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IFRS AND STOCK RETURNS: AN EMPIRICAL ANALYSIS IN BRAZIL

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ABSTRACT

In recent years, the convergence of accounting standards has been an issue that motivated new studies in the accounting field. It is expected that the convergence provides users, especially external users of accounting information, with comparable reports among different economies. Considering this scenario, this article was developed in order to compare the effect of accounting numbers on the stock market before and after the accounting convergence in Brazil. The sample of the study involved Brazilian listed companies at BM&FBOVESPA that had American Depository Receipts (levels II and III) at the New York Stock Exchange (NYSE). For data analysis, descriptive statistics and graphic analysis were employed in order to analyze the behavior of stock returns around the publication dates. The main results indicate that the stock market reacts to the accounting reports. Therefore, the accounting numbers contain relevant information for the decision making of investors in the stock market. Moreover, it is observed that after the accounting convergence, the stock returns of the companies seem to present lower volatility.

Keywords: stock market, stock returns, listed companies, Brazilian firms, IFRS

INTRODUCTION

On International Financial Reporting Standard (IFRS) website, it can be found that the aim of IFRS is to "bring transparency, accountability and efficiency to financial markets around the world" (IFRS Foundation, 2016). IFRS adoption and the effects of its adoption have been studied in the field of accounting and finance (Barbosa Neto, Dias & Pinheiro, 2009; Lima, 2010; Hail, Leuz, & Wysocki, 2010; Mala & Chand, 2012; Morris *et al*., 2014; Kaya & Pillhofer, 2013; Malaquias & Lemes, 2013; Malaquias & Lemes, 2015).

The effect of accounting numbers on the stock market was found to be significant in previous research. In this area, the writers can highlight the study of Ball and Brown (1968), which analyzed the usefulness of accounting numbers. Therefore, the writers observe that annual accounting numbers contain relevant information, but interim reports and more prompt media also have a relevant role in the dissemination of accounting information (Ball & Brown, 1968).

After the implementation of IFRS, the changes in financial statements such as fair value adoption and goodwill recognition affect the net income of organizations. These changes are especially relevant in an emerging market like Brazil, where the standards regarding these operations were different before IFRS adoption. In turn, these changes have relevant content to external users of financial reports, such as investors (Maria Jr. & Maria, 2015), since the relevance of accounting information in Brazil increased after IFRS adoption (Lima, 2010).

Accounting harmonization contributes with decision making and firms' competitiveness, which can present a positive effect on the efficiency of resources allocation (Hail, Leuz, & Wysocki, 2010).

As the accounting reports are relevant for the analysis of evaluators and financial analysts, it is important accessing information without biases and with high quality, in order to better evaluate the conditions of a given company (Healy & Palepu, 2001; Lee, 2001; Lucena & Pinto, 2008; Martinez, 2009; Almeida & Pinheiro, 2010). Furthermore, capital mobility across different countries is affected by financial accounting regulations (Medeiros & Quinteiro, 2008). Several studies converge on the need for comparable financial statements. In this way, information disclosed by firms will be considered material both for the domestic and international markets. The quality of accounting information can present influences in a set of variables. For example, according to Lambert *et al.* (2007), “the link between accounting information and the cost of capital of firms is one of the most fundamental issues in accounting. Standard setters frequently refer to it”(p. 385-386).

In this article, the effect of accounting numbers on the stock market of an emerging economy: Brazil is analyzed. The sample period comprises the years from 2007 to 2013, thus the effects of accounting convergence, mandatory in the year of 2010 for Brazilian listed firms can be studied. Based in this context, the aim in this paper is to compare the effect of accounting numbers on the stock market before and after the accounting convergence in Brazil. The stock market contains users interested in the information on accounting reports published by firms (Pessotti & Costa, 2013), which highlight the relevance of this research. In Brazil, listed firms trade their stocks at the Bolsa de Valores, Mercadorias e Futuros de São Paulo (BM&FBOVESPA). Some companies are also listed in other capital markets, such as those Brazilian firms that have American Depositary Receipts (ADRs) at the New York Stock Exchange (NYSE). These Brazilian companies were subject to analysis in this paper, specifically those that trade ADRs (levels II and III).

An international cross-listing represents a non-mandatory action by firms. With cross-listing, firms can access global capital markets, enhance visibility with media/financial analysts, and increase liquidity (Karolyi, 2004). Through ADRs, companies can access the US stock market. “An ADR is a negotiable certificate, a receipt issued by a U.S. depositary that represents ownership of shares of securities of a foreign private issuer”; these shares are deposited by the holder and held by the depositary (Lander, 1995). Domestic US investors can save transaction costs of diversification when they include ADRs in their portfolio (Choi & Kim, 2000) since they can buy these securities like the other securities available in US capital market (Patro, 2000). Therefore, two major advantages of ADRs for US investors are convenience and cost (Lander, 1995).

The market efficiency has attracted a large body of academic research (Hiremath & Narayan, 2016). The theory of market efficiency also involves the stock market, which, “is important in an economy because of its role in facilitating between surplusfund unit (investors) and deficit fund unit (stock issuers) to trade” (Fauzi & Wahyudi, 2016). It is also important to note the relevance of stock market interactions (Narayan, Doytch, Nguyen, & Kluegel, 2016) and financial market integration since both benefits the development of a given financial system (Al Nasser & Hajilee, 2016). There is a positive relationship between stock market development and economic development (Karolyi, 2004). Nevertheless, “Market liberalization and capital market integration do not necessarily lead to an improvement in market efficiency” (Graham, Peltomäki, & Sturludóttir, 2015). During crash events, factors such as market risk, market capitalization, volatility, leverage and profitability are useful to understand the variations in the value of firms in the stock market (Fauzi & Wahyudi, 2016). Furthermore, politicians’ issues contain information that helps in analyzing the behavior of stock returns (Wisniewski, 2016). In this article, there are evidences that accounting convergence is another factor that seems to affect the relationship between accounting numbers and stock returns of emerging economies.

METHODS

The writers can highlight important measures in order to align the local accounting standards of Brazil to the international accounting standards, from International Accounting Standards Board (IASB). One of them occurred in 2005, is the establishment of the board called Comitê de Pronunciamentos Contábeis (CPC). The Brazilian Laws no. 11,638 (from 2007) and 11,941 (from 2009) made substantial changes in the accounting standards for listed companies. Therefore, the accounting reports for the year of 2010 should be published following the new standards (CVM, 2007). Based on these new requirements, the data are collected for the period before the convergence (2007, 2008, 2009, and 2010) and after the convergence (2011, 2012, and 2013).

The sample of the study comprises Brazilian companies that have ADRs at NYSE, levels II and III. The data are obtained from the websites of Comissão de Valores Mobiliários (CVM) and BM&FBOVESPA, as well as from the Economatica database. In these sources, public information regarding net profit, equity, total of assets, operational income, and daily returns of stocks is accessed. With this information, It can be calculated the ROA (Return on Assets), through the quotient between net profit and total of assets. The writers ranked all firms, by year, based on their ROA index. This index can be used because “textbooks on financial statement analysis exposure the importance of the rate of return on assets as a useful measure for evaluating the operation and investing performance of a firm” (Selling & Stickney, 1989).

Each company published its accounting report on a specific date. In this way, it is necessary to standardize the dates of publication, enabling the comparison of daily stock returns. To do so, the effective date of publication of accounting reports as day zero (d0) was considered. For example, if company A published its accounting reports on March 30, this is the d0 for this company. If company B published on March 15, this is the d0 for company B, and so on. This procedure was necessary to standardize the observations for the purpose of comparison of stock returns around the publication of the accounting reports. After standardizing all dates, the average returns of stocks (day by day) for the 60 days before and 60 days after the publication of accounting reports were estimated. Finally, graphics were generated in order to analyze the behavior of stock returns around the publication dates. In these analyses, the accumulated returns were used. These graphics and analyses were developed through electronic spreadsheets.

The returns used in this article are based only on ordinary stocks, which represent a limitation for the results. Furthermore, we only analyze data from companies that issue levels II and III of ADRs at NYSE. This is a specific group of Brazilian companies since BM&FBOVESPA contains diverse types of firms, with other sizes and economic sectors. Nevertheless, it is understood that, even with these limitations, the results indicate a panorama about some effects of IFRS adoption on the Brazilian stock market.

RESULTS AND DISCUSSIONS

There is an expectation regarding some improvements in the level of disclosure and comparability after IFRS adoption in Brazil. Previous research (Lima, 2010; Maria Jr. & Maria, 2015) indicated that, in Brazil, there was a change in the accounting indexes, as well as in the quality of accounting information after IFRS adoption. So, it is expected to observe some difference in the behavior of stocks returnsdue the publication of accounting reports.

The descriptive analysis indicates that, before accounting convergence (Figure 1), the reaction of the stock market for good news (companies with good indexes for ROA) was slowly tha n it was after the convergence. It can be seen that the accumulated average returns of stocks around the day of accounting reports publication (d0) remains at equivalent levels during ten days after and ten days before the publication (period: 2007-2010, Figure 1). On the other hand, after the convergence (Figure 2), it seems to be an increment on the accounting reports information (based on the index for ROA), since companies with higher ROA indexes also presented higher stock returns.

Therefore, the price of the shares of these companies in the financial market increased around the publication of their accounting reports with good news (Figure 2). In line with previous research (Ball & Brown, 1968), the results of this paper also indicate the role of other sources of information, since the increase in the price of the shares started some days before the report's publication.

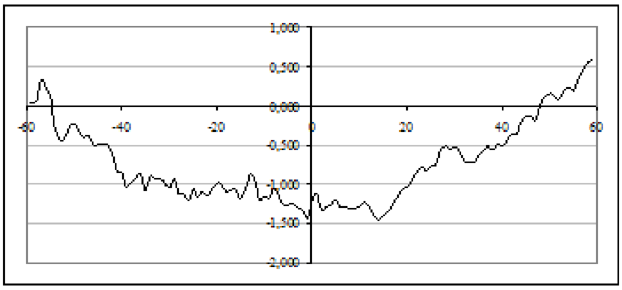

Figure 1 Accumulated Returns of Stocks from the Five Companies with Highest Values of ROA (Period: 2007-2010)

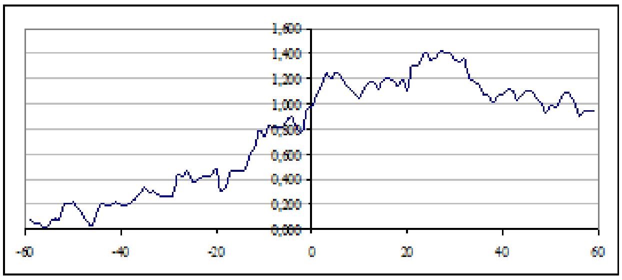

Figure 2 Accumulated Returns of Stocks from the Five Companies with Highest Values of ROA (Period: 2011-2013)

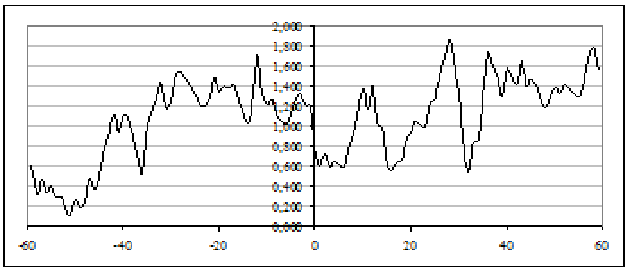

Figure 3 Accumulated Returns of Stocks from the Five Companies with Lowest Values of ROA (Period: 2007-2010)

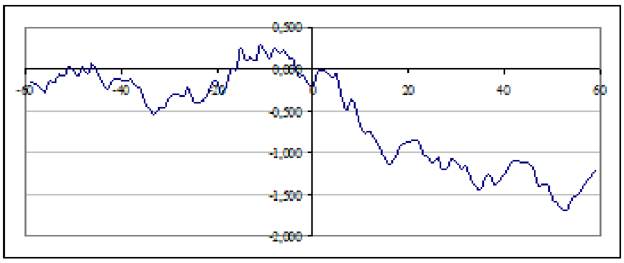

Figure 4 Accumulated Returns of Stocks from the Five Companies with Lowest Values of ROA (Period: 2011-2013)

In Figures 3 and 4, it can be observed that the reaction of the stock market to bad news (companies with lower indexes of ROA) occurred faster before convergence (Figure 3). However, the volatility of the returns of these companies seems to be higher than it was after the convergence. Figure 3 also indicates that other relevant information regarding these companies (with lower indexes of ROA) were available for the financial market since the prices of their shares increased and decreased in the days that followed the publication of accounting reports.

After the convergence, the prices of stocks from companies with lower values of ROA tended to decrease slowly after the publication of accounting reports (Figure 4). Nevertheless, it is important to note that the volatility of these returns was also lower after the reports publication. This result can indicate that the reports published after the convergence can also contribute to mitigate higher indexes of volatility in stock returns, both for companies with good news (Figure 2) and for companies with bad news (Figure 4).

With the descriptive analysis, the evidence can be found about the relevance of accounting numbers to the Brazilian stock market. These results reinforce and complement previous research in this field (Lima, 2010; Malaquias & Lemes, 2013; Maria Jr. & Maria, 2015; Malaquias & Lemes, 2015). Results also corroborate with the relevance of the rate of return on assets (Selling & Stickney, 1989) as a measure of firms performance. In turn, changes in the value of ROA have relevant content to external users of financial reports, such as investors (Maria Jr. & Maria, 2015), since the relevance of accounting information in Brazil increased after IFRS adoption (Lima, 2010).

According to the arguments and discussion, the convergence to IFRS increases the benefits of accounting reports for the efficiency of resources allocation in the financial market. There are also benefits for the accuracy in fair value measurement, an important concept for assets evaluation.

CONCLUSIONS

The stock market has an important role in economic growth and development. In this paper, the writers address the reaction of stock returns to the publication of accounting numbers, before and after the accounting convergence to IFRS in Brazil. Using a sample of listed companies that have shares traded both at BM&FBOVESPA and at NYSE (ADRs, levels II and III), it is observed that the accumulated average returns of stocks in a window of 120 days: 60 days before d0 (the date in which each company published its accounting reports) and 60 days after d0.

The results indicate that the accounting numbers presented a significant effect in the Brazilian financial market. The investors seem to react positively when companies obtain good indexes for ROA (Return on Assets) and negatively when they disclose lower indexes for ROA. Based on the analysis that was carried out, it can be indicated that two potential effects of accounting convergence to international standards.

The first effect is that after the convergence, investors in the financial market seem to estimate the fair value of assets (considering that each share in the financial market represents a financial asset) more accurately. Therefore, after IFRS adoption, information about companies reported in the financial statements seems to represent more adequately the financial position of the company.

The second effect is after the convergence, it is realized that lower volatility of stock returns after the publication of accounting reports. This result also reinforces our previous comments, that financial reports following IFRS have informational content to external users of accounting numbers since the adjustments made in the value of stocks are lower.

In the light of these results, it can be argued that the relevance of accounting convergence for financial markets, especially for emerging economies. Therefore, the results of this paper contain useful information regarding some benefits of accounting convergence for countries which still do not adopt IFRS. These results can also motivate further research including hypotheses testing, using cross-country data. It is also important to note that, after convergence, the numbers published by companies in a given country are comparable to the numbers of companies that operate in other countries. Without the use of equivalent standards, the comparison of these numbers represents a complex task. Beyond these advantages, fair value measurement seems to be more accurate after IFRS implementation.

In this article, only one variable is used to analyze the behavior of stock market returns. Therefore, the stock prices movements are expected to be influenced by IFRS adoption. There are many other variables that affect the stock market, but the arguments and empirical analysis indicate that accounting convergence represents a factor that positively contributes to efficiency in resources allocation.

Regarding capital mobility (Medeiros & Quinteiro, 2008), the convergence can also attract more financial resources for emerging economies, increasing the capital mobility across different nations, since the cost for international investors to become informed will be lower. It is recommended for further research the analysis of IFRS effect in other developing countries. It will also be relevant to investigate the effect of IFRS adoption on the volatility of stock returns, using econometric models.

The results have some limitations since the analysis is based only on ordinary stocks. The effect of IFRS on another kind of assets can be different, so further analysis is needed. Moreover, the sample is comprised of Brazilian companies that have stocks both at BM&FBOVESPA and at NYSE. These companies tend to be larger than the other Brazilian firms (Malaquias & Lemes, 2013), so these results are not necessarily generalizable to the other listed companies. As a third limitation, one index is only considered for performance measurement (ROA), and there are a set of accounting indexes that can present a significant effect on the stock market. Nevertheless, with the consideration of only one variable (ROA), it is found that accounting numbers contain relevant information for the external users of accounting information.

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