

THE IMPACT OF THE ADOPTION OF INTERNATIONAL FINANCIAL REPORTING STANDARDS ABOUT THE QUALITY OF ACCOUNTING INFORMATION OF THE BRAZILIAN AND EUROPEAN PUBLIC FIRMS

Edílson Paulo

Doutor em Controladoria e Contabilidade
Universidade Federal da Paraíba
Centro de Ciências Sociais Aplicadas - Ambiente 67 - Cidade Universitária
CEP: 58051-900 - João Pessoa/PB
Fone: (83) 3216 7459
E-mail: e.paulo@uol.com.br

David Carter

Reader in Accounting
University of Roehampton Business School, University of Roehampton

Luiz Felipe de Araújo Pontes Girão

Mestrado em Contabilidade pelo Programa Multiinstitucional e Inter-regional
UnB/UFPB/UFRN
Universidade Federal da Paraíba
Centro de Ciências Sociais Aplicadas - Ambiente 67 - Cidade Universitária
CEP: 58051-900 - João Pessoa/PB
Fone: (83) 3216 7459

Rodrigo Silva de Sousa

Universidade Federal da Paraíba

ABSTRACT

Several factors affect the quality of accounting information, such as characteristics of the firm, practices and procedures adopted in the elaboration of the financial statements, corporative governance system, capital market, regulation, among others. Among these factors, it is noteworthy the influence of the accounting standards about the quality of the numbers reported by the firms. Since 2005, the European companies elaborated their consolidated financial statements according to the *International Financial Reporting Standards* (IFRS), while in Brazil, the process of convergence of national accounting standards to IFRS was promoted just after the approval of the Law nº 11.638/07, therefore, after that, the Comitê de Pronunciamentos Contábeis (CPC) approved various Technical Pronouncements which aimed to facilitate the convergence of Brazilian accounting standards to these international rules. Considering that these international accounting standards have a higher quality, it is expected that the IFRS adoption affect positively accounting information quality. Thus, this research aims to analyze the effect of the IFRS adoption in the earnings quality reported by the Brazilian and European public firms, in the period between 2000 and 2011, considering that previous research did not showed a consensus about this topic. Empirical technical models, such as persistence, conservatism, earnings management and accruals errors, were used to reach the proposed objective. The results showed that the quality of accounting information has not significantly improved comparing the period before and after the adoption of the IFRS in Brazil or Europe.

Key-words: Quality of accounting information; International Financial Reporting Standards; Conservatism; Accruals; Earnings management.

Área Temática: Mercados Financeiro, de Crédito e de Capitais

1 INTRODUCTION

Accounting seeks to contribute to the reduction of information asymmetry, what, consequently, minimizes agency conflicts and assists in the proper provision of the available resources. Accounting reports are the base of the company analysis and are used as an important mean of communication of firm performance for the investors and as a mechanism of corporative governance (PALEPU; HEALY; BERNARD, 2004).

However, accounting reports only contribute, effectively, for the reduction of the information asymmetry, when they provide good quality in accounting information about the companies' financial and economic situation. Several studies analyzed the quality of accounting information (or earnings quality) and their implications in the performance evaluation and in companies' contract relations (BALL, 1999; BARTH; CRAM; NELSON, 2001; LOPES, 2002; MARTINEZ, 2001; DECHOW; DICHEV, 2002; DECHOW; SCHRAND, 2004; CARDOSO, 2005; DECHOW; GE; SCHRAND, 2010).

Dechow, Ge and Schrand (2010) carried out a wide research review about determinant factors and consequences of accounting information quality, as well as the metrics used to measure them. In this work, the authors consider several dimensions (attributes) of accounting information quality, like, transparency, accruals errors, opportunity, conservatism, earnings management and value relevance.

Additionally, the organizations that establish financial accounting and reporting standards in several countries have been seeking for the convergence of national accounting rules to the ones described in the International Financial Reporting Standards (IFRS) emitted by the International Accounting Standard Board (IASB). From January 1st 2005, in line with the Directive n° 2003/51, the companies that negotiate in a regulated market of any Member State of the European Union must elaborate their consolidated financial statements according to the IFRS.

In Brazil, this process was accelerated with the approval of the Law n° 11.638/2007. After this law, the Comitê de Pronunciamentos Contábeis (CPC), organization responsible for the emission of Brazilian accounting standards, approved several Technical Pronouncements with the objective of converge the Brazilian accounting standards to the IFRS.

Considering that the IFRS seeks to improve the information quality of companies' financial reports, it is relevant to analyze the behavior and quality of accounting numbers reported from the adoption of this international accounting standard emitted by the IASB.

In spite of being the topic of several works in the international literature (VAN TENDELOO; VANSTRAELEN, 2005; BARTH; LANDSMAN; LANG, 2008; WANG; WELKER, 2011; ISIDRO; RAONIC, 2012; LIN; RICCARDI; WANG, 2012), the influence of IFRS convergence in accounting information quality of Brazilian firms is a subject incipiently investigated.

As IFRS adoption in European Union countries preceded Brazilian convergence, the comparative study of accounting information between the Brazilian and European firms becomes relevant, in order to verify the impacts and tendencies of the numbers reported in European firms' financial statements and, then, compare if there is any similarity with the numbers disclosed by the Brazilian public companies.

Before the possibility of the differences in the accounting information caused by organizational and institutional factors of each type of firm, it can be raised the following research's question: What are the impacts of the adoption of the International Financial Reporting Standards (IFRS) in the quality of accounting information reported by the Brazilian and European public firms? Thus, the primary objective of this study is to analyze the effect of the adoption of the International Financial Reporting Standards in the quality of accounting information reported by the Brazilian and European public firms.

In general, this research becomes favorable, because analyzes the influence of the IFRS some years after its mandatory adoption in the Brazilian and European environment. Additionally, the Brazilian environment becomes peculiar for this topic of research, because it is carried out in an economic, legal, social and business context different from the European.

Besides the section of introduction, this paper has a section of background, which aims to support the methodology, results and final considerations are presented, in this sequence, in the following sections.

2 BACKGROUND

With the growing of the dimension and complexity of the business activities, the necessities of information by the administrators and the other users of Accounting become even more distinct; in which these users need a crescent demand of accounting information in order to judge the performance of the manager and the company, as well as to monitor the elaboration and execution of the contracts.

The Agency Theory has assisted Accounting to understand more clearly the pressures directed to the process of accounting regulation and the effects of the accounting information in the resources' allocation. Many of the contracts made among the economic agents utilize accounting numbers, like, for example, the managers' remuneration when it is based on the firm's economic performance or the creditors that can demand protection of the borrowed capital through the maintenance of certain financial indicators. Thus, the accounting information, observed by the theory of costs of contracts, assists the monitoring and compliance of the contracts, through the decrease in the information asymmetry, thus, contributing for the reduction of the costs of the agency generated by conflict of interests. Therefore, the accounting information influences the individual decisions of its users, affecting the allocation of resources and the functioning of markets, consequently, the efficiency of economy.

Thus, it becomes important to assure the quality of the accounting information, for it influences the allocation of resources, as well as the distribution of wealthy among the various economic agents. However, it is considered that the accounting information suffers from the direct influence of the personal interests of the managers or other economic agents. Besides, other factors, like sources of funding, tax legislation, enforcement and ownership structure, enable the existence of accounting information substantially different in the several economic environments (BALL, 1999; ALI; HWANG, 2000; GINER; REES, 2001; BURGSTAHLER; HAIL; LEUZ, 2006; DECHOW; GE; SCHRAND, 2010), being the differences in the information content of the Accounting also associated to the institutional characteristics and the capital market, which possibly imply in differences in the accounting measurement (POPE; WALKER, 1999).

In this sense, the earnings quality can increase if the regulators limit the opportunities of manager's discretion, however there is the possibility of some IFRS, principles-based standards, creates a greater discretion about the results, implying in a decrease of quality of the accounting numbers. (BARTH; LANDSMAN; LANG, 2008).

Ewert and Wagenhofer (2005) analytically demonstrate that the accounting standards that inhibit the opportunistic discretion enable the generation of information as large information content. Therefore, it is expected that the quality of the accounting reports be widened if the regulators reduce the opportunistic decisions of the managers about the process of identification, measurement and evidence of Accounting.

There are several works that examine the differences of the earnings quality between the local GAAP and IFRS. Van Tendeloo and Vanstraelen (2005) did not find significant differences at the level of earnings management contained in the financial statements based on the IFRS by the German firms, in the period of 1999 to 2001, when compared to the ones

elaborated through the German standards. Daske (2006) also did not find the evidence that the IFRS adoption reduced the costs of capital for the German companies, from 1993 to 2002.

Nevertheless, Bartov, Goldberg and Kim (2005) demonstrate that the financial reports of the German firms prepared through the USGAAP or IAS have higher value relevance than the ones based on the German GAAP; but they did not find significant differences among the ones elaborated by the IAS and the ones following the USGAAP. However, Van der Meulen, Gaeremynck and Willekens (2007) present results that indicate that there are no significant differences in the value relevance among the financial statements of the German firms elaborated by the IFRS and U.S. GAAP. Schiebel (2007) presents that values of equity based on German GAAP have higher value relevance than the ones measured by the IFRS.

Callao, Jarne, and Lainez (2007) demonstrate that the relevance of the accounting information of the Spanish companies was not affected by the adoption of the IFRS. Paananen (2008), analyzing a sample of financial statements from 2003 to 2006, identified that a decrease occurred in the value relevance of the numbers reported by the Swedish companies. Oliveira, Rodrigues and Craig (2010) also show a reduction in the value relevance in Portuguese firms that adopted the IFRS. Horton and Serafeim (2010) found that the mandatory IFRS adoption altered the perception of the investors of the capital market of the United Kingdom.

Devalle, Onali and Magarini (2010) analyzed the value relevance of 3721 companies listed in the Frankfurt, Madrid, Paris, London and Milan Stock Exchanges, in the period 2002 to 2007. The evidence shows that an increase occurred in the value relevance of the accounting income and of the equity for the German and French firms after the IFRS adoption. A decrease occurred in the value relevance of the accounting income and an increase in the equity in the Italian firms' reports. In the sample of the Spanish companies, a significant increase occurred in the value relevance of the book value of the equity, while for firms of the United Kingdom there was a decrease.

Using a sample of foreigner firms from 21 countries that negotiate assets in the North American capital market, Barth, Landsman and Lang (2008) found a small level of earnings management, greater favorable recognition of bad news and greater value relevance in the accounting numbers in the period after the voluntary IFRS adoption, from 1994 to 2003.

Isidro and Raonic (2012) investigated the relation between the incentives and institutional factors that affect the earnings quality in firms from 26 countries that fully adopted the IFRS in 2005. The sample was basically composed of European companies, besides the ones located in South Africa, Australia, Philippines, Singapore and Venezuela, with accounting data of the social exercises of 2006 and 2007. Among the results obtained, the authors highlight that the quality of the accounting numbers improved in environments with stronger regulated systems, higher level of economic development, higher business sophistication and in more globalized markets. The authors still suggest that the specific incentives of each firm perform a more relevant role in the information content of the financial reports than general institutional factors of each country. Thus, they consider that the global adoption of an only set of accounting standards, singly, will not conduct to the financial statements more comparable and transparent.

Based on a sample of 58 German firms of high technology, which negotiated their assets in the North American market and changed the accounting standard from the IFRS to U.S. GAAP in 2005, Lin, Riccardi and Wang (2012) found that the accounting numbers reported according to the IFRS present, in general, greater volume of earnings management, lesser conservatism and value relevance than the reports based on U.S. GAAP.

Tsalavoutas, André and Evans (2012) presented evidence that the value relevance of the net income and the book value of the equity did not change with the IFRS adoption in Greece. The evidence found in the research of Lang, Raedy and Wilson (2006) and Bradshaw

and Miller (2007) suggest that similar regulatory and legal environments do not assure accounting information with the same level of the informational content.

It is verified that results of these several works are ambiguous. Barth, Landsman and Lang (2008, p.474) explain that “one explanation for the mixed findings in this individual country research is that firms preparing to adopt IAS likely transition gradually, changing accounting amounts based on domestic standards to be closer to those based on IAS”. The researchers still consider that the ambiguity of evidences about the IFRS adoption can be explained because the growing economy lacks infrastructure to demand the application of the IFRS.

Barth, Landsman and Lang (2008) still alert towards the evidences with samples of firms that voluntarily adopted the IFRS, for the voluntarily adoption can be their answers to the changes in the incentives, or simply, adopted the IFRS because they believe that the economic agents perceive the information based on the IFRS as higher quality than the ones guided by local GAAP, but actually aren't. Finally, other explanations may be that the studies differ in the use of control of incentives associated to the use of a particular set of accounting standards by the firms and the effects of the economic environment; besides the use of different metrics, economic and financial data in different periods and several control variables.

Lin, Riccardi and Wang (2012) also explain that the firms at the moment of reconciliation of the accounting numbers may reduce the differences reported between the accounting information by the U.S.GAAP and IFRS, because great differences between both results can increase the uncertainty about the performance of the firm among the participants of the capital market.

However, Wang and Welker (2011) highlight that changes of a set of accounting standards to another can create conditions for the managers to explore real earnings management like funding decisions. According to these authors, the change of the local standard to IFRS alters the representation of the financial position and the firm performance, what lead the investors to reevaluate the value of the firm; but the managers know the effects of the changes to IFRS before the investors, therefore, the adoption of the standards emitted by the IASB create informational asymmetry imposed in a exogenous way between the management and capital providers.

So, the inferences obtained in the studies about earnings quality between the IFRS and the local GAAP may not truly reflect the differences in the information contents among the sets of accounting standards.

3 METHODOLOGY

3.1 Sample selection

This sample is composed by Brazilian and European public firms listed, respectively, on BM&FBovespa and stock exchanges in Europe (Frankfurt, Madrid, Paris and London), in the period 2000-2011, excluded the ones from the financial sector.

3.2 Hypotheses development and research design

Considering the importance of earnings persistence in the process of the performance evaluation of firms and the evidence that these ones are no more persistent than the cash flow, as well as the relevance of understanding the influence of idiosyncrasy of each country in the characteristics of the accounting information, the following research hypotheses were adopted:

Hypothesis 1: The accounting earnings reported by the firms present greater persistence than the cash flows after the IFRS adoption.

Hypothesis 2: The persistent behavior of the accounting earnings in the

financial statements is significantly different between the Brazilian and European public firms after the IFRS adoption.

In order to analyze the earnings and cash flow persistence, the following model used (DECHOW; SCHRAND; 2004; p.12):

$$X_{it+1} = \alpha_0 + \alpha_1 X_{it} + \varepsilon_{it} \quad (1)$$

Where: X_{it+1} is variable of the firm i in the year $t+1$; X_{it} is variable of the firm i in the year t . All the variables are scaled by beginning book value of total assets of firm i in period t .

In order to analyze the earnings persistence, the X_{it+1} and X_{it} variables are replaced, respectively, by the future operational earnings (OE_{it+1}) and the current operational earning (OE_{it}); while in order to evaluate the cash flow persistence, the model's variables described in the equation 1 were replaced by the operational cash flow in the year $t+1$ (CFO_{it+1}) and current year (CFO_{it}). It is considered that the accounting earnings are more persistent than the cash flows when the estimation of the coefficient α_1 is closer to 1. This methodology is consistent with the one adopted by Dechow (1994), Barth, Cram and Nelson (2001) and Dechow and Schrand (2004).

In order to analyze the differences of accounting information characteristics among the environments, it is considered that the sample with the higher estimated coefficient α_1 is the country with the highest level of earnings persistence.

Observing another dimension of the accounting information quality, as exposed previously, it becomes relevant to understand the influence of conservatism, thus, those are the third and fourth hypotheses:

Hypothesis 3: The accounting practices adopted by the firms are significantly more conservative after the IFRS adoption.

Hypothesis 4: The conservative behavior of accounting earnings in the financial statements is significantly different between the Brazilian and European public firms after the IFRS adoption.

For the measurement of conservatism level, the model proposed by Ball and Shivakumar (2005) was used, as described below:

$$\Delta NI_{it} = \alpha_0 + \alpha_1 \Delta NI_{it-1} + \alpha_2 \Delta NI_{it-1} + \alpha_3 \Delta NI_{it-1} * D\Delta NI_{it-1} + \varepsilon_{it} \quad (2)$$

Where: ΔNI_{it} is the change in income from year $t-1$ to t , scaled by beginning book value of total assets; ΔNI_{it-1} is the change in income from year $t-2$ to $t-1$, scaled by beginning book value of total assets; $D\Delta NI_{it-1}$ is an indicator variable taking the value 1 if the prior.

In this model (equation 2), the use of changes in income as an independent variable, has the advantage of providing an adequate specification to identify the earnings' transitory components of the earning (BALL; SHIVAKUMAR, 2005). The hypothesis accepted by the referred authors is that there is less reversal of negative changes of earnings in less conservative firms, reflecting a lower frequency of losses recognition, due to less demand for conservative behavior in the measurement of the accounting information.

It is expected that the coefficient α_2 be equal to zero ($\alpha_2 = 0$), because earnings deferral until the moment in which its cash flow is done make the positive results become a persistent component of the income what tends to be not reversed (BALL; SHIVAKUMAR, 2005, p.95). In the case of the timely recognition, the gains are a transitory component of the earning and tend to be reverted in the subsequent periods. This implies that the coefficient α_2 is less than zero ($\alpha_2 < 0$).

Nonetheless, the loss recognition should be more than the gains which implies that the coefficient α_3 is less than zero ($\alpha_3 < 0$). Using the same idea, the timely recognition of losses results in transitory decrease of earning and, consequently, they must be reverted in the following periods, which imply, initially, that the sum of the coefficients α_2 and α_3 is less than zero ($\alpha_2 + \alpha_3 < 0$).

In order to analyze if there are significant differences in the conservative behavior

among the countries, it is considered that the sample with the smallest estimated sum of coefficients α_2 and α_3 is the country with the highest level of conservatism.

In relation to earnings management dimension, it becomes relevant to identify the level of opportunistic behavior in each business environment and it affects in earnings quality. Therefore, the following hypotheses are highlighted:

Hypothesis 5: The level of earnings management is significantly different after the IFRS adoption in Brazil and in the European Union.

Hypothesis 6: The level of the earnings management is significantly different between the Brazilian and European public firms after the IFRS adoption.

The *proxy* of earnings management used in this paper is a discretionary accrual (DA_{it}) estimated by the models proposed by Pae (2005) and Paulo (2007).

The Pae's model (2005) aims to increase the predictive power of the Jones and Jones Modified models through the inclusion of the variables that represent the operational cash flow and the natural reversion of previous accruals, as described in the Equation 3, as follows:

$$TA_{it} = \alpha_1(1/A_{t-1}) + \beta_1(\Delta R_{it}) + \beta_2(PPE_{it}) + \beta_3(CFO_{it}) + \beta_4(CFO_{it-1}) + \beta_5(TA_{it-1}) + \varepsilon_{it} \quad (3)$$

Where: TA_{it} is total accruals of the firm i in the period t ; ΔR_{it} is the changes of net revenues of the firm i from the period $t-1$ until the period t ; PPE_{it} is gross property, plant, and equipment of the firm i at the of the period t ; A_{it-1} is total assets of the firm i in the period $t-1$; CFO_{it} is operational cash flow of the firm i in the period t ; CFO_{it-1} is the operational cash flow of the firm i in the period $t-1$; TA_{it} is the total accruals of the firm i in the period t . All the variables are scaled by the total assets at the beginning of the period.

Paulo (2007) analyzes several models widely used in the estimation of the discretionary accruals. After identifying the theoretical and empirical problems in these models, the author proposes a specification that in his research obtained a greater predictive power than the others models. This fact is important, because it reduces the possibility of estimating excessively the discretionary accruals, thus giving more reliability in the empirical studies. The referred simplified model is presented by the equation 4:

$$TA_{it} = \alpha + \beta_1(R_{it}) + \beta_2(AI_{it}) + \beta_3(CFO_{it}) + \beta_4(E_{it}) + \beta_5(E_{it}^2) + \beta_6(\Delta E_{it-1}) + \beta_7(D\Delta E_{it-1}) + \beta_8(\Delta E_{it-1} * D\Delta E_{it-1}) + \beta_8(TA_{it-1}) + \varepsilon_{it} \quad (4)$$

Where: TA_{it} is total accruals of the firm i in the period t ; R_{it} is net revenues of the firm i in the period t ; AI_{it} is fixed asset of the firm i at the end of the period t ; CFO_{it} is operational cash flow of the firm i in the period t ; E_{it} is income of the firm i in the period t ; ΔE_{it-1} is change in the income of the firm i in the year $t-2$ to the year $t-1$; $D\Delta E_{it-1}$ is an indicator variable equal to one if there is a negative change in the income of the firm i in the year $t-2$ to the year $t-1$, assuming the value 1 if $\Delta NI_{it} < 0$, and 0 in the other cases; TA_{t-1} is total *accruals* of the firm i in the period $t-1$. All the variables are scaled by the total asset at the beginning of the period.

It is noteworthy that in the final estimate the parameters of the abnormal behavior of the production and operational expense costs were not used due to their statistical insignificance. For both of the models used, the total accruals are calculated as follows:

$$TA_{it} = (\Delta AC_{it} - \Delta Disp_{it}) - (\Delta PC_{it} - \Delta Div_{it}) - Depr_{it} \quad (5)$$

Where: TA_{it} is the total accruals of the firm i in the period t ; ΔAC_{it} is the change of the current assets of the firm i at the end of the period $t-1$ to the end of the period t ; ΔPC_{it} is the change of the current liabilities of the firm i at the of the period $t-1$ to the end of the period t ; $\Delta Disp_{it}$ is the change of the cash of the firm i at the of the period $t-1$ to the end of the period t ; ΔDiv_{it} is the change of the short-term debt of the firm i at the end of the period $t-1$ to the end of the period t ; $Depr_{it}$ is the amount of the depreciation expense of the firm i during the period t ; and all variables are scaled by the total assets at the beginning of the period t . Finally, the discretionary accruals of the firm i in the period t , calculated as follows:

$$DA_{it} = TA_{it} - NDA_{it} \quad (6)$$

Where: DA_{it} is discretionary accruals of the firm i in the period t ; TA_{it} is total accruals of the firm i in the period t (equation 5); NDA_{it} is non-discretionary accruals of the firm i in the period t (equation 3); all variables are scaled by the total assets at the beginning of the period t .

It is considered that the firms that have a greater standard deviation in the discretionary accruals are those that have greater probability of earnings management. The use of the standard deviation of the discretionary accruals, instead of the amount of the discretionary accruals, as a measure of earnings management is because a greater volume of accruals (discretionary and nondiscretionary) can be caused by the particular characteristics of a determined industry.

The analysis of the differences of earnings management among the countries considers that the sample with the greatest standard deviation of discretionary accruals is the one with the biggest probability of the firms to use 'aggressive' accounting practices.

Lastly, it is considered that the peculiar characteristics of each country influence the process of the accounting numbers' measurement, affecting, consequently, the accruals quality. Thus, there is the following hypothesis:

Hypothesis 7: The accruals quality of the public firms is significantly different between Brazil and European countries.

Considering that the amount of accruals is similar to the past and future cash flows plus the estimate of the respective error of adjustment, Dechow and Dichev (2002) proposed an operational model for the measurement of the quality of accruals:

$$\Delta WC_t = \sigma_0 + \beta_1(CF_{t-1}) + \beta_2(CF_t) + \beta_3(CF_{t+1}) + \square_t \quad (7)$$

Where: ΔWC_t is the change of the working capital accruals of the firm i from the period $t-1$ to the period t ; CF is the cash flow of the periods $t-1$, t and $t+1$; all the variables are scaled by the total assets of a period prior.

Based on equation 7, the accruals errors (residuals) are the accruals that are not related in the realization of the cash flows and their standard deviation is the measure for the accruals quality (DECHOW; DICHEV, 2002). Thus, it is considered that the country that has the highest standard deviation of the accruals has also the lesser quality information amount them.

In order to reach the objectives of this paper, all the parameters of the models previously described were estimated before and after the adoption of the IFRS, thus, the impact of these ones over the accounting numbers reported by the Brazilian and European public firms can be compared. There are advantages and disadvantages when analyzing each country singly, as it reduces the need to use control variables that potentially must capture the effects of the idiosyncrasy of each country not related to the accounting system.

The analyze of earnings persistence, conservatism level, discretionary accruals and accruals quality are significantly different among the countries analyzed on this research, therefore, the tests of hypotheses were carried out to search differences between the means F ANOVA (parametric) and Kruskal-Wallis (non-parametric), as well as the test *post hoc* of Gabriel or the Mann-Whitney test.

4 ANALYSIS OF RESULTS

Initially, the hypothesis 1 was analyzed, which refers to the earnings and cash flow persistence. Due to the limit of pages, the parameters' estimates and statistical tests cannot be presented with greater detailing, however, when a problem of heteroscedasticity occurred, the standard errors were corrected by White, and in case there was a problem of autocorrelation, it was corrected by Newey-West. In the table 1 the parameters' estimates of the earnings persistence are presented (panel A) and also the operational cash flows (panel B) for all the years of the sample.

Based on the estimates presented in table 1, it is verified that there was a reduction in the earnings persistence reported by the Brazilian firms after the IFRS adoption, making that the cash flow persistence in the same period is superior to the earnings. The R^2 for the sample with the Brazilian firms varied between 0.053 and 0.556, being the explanatory power was better than the period between 2001 and 2005.

On the other hand, this behavior of the earnings and cash flow persistence was not observed in the European public firms, and there is a constant behavior during the period analyzed, except for the year 2010 in the sample with the German firms. Basically for all the European countries, the earnings were more persistent than their operational cash flows, suggest that are better indicators for the prediction of the future performance.

Table 1 – Earnings Persistence and Cash Flow Persistence - Estimates of parameters OE_{it} e CFO_{it}

	Brazil		France		Germany		Italy		UK	
	coefic.	<i>p-value</i>								
Panel A – Earnings Persistence										
2000	0.629	0.000	0.727	0.000	0.974	0.000	0.526	0.000	0.804	0.000
2001	0.814	0.000	0.815	0.000	0.560	0.000	0.885	0.000	0.690	0.000
2002	0.481	0.000	0.588	0.000	0.686	0.000	0.698	0.000	0.704	0.000
2003	1.634	0.031	0.747	0.000	0.401	0.000	0.756	0.000	0.675	0.000
2004	0.759	0.000	0.622	0.000	0.603	0.000	0.803	0.000	0.735	0.000
2005	0.724	0.000	0.728	0.000	0.632	0.000	0.695	0.000	0.717	0.000
2006	0.435	0.088	0.719	0.000	0.669	0.000	0.922	0.000	0.741	0.000
2007	0.650	0.097	0.826	0.000	0.899	0.000	0.781	0.000	0.710	0.000
2008	0.274	0.391	0.781	0.000	0.533	0.000	0.615	0.000	0.825	0.000
2009	0.176	0.005	0.706	0.000	0.672	0.000	0.784	0.000	0.648	0.000
2010	0.372	0.000	0.734	0.000	0.252	0.165	0.758	0.000	0.800	0.000
Panel B – Cash Flow Persistence										
2000	0.352	0.000	0.383	0.000	0.454	0.000	0.245	0.000	0.689	0.000
2001	0.306	0.008	0.478	0.000	0.687	0.000	0.559	0.000	0.599	0.000
2002	0.254	0.057	0.440	0.000	0.495	0.000	0.228	0.000	0.610	0.000
2003	0.500	0.000	0.456	0.000	0.430	0.000	0.258	0.000	0.585	0.000
2004	0.621	0.000	0.434	0.000	0.473	0.000	0.435	0.000	0.538	0.000
2005	0.380	0.000	0.391	0.000	0.500	0.000	0.441	0.000	0.578	0.000
2006	0.528	0.000	0.258	0.000	0.449	0.000	0.617	0.000	0.667	0.000
2007	0.161	0.000	0.470	0.000	0.697	0.000	0.599	0.000	0.642	0.000
2008	0.606	0.000	0.517	0.000	0.410	0.000	0.389	0.000	0.622	0.000
2009	0.483	0.000	0.414	0.000	0.521	0.000	0.566	0.000	0.654	0.000
2010	0.708	0.000	0.644	0.000	0.601	0.000	0.486	0.010	0.689	0.000

Earnings persistence model – Panel A (equation 1): $OE_{it+1} = \alpha_0 + \alpha_1 OE_{it} + \varepsilon_{it}$;

where: OE_{it+1} is future operational earnings of the firm i in the period $t+1$; OE_{it} is current operational earning of the firm i in the period t .. All the variables are scaled by beginning book value of total assets of firm i in period t .

Cash flow persistence model– Panel B (equation 1): $CFO_{it+1} = \alpha_0 + \alpha_1 CFO_{it} + \varepsilon_{it}$;

where: CFO_{it+1} is operational cash flow of the firm i in the period $t+1$; CFO_{it} is operational cash flow of the firm i in the period t . All the variables are scaled by beginning book value of total assets of firm i in period t

Thus, the first hypothesis of this research was not confirmed, for the earnings did not become more persistent after the adoption of the standards emitted by the IASB, so in the case of the Brazilian firms occurred a reduction in these parameters. One of the possible

explanations for this behavior of the sample of the Brazilian firms is that the IFRS adoption in Brazil coincides with the aggravation of the world financial crisis initiated in 2007, that when added to the necessary adjustments to report the numbers in the financial statements according to the international rules widened the volatility of the results published. It is verified that there was also a reduction in the earnings persistence in the German firms in 2010.

Regarding the second hypothesis, as it can be observed in table 2, the earnings persistence between the European and Brazilian firms is not significantly different in the period before the adoption of the IFRS, however, from the IFRS adoption in Europe and in Brazil, the earnings become significantly different on average. This evidence rejects the hypothesis 2 of this research. The adoption of the international rules, besides the comparability, sought the improvement in quality; this fact cannot be observed in the results regarding the earnings persistence. Nevertheless, it is important to highlight that the period of the crisis that started in 2007, which still has reflections in the whole world today, may have influenced in the results presented in this paper.

Table 2 - Earnings Persistence – Before and After IFRS

	Before IFRS adoption		After IFRS adoption	
	coefficient	<i>p-value</i>	coefficient	<i>p-value</i>
Kolmogorov-Smirnov	0.225	0.001	0.211	0.003
Shapiro-Wilk	0.764	0.000	0.839	0.001
Levene	1.233	0.325	1.695	0.187
Kruskal-Wallis	1,982	0.739		
ANOVA			10.164	0.000

After rejecting the hypothesis that the after the IFRS adoption there were significant differences in the earnings persistence, there was the analysis with the test *post hoc* of Gabriel, indicating that to the level 5%, only Brazil has the earnings persistence different from the European countries (statistics omitted because little numbers of pages).

Thus, the two hypotheses of this research were not confirmed, because the accounting earnings did not become more persistent after the adoption of the rules emitted by the IASB, so in the case of the Brazilian firms a reduction of these parameters occurred, and there was not similarity in the means of these parameters. It is verified that there was also a reduction in the earnings persistence in the German firms in 2010.

According Ball and Shivakumar, when the coefficient $\Delta NI_{it-1} * \Delta NI_{it-1} (\alpha_3)$ is negative and significant, it indicates that a reversion of the losses, suggesting a conservative practice by the firms. In Table 3, it is observed that the coefficients for almost all the years are negative and significant. The only positive and significant estimates are for the German firms in 2001 and for the French firms in 2006. These results indicate that the reported income by the European firms is conservative.

On the other hand, it is observed that the sample with the Brazilian public firms only in 3 years, the coefficients are negative and significant, so most of them are not statistical significant (positively or negatively). So, it cannot confirm that the Brazilian firms' earnings are conservative.

Verifying the evolution of this parameter during the period, it can be observed that there were not significant changes in all the analyzed countries, what makes that there is no confirmation of the hypothesis 3 in this research. Therefore, the IFRS adoption did not affect significantly the level of conservatism of the Brazilian and European firms. This result is different from what was found by Barth, Landsman and Lang (2008), in the North American market, for there was an increase in the conservatism, and in the work of Lin, Riccardi and Wang (2012) that in Germany they found a decrease in the conservatism. It is noteworthy that as the p-value of the ANOVA increased after the IFRS adoption, the conservatism became

more similar among the countries.

Table 3 – Conservatism - Estimates of parameter $\Delta NI_{it-1} * D\Delta NI_{it-1} (\alpha_3)$

	Brazil		France		Germany		Italy		UK	
	coefic.	p-value								
2001	0.404	0.350	-0.324	0.025	0.460	0.018	0.962	0.142	-0.303	0.029
2002	1.233	0.002	-0.707	0.026	0.063	0.714	0.279	0.277	-0.426	0.000
2003	0.099	0.832	-0.609	0.000	-0.436	0.002	-0.453	0.000	-0.668	0.000
2004	-0.503	0.035	-0.043	0.035	-0.244	0.151	-0.818	0.006	-0.629	0.000
2005	-0.879	0.000	-0.561	0.017	-0.584	0.001	-0.464	0.000	-0.294	0.073
2006	0.678	0.000	0.078	0.431	-0.305	0.060	-0.919	0.000	-0.320	0.005
2007	0.464	0.009	-0.386	0.007	-0.156	0.426	0.070	0.717	-0.125	0.425
2008	-0.021	0.413	-0.544	0.000	0.320	0.128	-0.408	0.047	-0.564	0.000
2009	-1.195	0.000	-0.145	0.570	-0.518	0.032	-0.529	0.052	-0.290	0.002
2010	0.186	0.449	-0.728	0.002	-0.813	0.000	-0.487	0.015	-0.583	0.000
2011	-0.406	0.554	-0.633	0.000	-0.265	0.095	-0.965	0.011	-0.363	0.000

Conservatism model (equation 2): $\Delta NI_{it} = \alpha_0 + \alpha_1 D\Delta NI_{it-1} + \alpha_2 \Delta NI_{it-1} + \alpha_3 \Delta NI_{it-1} * D\Delta NI_{it-1} + \varepsilon_{it}$ (2)

Where: ΔNI_{it} is the change in income from year $t-1$ to t , scaled by beginning book value of total assets; ΔNI_{it-1} is the change in income from year $t-2$ to $t-1$, scaled by beginning book value of total assets; $D\Delta NI_{it-1}$ is an indicator variable taking the value 1 if the prior

Additionally, it can be observed that accounting conservatism before the IFRS adoption in Brazil and Europe does not have difference, on average, because, as presented in table 4, the Brazilian firms reported earnings with a conservatism level similar to the firms listed in all the European countries, therefore, also, there are not significant differences among the firms listed in Europe. This same result was found when the level of conservatism was evaluated after the IFRS adoption.

Table 4 - Conservatism – Before and After IFRS

	Before IFRS adoption		After IFRS adoption	
	coefficient	p-value	coefficient	p-value
Kolmogorov-Smirnov	0.172	0.915	0.087	0.200
Shapiro-Wilk	0.033	0.026	0.099	0.980
Levene	2.592	0,063	1.301	0.301
ANOVA	1.692	0.186	0.380	0.821

The third attribute of quality of accounting information analyzed in this research was the earnings management, being the discretionary accruals like the proxy of opportunistic behavior. In table 5 the tests are presented to analyze the differences between the standard deviation of the discretionary accruals estimated according to the models of Pae (2005) and Paulo (2007). It is noteworthy that due to the limitation of pages, all the estimates of parameters and tests referred to regressions described in equations 3 and 4 could not be presented.

Table 5 - Earnings Management– Before and After IFRS

	Pae Model		Paulo Model	
	Coefficient	<i>p-value</i>	coefficient	<i>p-value</i>
Panel A1 – Before IFRS adoption				
Kolmogorov-Smirnov (Shapiro-Wilk)	0.327 (0.631)	0.000 (0.000)	0.122 (0.932)	0.200 (0.095)
Levene	12.168	0.000	0.568	0.689
Kruskal-Wallis	2.534	0.638		
ANOVA			3.188	0.035
Panel A2 – Complete period (Gabriel's as <i>post hoc</i>)				
Brazil x France			0.008	1.000
Brazil x Germany			-0.008	1.000
Brazil x Italy			0.026	0.796
Brazil x United Kingdom			-0.036	0.422
France x Germany			-0.017	0.981
France x Italy			0.017	0.973
France x United Kingdom			-0.044	0.198
Germany x Italy			0.035	0.467
Germany x United Kingdom			-0.027	0.752
Italy x United Kingdom			-0.062	0.025
Panel B1 – After IFRS adoption				
Kolmogorov-Smirnov	0.190	0.005	0.166	0.024
Shapiro-Wilk	0.831	0.000	0.802	0.000
Levene	5.511	0.002	6.169	0.001
Kruskal-Wallis	13.547	0.009	9.524	0.000
Panel B2 – After IFRS adoption (Mann-Whitney as <i>post hoc</i>)				
Brazil x France	-2.268	0.023	-2.457	0.014
Brazil x Germany	-1.890	0.059	-2.646	0.008
Brazil x Italy	-1.189	0.850	-2.646	0.008
Brazil x United Kingdom	-1.134	0.257	-2.079	0.038
France x Germany	-2.747	0.006	-1.086	0.277
France x Italy	-1.342	0.180	-0.064	0.949
France x United Kingdom	-2.108	0.035	-2.364	0.018
Germany x Italy	-2.108	0.035	-1.597	0.110
Germany x United Kingdom	-2.364	0.018	-1.725	0.085
Italy x United Kingdom	-0.192	0.848	-2.619	0.009

Observing tests estimations by the Paulo model (2007), the standard deviations of the discretionary accruals by the Brazilian and European firms are significantly different from one another (Table 5 Panel A). By the test of Gabriel it was found that the difference occurs between the firms of Italy and the United Kingdom. By the model of Pae (2005) evidence of differences in the earnings management were not found.

After the IFRS adoption, the standard deviations estimated by the Pae model (2005) presented that the opportunistic behavior is divergent among half of the analyzed cases. Through estimates from the Paulo model (2007), the Brazilian firms have a level of earnings management divergent from the European firms, also occurring divergences among the European countries: France and United Kingdom, and Italy and United Kingdom. Before this evidence it cannot be corroborated that after the international rules, the European and Brazilian firms have the same discretionary behavior in their accounting reports.

As the results showed that the differences in the level of earnings management before the IFRS adoption remained after the adoption, in general, these results diverge, for example, from the ones found by Barth, Landsman and Lang (2008), who found a lesser level of earnings management, after the voluntarily adoption of the USA, and Lin, Riccardi and Wang (2012) who found a higher level of earnings management in the German firms, when compared to the disclosures made based on the USGAAP.

Analyzing the quality of the accruals through the Dechow and Dichev model (2002) it can be observed that before the IFRS adoption there were no significant differences in the accruals quality. However, opposing what it was expected, after the IFRS adoption differences were found, which, posteriorly, by the test of Mann-Whitney was identified in Italy with Germany and the United Kingdom.

Table 6 – Accruals Quality– Before and After IFRS

	Dechow-Dichev Model	
	Coefficient	p-value
Panel A1 – Before IFRS adoption		
Kolmogorov-Smirnov (Shapiro-Wilk)	0.498 (0.243)	0.000 (0.000)
Levene	10.814	0.000
Kruskal-Wallis	7.175	0.127
Panel B1 – After IFRS adoption		
Kolmogorov-Smirnov (Shapiro-Wilk)	0.392 (0.291)	0.000 (0.000)
Levene	4.789	0.006
Kruskal-Wallis	11.656	0.020
Panel B2 – After IFRS adoption (Mann-Whitney as <i>post hoc</i>)		
Brazil x France	-0.775	0.439
Brazil x Germany	-1.291	0.197
Brazil x Italy	-1.549	0.121
Brazil x United Kingdom	-1.033	0.302
France x Germany	-1.281	0.200
France x Italy	-1.922	0.055
France x United Kingdom	-1.281	0.200
Germany x Italy	-2.562	0.010
Germany x United Kingdom	-0.801	0.423
Italy x United Kingdom	-2.722	0.006

5 FINAL CONSIDERATIONS

The quality of the accounting information is related to the economic, political and social environment in which firms are inserted, besides other factors as maturity of capital market, regulation level and professional education. In 2005, there was the initiation of the process of IFRS convergence in Europe which aimed to increase the quality and comparability of the accounting information, but it also raises the question about whether this goal was achieved. The results of studies carried out about this issue were divergent, and there was no consensus about the effective quality improvement in accounting numbers. Thus, this article aimed to analyze the effect of IFRS convergence examining the accounting information quality reported by Brazilian and European public firms, during the period of 2000-2011, through the analysis of the earnings and cash flow persistence, conservatism and earnings management.

The results presented in this paper demonstrated that the adoption of international accounting standards, both in Brazil and Europe, did not increase the quality of the accounting

information, on average. Nevertheless, it must be important to consider that the period of evaluation after the adoption of the IFRS may have been influenced by the financial crises that occurred after 2005. Thus, it is relevant to analyze of the adoption of the IFRS in a wider sample, incorporating other institutional and organizational characteristics of the firms related to each specific economic environment, as well as macroeconomic effects that interfere in the behavior of the earnings reported by the firms. It is recommended, additionally, that other characteristics related to accounting information be evaluated in future studies, such as value relevance and transparency which have not been measured in this paper, as well as try to control the effects of other variables that may interfere in the information quality such as firm's economic environment, the main capital sources, capital market maturity etc.

REFERENCES

- ALI, Ashiq; HWANG, Lee S. Country-specific factors related to financial reporting and the value relevance of accounting data. *Journal of Accounting Research*, Chicago, v. 38, n.1, p.1-21. spr. 2000
- BALL, Ray. Discussion: The association between firms' value and accounting numbers after adoption of fresh start reporting. *Journal of Accounting, Auditing and Finance*, New Jersey, v. 14, n. 3, p.212-218, jul. 1999.
- BALL, Ray; SHIVAKUMAR, Lakshmanan. Earnings quality UK private firms: comparative loss recognition timeliness. *Journal of Accounting and Economics*, New York, v. 39, n.1, p.83-128, feb. 2005.
- BARTOV, Eli; GOLDBERG, Stephen R.; KIM, Myungsun. Comparative value relevance among German, U.S., and international accounting standards: a German stock market perspective. *Journal of Accounting, Auditing and Finance*, New Jersey, v. 20, n. 2, p. 95-119, apr. 2005.
- BARTH, Mary E.; CRAM, Donald P.; NELSON, Karen K. Accruals and the prediction of future cash flows. *The Accounting Review*, Sarasota, v. 76, n. 1, p.27-58, jan. 2001.
- BURGSTÄHLER, David C.; HAIL, Luzi; LEUZ, Christian. The importance of reporting incentives: earnings management in European private and public firms. *The Accounting Review*, Sarasota, v. 81, n.5, p.983-1016, oct. 2006.
- CALLAO, Susana; JARNE, José I.; LAINEZ, José A. Adoption of IFRS in Spain: Effect on the comparability and relevance of financial reporting. *Journal of International Accounting, Auditing and Taxation*, Villanova, v. 16, n. 2, p. 148-178, jan. 2007.
- DASKE, H. Economic benefits of adopting IFRS or US-GAAP – Have the expected cost of equity capital really decreased? *Journal of Business Finance and Accounting*, Manchester,, v.33, n.3-4, p.329-373, apr. 2006.
- DECHOW, Patricia M. Accounting earnings and cash flows as measures of firm performance: the role of accounting accruals. *Journal of Accounting and Economics*, New York, v. 18, n.1-2. p.3-42, jan. 1994.
- DECHOW, Patricia M.; DICHEV, Iliia D. The quality of accruals and earnings: the role of accrual estimation errors. *The Accounting Review*, Sarasota, v. 77, n.4, p.35-59, supl. 2002.
- DECHOW, Patricia M.; GE, Weili; SCHRAND, Catherine. M. Understanding earnings quality: a review of proxies, their determinants and their consequences. *Journal of Accounting and Economics*, New York, v. 50, n. 2-3, p. 344-401, dec. 2010.
- DECHOW, Patricia M.; SCHRAND, Catherine M. Earnings quality. Charlottesville

(Virginia): CFA Institute, 2004.

DECHOW, Patricia M.; SKINNER, Douglas J. Earnings management: reconciling the views of accounting academics, practitioners, and regulators. *Accounting Horizons*, Sarasota, v. 14, n.2, p.235-250, jun. 2000.

DEVALLE, Alain; ONALI, Enrico; MAGARINI, Riccardo. Assessing the value relevance of accounting data after the introduction of IFRS in Europe. *Journal of International Financial Management and Accounting*, Sidney, v. 21, n.2, p. 85-119, sum. 2010.

EWERT, Ralf; WAGENHOFER, Alfred. Economic effects of tightening accounting standards to restrict earnings management. *The Accounting Review*, Sarasota, v. 80, n.4, p.1101-1124, oct. 2005.

GINER, Begoña; REES, William. On the asymmetric recognition of good and bad news in France, Germany and the United Kingdom. *Journal of Business Finance and Accounting*. Manchester, v.28, n.9-10 p.1285-1331, nov./dec. 2001.

HORTON, Joanne; SERAFEIM, George. Market reaction to and valuation of IFRS reconciliation adjustments: first evidence from the UK. *Review of Accounting Studies*, Vancouver, v. 15, n. 4, p 725-751, dec. 2010.

LOPES, Alexandre B. A informação contábil e o mercado de capitais. São Paulo: Pioneira Thomson Learning, 2002.

MARTINEZ, Antônio Lopo. Gerenciamento dos resultados contábeis: estudo empírico das companhias abertas brasileiras. 2001. 274f. Tese (Doutorado em Ciências Contábeis) – Programa de Pós-Graduação em Ciências Contábeis, Departamento de Contabilidade e Atuária, Faculdade de Economia, Administração e Contabilidade da Universidade de São Paulo, São Paulo, 2001.

PAE, Jinhan. Expected accrual models: the impact of operating cash flows and reversals of accruals. *Review of Quantitative Finance and Accounting*, Dordrecht, v. 24, n. 1, p.5-22, feb. 2005.

PALEPU, Krishna G.; HEALY, Paul M.; BERNARD, Victor L. Business analysis and valuation: using financial statements. 3. ed. Ohio: Thomson Learning, 2004.

PAULO, Edilson. Manipulação das informações contábeis: uma análise teórica e empírica sobre os modelos operacionais de detecção de gerenciamento de resultados. 2007. 260 f. Tese (Doutorado em Ciências Contábeis). Curso de Pós-Graduação em Ciências Contábeis, Universidade de São Paulo, São Paulo, 2007.

POPE, Peter F.; WALKER, Martin. International differences in the timeliness, conservatism, and classification of earnings. *Journal of Accounting Research*, Chicago, v. 37, supl., p.53-87, 1999.

WAGENHOFER, Alfred. Accounting and economics: what we learn from analytical models in financial accounting and reporting. In: LEUZ, Christian et al (Org.). *The economics and politics of accounting international: perspectives on research trends, policy, and practice*. New York: Oxford University Press, 2004.

VAN DER MEULEN, Sofie; GAEREMYNCK, Ann; WILLEKENS, Marleen. Attribute differences between U.S. GAAP and IFRS earnings: An exploratory study. *The International Journal of Accounting*, Illinois, v.42, n.2, jun. p.123-142, 2007.

VAN TENDELOO, B.; VANSTRAELEN, A. Earnings management under German GAAP versus IFRS. *European Accounting Review*, Brussels, v.14, n.1, mar. 2005.