or fixed effects. As the lowest criterion values mentioned above was obtained by the pooled regression, it was verified that this is the most adjusted model. Thus, by adopting the pooled approach, regression results (pre- and post-convergence) can be visualized in Table 2.

**Table 2.** Results of regression estimation in panel via pooled method - dependent variable

Variables	Coefficient	Pre-convergence period (2003-2007)			Post-convergence period (2010-2014)		
		Standard error	p-value	Coefficient	Standard error	p-value	
Constant	0.097979	0.006949	0.0000*	-0.004977	0.002654	0.0610	
NI <sub>(i,t-1)</sub>	0.227343	0.017095	0.0000*	0.359895	0.020001	0.0000*	
R <sup>2</sup>	0.131023			0.216323			
R <sup>2</sup> adjusted	0.130282			0.215655			
F Statistics	176.8631			323.7899			
P-value (F Stat.)	0.000000			0.000000			
Durbin-Watson	1.596358			1.740044			

Source: Elaborated by the authors

Note: \* indicates significance at 1% level.

The regression data showed that the variable presented significant coefficients at 1% (p-value = 0.000), and positive for the dependent variable, then corroborating the hypothesis that there is a significant and positive relationship between the adoption of the IFRS Standards and the earnings quality of the companies listed on BM&FBovespa. The base for measuring the net income persistence is the β coefficient of regression (1), where higher indexes indicate higher profit persistence, that is, earnings are more informational, and lower indexes indicate a lower earnings quality.

According to what is observed in Table 2, the pre-convergence period presented a β of 0.227, whereas the post-convergence period presented a coefficient of 0.359, thus indicating an increase in β of the regression when comparing the period before adoption with the period after the adoption of IFRS Standards. This result corroborates the research hypothesis, indicating that the adoption of IFRS Standards by the companies listed on BM&FBovespa increased the earnings quality of these companies. Moreover, regressions were carried out dividing the sectors of BM&FBovespa, in order to verify whether the adoption of IFRS Standards influences the corporate earnings quality. For this purpose, dummies were created for each sector of BM&FBovespa and the following regression equation was estimated:

$$NI_{i,t} = \alpha + \beta_1(BI*NI_{i,t-1}) + \beta_2(CT*NI_{i,t-1}) + \beta_3(CC*NI_{i,t-1}) + \beta_4(CNC*NI_{i,t-1}) + \beta_5(FIN*NI_{i,t-1}) + \beta_6(MB*NI_{i,t-1}) + \beta_7(PGB*NI_{i,t-1}) + \beta_8(TI*NI_{i,t-1}) + \beta_9(TEL*NI_{i,t-1}) + \beta_{10}(UP*NI_{i,t-1}) + \epsilon_{i,t} \quad (2)$$



The variables BI, CT, CC, CNC, FIN, MB, PGB, TI, TEL and UP are representative of the sectors of BM&FBovespa (industrial goods, construction and transportation, cyclical consumption, non-cyclical consumption, basic materials, oil, information technology, telecommunications, public utility and finance, respectively) and binary, being equal to 1 when the company is inserted in the respective sector, and 0 otherwise. The results obtained from the regression (2) can be seen in Table 3 below:

**Table 3.** Result of estimation of regression by BM&FBovespa sectors - dependent variable

Variables	Coefficient	Pre-convergence period (2003-2007)		Post-convergence period (2010-2014)		p-value
		Standard error	p-value	Coefficient	Standard error	
Constant	0.075096	0.005161	0.0000*	-0.001223	0.004100	0.7655
BI*	0.303606	0.017351	0.0000*	0.746880	0.089179	0.0000*
CT*	0.288144	0.114422	0.0119**	0.503967	0.063080	0.0000*
CC*	0.476537	0.164082	0.0038*	0.400585	0.086306	0.0000*
CNC*	-0.076701	0.155703	0.6224	0.168354	0.070166	0.0166**
FIN*	0.518504	0.056737	0.0000*	0.307430	0.058485	0.0000*
MB*	0.495804	0.086422	0.0000*	0.137746	0.086168	0.1102
PGB*	0.481019	0.053157	0.0000*	0.646743	0.092553	0.0000*
TI*	0.231791	0.010153	0.0000*	0.304135	0.138957	0.0288**
TEL*	1.533453	0.261051	0.0000*	0.733822	0.060734	0.0000*
UP*	0.033727	0.010578	0.0015*	0.250741	0.087698	0.0043*
R <sup>2</sup>	0.319474			0.263552		
R <sup>2</sup> adjusted	0.313628			0.257225		
F Statistics	54.64415			41.65600		
P-value (F Stat.)	0.000000			0.000000		
Durbin-Watson	2.011927			1.933601		

Source: Elaborated by the authors

Note: \* indicates significance at 1% level. \*\* indicates significance at 5% level.

Analyzing Table 3, it can be seen that 6 out of the 10 sectors into which the companies on BM&FBovespa are divided showed an increase in the  $\beta$  coefficient after the adoption of IFRS Standards. The sectors of industrial goods, construction and transportation, non-cyclical consumption, oil, gas and fuel, information technology and public utility showed an increase in earnings quality after the implementation of international accounting standards, which denotes not only the majority of sectors (6 in total), but also most of the companies investigated (122 or 52%).

The sectors of industrial goods, construction and transportation, oil, gas and fuels are characterized by high investments in fixed assets; after the advent of accounting convergence, the companies listed on BM&FBovespa started adopting depreciation rates different from the tax depreciation rates. Studies as that of Eckert *et al.* (2012) verified that after the introduction of international accounting standards in Brazil, it was possible to realize changes in the way of evaluation of fixed assets useful life and reductions in depreciation expenses. For example, the industrial goods sector is, essentially, industries that produce capital goods and therefore need high investments in fixed assets (Eckert *et al.*, 2012; Freire, Machado, Machado, Souza & Oliveira, 2012), implying higher depreciated values.

The expectation is that the accounting treatment of depreciation in this sector is more accurate due to the importance that these values represent in the investigated companies' assets and results (Freire *et al.*, 2012). In general, the adoption of IFRS Standards, especially in relation to the valuation of fixed assets in these sectors, enables a better accounting information quality due to the depreciation based on the economic useful life and to the Impairment test. The non-cyclical consumer sector includes companies that are focused on selling food, beverages, tobacco and household products. This sector is characterized by its lower correlation with the economy evolution: in times of lower economic growth, or even recession, consumption of products tends not to be particularly affected. Essential consumer goods have lower price elasticity than any other products and services. This means that when prices rise, demand for products does not suffer as much as the demand for other product genres, such as the technological ones (Horta, Alves, & Jorge, 2013).

In addition, the oil companies sector with great relevance in the Gross Domestic Product (GDP) and in the national economy has large deals transacted through oil, involving a large volume of financial operations and, consequently, several accounting transactions required to meet the informational demand. Nevertheless, the sector also operates in a foreign trade environment, which naturally can lead to need to transmit its information at equalitarian and standardized level (Ribeiro & Da Silva, 2010).

On the other hand, 4 sectors showed lower coefficients after the adoption of IFRS Standards: cyclical consumption, finance, basic materials and telecommunications. Possibly, these results were obtained because the financial and telecommunications sectors still have strong regulation in Brazil: although their regulatory agencies have adopted some CPC pronouncements, these companies are still subject to a strong regulation by these bodies, and their accounting is still not entirely principles-based. In turn, in basic materials sector, 70% of the companies belong to mining, chemical and steel and metallurgy sub-sectors, also marked by strong regulation, which may have influenced these companies' earnings quality.

The results found in this research are in line with the hypothesis that the adoption of IFRS Standards increases the company's earnings quality, making it the best predictor of future dividend flows and of the value of these companies' stock. Thus, the findings are consistent with the work of Psaros and Trotman (2004), Ashbaugh and Pincus (2001), Yoon (2007), Barth, Landsman and Lang (2008), Christensen *et al.* (2015), Paananen and Lin (2009), Chen *et al.* (2010) and Iatridis (2010), in which it was evidenced that the adoption of international accounting standards results in higher earnings quality.

## 5 FINAL CONSIDERATIONS

The results corroborate the research hypothesis indicating that there is a significant and positive relationship between the adoption of IFRS Standards and the earnings quality of the companies listed on BM&FBovespa. Besides, the  $\beta$  coefficient of the regression (1) was used as a way to measure the profit persistence: since the post-convergence period presented a higher coefficient than the pre-convergence period, it was observed that the adoption of IFRS Standards has increased these companies' earnings quality. This result was in line with the work of Psaros and Trotman (2004), Ashbaugh and Pincus (2001), Yoon (2007), Barth, Landsman and Lang (2008), which showed that the implementation of international standards causes increased companies' earnings quality, making it a measure of interest to investors, since it becomes a better predictor of the value of these companies' stock

Additionally, regression (2) was performed with the insertion of dummy variables in order to separate the 10 sectors of BM&FBovespa and verify the relationship between the adoption of IFRS Standards and earnings quality, by sector. It was found, therefore, that most sectors and companies exhibited an increase in earnings quality by implementing international accounting standards. As suggestion for future research, study of other approaches of measurement of earnings quality is indicated, such as the magnitude of accruals or smoothing, as those presented in Dechow, Ge and Schrand (2010), for example.

## REFERENCES

- Ashbaugh, H., & Pincus, M. (2001). Domestic Accounting Standards, International Accounting Standards, and the Predictability of Earnings, *39*(3), 417–434.
- Askary, S. (2006). Accounting professionalism – a cultural perspective of developing countries. *Managerial Auditing Journal*, *21*(1), 102–111.
- Baiman, S., & Verrecchia, R. E. (1996). The Relation among Capital Markets, Financial Disclosure, Production Efficiency, and Insider Trading. *Journal of Accounting Research*, *34*(1), 1–22.
- Bao, B. H., & Bao, D. H. (2004). Income smoothing, earnings quality and firm valuation. *Journal of Business Finance and Accounting*, *31*(9–10), 1525–1557.
- Barth, M. E., Landsman, W. R., & Lang, M. H. (2007). International Accounting Standards and Accounting Quality. *Journal of Accounting Research*.
- Barth, M. E., Landsman, W. R., Lang, M., & Williams, C. (2012). Are IFRS-based and US GAAP-based accounting amounts comparable? *Journal of Accounting and Economics*, *54*(1), 68–93.

- Bartov, E., Goldberg, S. R., & Kim, M. (2005). Comparative Value Relevance Among German, U.S., and International Accounting Standards: A German Stock Market Perspective. *Journal of Accounting, Auditing & Finance*, 20(2), 95–119.
- Baseri, M., Ranjbar, A., & Khademi, S. (2013). Comparative Investigation of Income Smoothing and Earning Quality on Firm Valuation of Listed Companies in Tehran Stock Exchange. *Advances in Environmental Biology*, 7(10), 2992.
- Beaver, W. H. (1998). *Financial Reporting: An Accounting Revolution*. (P. Hall., Ed.) (3rd ed.). Englewood Cliffs, NJ.
- Black, F. (1980). The Magic in Earnings: Economic Earnings versus Earnings Accounting. *Financial Analysts Journal*, 36(6), 19–24.
- Bushman, R. M., & Smith, A. J. (2001). Financial Accounting Information and Corporate Governance. *Journal of Accounting & Economics*, 23, 1–115.
- Byard, D., Brown, A., Dahya, J., Darrough, M., Davis-friday, P., & Gore, A. (2010). The Effect of Mandatory IFRS Adoption on Financial Analysts' Information Environment. *Journal of Accounting Research*, 49, 69–96.
- Chen, H., Tang, Q., Jiang, Y., & Lin, Z. (2010). The Role of International Financial Reporting Standards in Accounting Quality: Evidence from the European Union. *Journal of International Financial Management Accounting*, 21(3), 220–278.
- Christensen, H. B., Lee, E., Walker, M., & Zeng, C. (2015). Incentives or Standards: What Determines Accounting Quality Changes around IFRS Adoption? *European Accounting Review*, 24(1), 31–61.
- Covrig, V. M., Defond, M. L., & Hung, M. (2007). Home bias, foreign mutual fund holdings, and the voluntary adoption of international accounting standards. *Journal of Accounting Research*, 45(1), 41–70.
- Daske, H., & Gebhardt, G. (2006). International financial reporting standards and experts' perceptions of disclosure quality. *Abacus*, 42(3–4), 461–498. <http://doi.org/10.1111/j.1467-6281.2006.00211.x>
- Daske, H., Hail, L., Leuz, C., & Verdi, R. (2008). Mandatory IFRS Reporting around the World: Early Evidence on the Economic Consequences. *Journal of Accounting Research*, 46(5), 1085–1142.
- Dechow, P., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics*, 50(2–3), 344–401. <http://doi.org/10.1016/j.jacceco.2010.09.001>
- Dechow, P. M., & Schrand, C. M. (2004). Earnings quality. *Research Foundation of CFA Institute*, 1–160. Retrieved from <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Earnings+quality#2>
- Eckert, A., Mecca, M. S., Biasio, R., & Souza, K. M. de. (2012). Normas contábeis de reconhecimento e mensuração do ativo imobilizado: impacto em empresas de bens industriais gaúchas listadas na BM&FBOVESPA. *Revista Contabilidade E Controladoria*, 4(2), 69–89.
- El-Gazzar, S., Finn, P. M., & Jacob, R. (1999). An Empirical Investigation of Multinational Firms' Compliance with International Accounting Standards. *The International Journal of Accounting*, 34(2), 239–248.
- Elbannan, M. A. (2010). Accounting and stock market effects of international accounting standards adoption in an emerging economy. *Review of Quantitative Finance and Accounting*, 36(2), 207–245.
- Freire, M. D. D. M., Machado, M. R. R., Machado, L. S., Souza, E. S., & Oliveira, J. J. De. (2012). Aderência às normas internacionais de contabilidade pelas empresas brasileiras. *Revista de Contabilidade E Organizações*, 6(15), 3–22.
- Gelb, D. S., & Zarowin, P. (2002). Corporate disclosure policy and the informativeness of stock prices. *Review of Accounting Studies*, 7(1), 33–52.
- Hail, L., Leuz, C., & Wysocki, P. (2010a). Global Accounting Convergence and the Potential Adoption of IFRS by the U.S. (Part II): Political factors and future scenarios for U.S. accounting standards. *Accounting Horizons*, 24(4), 567–588.
- Hail, L., Leuz, C., & Wysocki, P. (2010b). Global Accounting Convergence and the Potential Adoption of IFRS by the U.S. (Part I): Conceptual Underpinnings and Economic Analysis. *Accounting Horizons*, 24(3), 355–394.



- Healy, P. M., & Palepu, K. G. (2001). A Review of the Empirical Disclosure Literature. *Journal of Chemical Information and Modeling*, 53(December), 160.
- Horta, R. A. M. H., Alves, F. J. dos S., & Jorge, M. J. (2013). Descontinuidade de Empresas Brasileiras do Setor de Consumo Não Cíclico: Um Estudo Com Dados Contábeis Utilizando Técnicas de Data Mining. *Revista de Informação Contábil*, 7(3), 63–83.
- Horton, J., Serafeim, G., & Serafeim, I. (2013). Does mandatory IFRS adoption improve information comparability? *Contemporary Accounting Research*, 30(1), 388–423.
- Iatridis, G. (2010). International Financial Reporting Standards and the quality of financial statement information. *International Review of Financial Analysis*, 19(3), 193–204.
- Jeanjean, T., & Stolowy, H. (2008). Do accounting standards matter? An exploratory analysis of earnings management before and after IFRS adoption. *Journal of Accounting and Public Policy*, 27(6), 480–494.
- Kajimoto, C. G. K., & Nakao, S. H. (2015). Persistência dos Lucros Tributáveis com a Adoção das IFRS no Brasil. *XII Congresso USP Iniciação Científica Em Contabilidade*, 1–16.
- Kaszniak, R. (1999). On the Association between Voluntary Disclosure and Earnings Management. *Journal of Accounting Research*, 37(1), 57-81.
- Klann, R. C., & Beuren, I. M. (2012). Gerenciamento de Resultados: análise comparativa de empresas brasileiras e inglesas antes e após a adoção das IFRSs. *Anais Do Encontro Nacional Da Associação Nacional de PósGraduação E Pesquisa Em Administração, Rio de Janeiro, RJ, Brasil*, 36, 1–18.
- Landsman, W. R., Maydew, E. L., & Thornock, J. R. (2012). The information content of annual earnings announcements and mandatory adoption of IFRS. *Journal of Accounting and Economics*, 53(1–2), 34–54.
- Leuz, C. (2003). IAS versus U.S. GAAP: Information asymmetry-based evidence from Germany's new market. *Journal of Accounting Research*, 41(3), 445-472.
- Leuz, C., & Verrecchia, R. E. (2000). The Economic Consequences of Increased Disclosure. *Journal of Accounting Research*.
- Li, S. (2010). Does Mandatory Adoption of International Financial Reporting Standards in the European Union Reduce the Cost of Equity Capital? *The Accounting Review*, 85, 607–636.
- Niyama, J. K. (2010). *Contabilidade Internacional*. (Atlas, Ed) (2nd ed). São Paulo.
- Niyama, J. K., & Silva, C. A. T. (2013). *Contabilidade Internacional*. (Atlas, Ed.). São Paulo.
- Nobes, C., & Parker, R. (2010). *Comparative International Accounting*. (Pearson, Ed.) (11th ed.). London.
- Ohlson, J. A., & Zhang, X.-J. (1998). Accrual Accounting and Equity Valuation. *Journal of Accounting Research*, 36(May), 85–111.
- Olson, D., & Mossman, C. (2003). Neural network forecasts of Canadian stock returns using accounting ratios. *International Journal of Forecasting*, 19(3), 453-465.
- Ou, J. A., & Penman, S. H. (1989). Financial statement analysis and the prediction of stock returns. *Journal of Accounting and Economics*, 11(4), 295-329.
- Paananen, M., & Lin, H. (2008). The Development of Accounting Quality of IAS and IFRS Over Time: The Case of Germany. *Journal of Chemical Information and Modeling*, 53(9), 1689–1699.
- Perotti, P., & Wagenhofer, A. (2014). Earnings Quality Measures and Excess Returns. *Journal of Business Finance & Accounting*, 41(5–6), 545–571.
- Pimentel, R. C., & Aguiar, A. B. (2012). Persistence of quarterly earnings: an empirical investigation in Brazil. *Brazilian Business Review*, 9 (special edition BBR Conference), 38-54.
- Psaros, J., & Trotman, K. T. (2004). The Impact of the Type of Accounting Standards on Preparers' Judgments. *Abacus*, 40(1), 76–93.
- Ribeiro, R. B., & Da Silva, J. D. G. (2010). Estágio de Adequação das Informações Contábeis às Normas Internacionais de Contabilidade no Setor de Petróleo, Gás e Biocombustíveis. *Revista de Educação E Pesquisa Em Contabilidade*, 4(3), 70–93.
- Samarasekera, N. (2013). *Accounting quality of UK firms under IFRS*. UWA Business School.

- Santos, M. A. C., & Cavalcante, P. R. N. (2014). O efeito da adoção dos IFRS sobre a relevância informacional do lucro contábil no Brasil. *Revista Contabilidade & Finanças*, 25(66), 228-241.
- Santos, L. P. G., Lima, G. A. S. F., Freitas, S. C., & Lima, I. S. (2011). Efeito da Lei 11.638/07 sobre o conservadorismo condicional das empresas listadas BM&FBOVESPA. *Revista Contabilidade & Finanças*, 22(56), 174–188.
- Sengupta, P. (1998). Corporate disclosure quality and the cost of debt. *The Accounting Review*, 73(4), 459.
- Silhan, P. A. (2014). Income smoothing from a Census X-12 perspective. *Advances in Accounting*, 30(1), 106–115.
- Sousa, E., Sousa, A. F. de, & Demonier, G. B. (2016). Adoção das IFRS no Brasil: Efeitos no Conservadorismo Contábil. *Revista de Educação E Pesquisa Em Contabilidade*, 10(2), 136–147.
- Tan, H., Wang, S., & Welker, M. (2011). Analyst following and forecast accuracy after mandated IFRS adoptions. *Journal of Accounting Research*, 49(5), 1307-1357.
- Tarca, A. (2004). International Convergence of Accounting Practices : Choosing between IAS and US GAAP. *Journal of International Financial Management and Accounting*, 15(1).
- Tendeloo, B. V., & Vanstraelen, A. (2005). Earnings Management under German GAAP versus IFRS. *European Accounting Review*, 14(1), 155-180.
- Tucker, J. W., & Zarowin, P. a. (2006). Does Income Smoothing Improve Earnings Informativeness? *The Accounting Review*, 81(1), 251–270.
- Yoon, S. (2007). Accounting Quality and International Convergence. *PhD Proposal*, 1.