

# International Financial Reporting Standards (IFRS): Exploring Financial Evidence from Listed Companies in the US

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## Abstract

This paper relates to the financial effects of the official adoption of International Financial Reporting Standards (IFRS) in the US. IFRS is a set of unique, high-quality accounting standards that listed firms have been obliged to implement since 2005 in Europe. However, in 2007, the SEC decided to allow foreign firms listed in the US stock markets to publish their financials under IFRS without the need to reconcile to the US GAAP. That fact increased the proportion of the converging process between the two regimes but provoked several core questions of interest to both academics and market professionals. In this order, the paper aims to detect any financial statement effects under IFRS for firms that used to follow US GAAP, to analyse whether the acceptance of IFRS in the US has improved the level of convergence between the two regimes, and provide evidence on whether listed firms in US markets exhibited fewer earnings management under IFRS. In this way, the paper tested a total of three Hypotheses, by involving quantitative analysis of secondary numerical data, from firms listed in the US stock markets that followed IFRS during the first allowance year (2007). The findings reveal that IFRS has not succeeded in eliminating falsified statements entirely but has performed better compared to other countries where they have been introduced. It seems that the US environment is appropriate for IFRS. Additionally, there are indications for fewer earnings management in the first IFRS adoption year, keeping a high level of accurate accounting interpretation. However, special attention is needed for any emerging issues in the future.

## Keywords

IFRS, US GAAP, Convergence, Financial Statement Effects, Earnings Management

## 1. Introduction

The process of harmonising accounting standards is an important aspect of globalisation. Thus, following the successful introduction of IFRS, the next step may be reconciliation with US GAAP (Schipper, 2005). Indeed, the introduction of IFRS aimed to bring European accounting standards closer to US GAAP. This would further increase the transparency, consistency, and comparability of accounting numbers around the globe. The reconciliation approach that has been implemented seems to be the most effective process, in terms of time and cost, in moving toward complete convergence. Indeed, an increasing number of studies have focused on this fact. These insist that US GAAP is not superior to IFRS regarding value relevance (Bartov et al., 2005), and suggest that US GAAP does not produce higher quality information than IFRS (Leuz, 2003). Thus, they argue that US GAAP is not superior to IFRS, at least outside the US (Bartov et al., 2005). In the US, however, researchers are likely to be more sceptical of IFRS. The results indicate that US investors prefer accounting methods that conform more closely to US GAAP (Bradshaw et al., 2004), even for foreign firms in the US (Harris & Muller, 1999), despite the fact that some findings suggest that in the crucial earnings domain, US GAAP have less explanatory power than IFRS (Ashbaugh & Olson, 2002).

However, previous experience indicates that any form of harmonisation between two strong regimes may be more complicated than anticipated, creating considerable difficulties. Indeed, some researchers disagree with the idea of harmonisation (Sunder, 2002, 2007), arguing that accounting standards should operate under competition. This will allow investors to choose between firms that report under different regimes, placing a higher value on firms that report under a set of high-quality accounting standards. Similarly, responsible authorities would prefer to focus on the development and evolution of accurate regimes to attract investors and reduce firms' cost of capital (Huddart et al., 1999). Furthermore, there is a need for changes to tax strategies and dividend policies, while all the general adjustments required for IFRS implementation (Jermakowicz & Gornik-Tomaszewski, 2006) will increase transaction and operating costs, affecting firms' financial performance. In addition, there are concerns about the timing of this venture, as many consider that the reconciliation option may result in a delay in the convergence process (Street & Linthicum, 2007). Finally, this venture may not only affect the US market, but Europe as well. This is because, in adopting IFRS, the US would have a significant influence on them and would be able to make changes according to its own needs. Since the IASB would have less power in the US, this institutional isolation might lead to the development of different sets of IFRS standards for the US market, while investors would perceive it as one common set (Ball, 2006).

However, in 2007, the US SEC allowed foreign firms listed on the US market to publish their financial statements in accordance with IFRS, without reconciliation with US GAAP. Before this, every public company had to reconcile its ac-

counting figures with US GAAP. Even firms that followed Canadian GAAP expedited their IFRS transition as early adopters, in order to take advantage of this decision and avoid reconciliation processes<sup>1</sup>. Contrary to this move, from 2008, European companies also listed on US markets that chose to report under US GAAP were no longer allowed to claim for exemption but had to prepare their consolidated financial statements also in accordance with IFRS. This might be considered as the first step toward a future total convergence of the two standards, and is only one of the measures taken to enhance comparability between the two standards. Apart from any practical concerns, this decision had direct cost-saving advantages for companies. Although many insist that IFRS resembles US GAAP, mainly for businesses' convenience, they appear to have major differences in many aspects of accounting, such as goodwill, taxes, and asset revaluations (**Appendix, Table A1**). Therefore, it is crucial for IFRS to succeed in this endeavour so that the SEC's strategic plan for IFRS and US GAAP convergence is not postponed yet again.

In this order, the research aims to critically evaluate the underpinnings of the IFRS introduction and analyse IFRS performance in the US market, and provide an in-depth examination of important attributes, patterns, and interactions that followed this implementation. Most studies find that the level of accounting harmonisation has increased considerably following IFRS, despite the differing economic backgrounds of EU countries (Hoarau, 1995; Epps & Oh, 1997). However, this does not indicate that IFRS could be successfully applied in the US. There was thus a need to evaluate IFRS in the US using the same methods as have been used in the EU. The interest was in detecting how they have performed in the crucial field of earnings management, and what have been the effects on firms' statements following their adoption. In this way, we sought to answer whether IFRS succeeded in implementing its values and overcoming any difficulties in the US market, and how responded firms' financials to the introduction of IFRS in the US. This is vital for accounting researchers and analysts, allowing them for the first time to compare IFRS performance between Europe and the US, and make better investment evaluations.

In turn, this would lead to extensive research on current thinking about the introduction of IFRS in the US. In this way, we would be able to evaluate the extent to which decisions by the US and the EU have influenced the internationalisation of accounting regimes. Overall, hoping that the research would enrich the results of these decisions, our central concern was to highlight critical issues following the official introduction of IFRS in the US, to review IFRS performance compared with US GAAP, and to critically evaluate IFRS implementation in the US, detecting any effects on adopting firms.

The paper proceeds as follows: Section 2 reviews the literature, Section 3 discusses the research hypotheses and methods, Section 4 refers to the dataset and descriptive statistics, Section 5 analyses the empirical findings, and Section 6 presents the conclusions of the study.

<sup>1</sup>Canada voluntarily adopted IFRS from January 2011 and officially in 2015.

## 2. Literature Review

This research relates to the literature on the effects of the introduction of IFRS in the US. In 2007, the SEC allowed foreign firms to report under IFRS in the US. For market participants, this was the first step toward total globalisation of stock markets, and perhaps toward the joint improvement of both regimes, but there were many obstacles owing to their differentiation. Although US GAAP is rules-based and IFRS is a principles-based regime, both are considered to be the highest quality accounting standards globally (Van Der Meulen et al., 2007). However, apart from their theoretical differentiation, there are also practical considerations. Recent studies focus on these and produce differing results in many respects, for example concerning accounting quality. Many believe that US GAAP is of higher quality than IFRS (Barth et al., 2006), and that this superiority is reflected in US firms (Barth et al., 2012).

In this regard, the high disclosure level of US GAAP seems to be important. However, this quality of US GAAP is lower in non-SEC environments (Glaum & Street, 2003). Thus, researchers consider that the most effective solution for countries with weak financial disclosure requirements is to adopt IFRS (Ding et al., 2007). The latter seem appropriate in such cases in order to deter auditing irregularities and increase shareholders' confidence (Daske et al., 2008). A country's enforcement system and institutional structure are closely related, as well as its underlying economic and political forces, which may lead to differences in accounting quality (Bushman & Piotroski, 2006). Therefore, the country's profile plays an important role in accounting performance. The same standards in different countries result in different levels of accounting quality (Ball et al., 2003), while in other cases, different standards may result in the same quality. In Germany, for example, there is no evidence of any difference in terms of timeliness, accruals quality or value relevance between US GAAP and IFRS (Van Der Meulen et al., 2007).

However, in the US, researchers are likely to be more sceptical toward IFRS, owing to differences such as revenue recognition and write-offs of long-lived asset impairment losses (Trottier, 2013; Gordon & Hsu, 2014; Hong et al., 2018). Some claim that, for this reason, there have been significant increases in foreign firms' cost of equity (Han & He, 2013), while many studies suggest that this may lead to significant capital market effects. Such cases may be sufficient to raise questions about the benefits of introducing IFRS in the US. Indeed, considering the convergence process, there seem to be many practical apprehensions and limitations (Jermakowicz, 2004) that may affect it. Debate began even before the introduction of IFRS in the US. Reconciliation of the two regimes has both benefits and costs, and the potential results are unclear. However, early studies indicate that it may produce significant benefits for investors, and may remove unnecessary costs and barriers for foreign firms listed in the US. Moreover, for foreign registrants required to reconcile with US GAAP, there was a time difference in presenting their annual reports, decreasing information symmetry. Reconcil-

ing IFRS and US GAAP has thus increased the comparability of investment opportunities. All these factors are likely to result in increased investor protection (Street & Linthicum, 2007). Similar studies indicate additional potential benefits. In practice, there has been a return to market balance, and the reconciliation process has not been associated with abnormal trading volumes, abnormal volatility in returns or changes in the bid-ask spread after the release date (Jiang et al., 2010).

Furthermore, there is no evidence that IFRS has changed market liquidity or insider trading after the first implementation year, compared with firms that have not adopted IFRS. The same research indicates that there is no significant impact on the cost of equity, analysts' forecast errors or stock price changes (Kim et al., 2012). Several other studies single out the importance of the convergence process, suggesting that it increases comparability, reduces costs and enhances global competition between financial markets (Ball, 2006). Of course, discussion should concentrate on the value relevance of reconciling IFRS and US GAAP. Many believe that value relevance will decrease following the reconciliation process, resulting in a loss of information. However, the fact that US GAAP is more closely related to IFRS than to the old national GAAP (Ashbaugh, 2001) instills optimism about the venture. Early studies suggest that reconciliation from IFRS to US GAAP is value relevant (Henry et al., 2007), and motivates IFRS in the US to provide informative disclosures, enhancing the integrity of accounting measures (Hansen et al., 2012).

The stricter the enforcement of IFRS, the more willingly companies comply (Street & Gray, 2002), so the strong protection laws and rights in the US (Tendeloo & Vanstraelen, 2005) may be an advantage for their adoption. Indeed, there is a positive correlation between abnormal trading volumes and earnings reconciliation adjustments within a two-day window surrounding the release of the reconciliation, suggesting that investors rely on reconciliation information to make valuation decisions (Chen & Sami, 2013). Similarly, Chen and Khurana (2015) document a positive market reaction for firms adopting IFRS. On the other hand, Lin et al. (2013) argue that under IFRS, earnings management has increased. However, their results are based on a sample of German high-tech firms that transitioned to IFRS from US GAAP in 2005, so their results are of questionable applicability to all IFRS firms in the US. Overall, firms must overcome technical differences, the cost of change and volatility resulting from IFRS adoption.

Therefore, most studies seem to be sceptical of reconciling IFRS and US GAAP owing to their differences, such as revenue recognition and write-offs of longstanding asset impairment losses (Trottier, 2013; Gordon & Hsu, 2014; Hong et al., 2018). They suggest that IFRS neither increase firms' liquidity and stock market performance, nor reduce the cost of capital. These results are clearer than the previously mentioned findings; nevertheless, studies of this period do not produce effective arguments concerning the introduction of IFRS in the US. Most research examines US GAAP and IFRS separately, so does not determine

whether US enforcement may increase the effectiveness of IFRS, and provides no evidence on whether IFRS successfully compete with US GAAP in terms of accounting misinterpretation, since the analysis does not take account of earnings management.

### 3. Research Hypotheses and Design

#### 3.1. Research Hypotheses

The compelling findings for this period, as described in the literature review, is that there are many differences between US GAAP and IFRS that may affect their performance, but their performance cannot be adequately compared in the absence of indications of whether companies that have adopted IFRS and are listed in the US have used earnings management to increase their financials or market value. This may cause ambiguities, because in many cases, companies have appeared to be performing well, but have later been proved to have deliberately used accounting misstatements. In this order, there is the need to answer the following core questions of interest to both academics and market professionals. Has acceptance of IFRS in the US improved IFRS performance? What were the financial statement effects under IFRS for firms that used to follow US GAAP? Have firms listed in US markets exhibited less earnings management under IFRS? The paper aims to answer on this general framework settled by these questions, by formulating the following hypotheses.

**H1: The SEC's decision to allow IFRS for foreign firms has increased the level of convergence.**

After the allowance of IFRS in the US in 2007, many considered that this would eliminate their differences. We examined this hypothesis, aiming to investigate early indications of comparability and convergence between the two accounting standards before and after the SEC's decision. Therefore, in order to capture these differences and examine the level of convergence, we adopted the following comparability index measures (Whittington, 2000).

1) The net income absolute difference measure ( $\text{DIFF}_{\text{NI}}$ ):

$$\text{DIFF}_{\text{NI}} = \left| \frac{\text{Net Income(US)} - \text{Net Income(IFRS)}}{\text{Net Assets(IFRS)}} \right| \quad (1)$$

2) The net assets absolute difference measure ( $\text{DIFF}_{\text{NA}}$ ):

$$\text{DIFF}_{\text{NA}} = \left| \frac{\text{Net Assets(US)} - \text{Net Assets(IFRS)}}{\text{Net Assets(IFRS)}} \right| \quad (2)$$

3) The return on net assets absolute difference measure ( $\text{DIFF}_{\text{RONA}}$ ):

$$\text{DIFF}_{\text{RONA}} = \left| \text{Return on Net Assets (US)} - \text{Return on Net Assets (IFRS)} \right| \quad (3)$$

4) The earnings per share absolute difference measure ( $\text{DIFF}_{\text{EPS}}$ ):

$$\text{DIFF}_{\text{EPS}} = \left| \frac{\text{Earnings per Share(US)} - \text{Earnings per Share(IFRS)}}{\text{Earnings per Share(IFRS)}} \right| \quad (4)$$

We specified earnings and assets, as we had determined that these figures seemed to prevail in differences between the two regimes (**Appendix, Table A1**), as also suggested by the literature. The sample consisted of firms that published their accounting statements under IFRS but also reconciled them under US GAAP. We calculated the above measurements for each company for the years 2006-2008, and estimated the mean for each measure for each year. The closer to 0 their mean value, the better the convergence process, while a mean of 0 would indicate total convergence of the two standards. We also carried out a *t*-test for equality of means to examine the above measurements across years and gain a better picture of this aspect.

### **H2: IFRS in the US, introduced financial statement effects for listed firms.**

Acceptance of IFRS has saved companies costs and time in preparing their financial statements, and has simplified investors' decisions as they have more timely access to reliable and clear information, providing easier cross-country and cross-firm comparability. On the other hand, many insist that IFRS may introduce volatility into the US market. Although this may be an advantage for financial reporting, as it reflects timely information, volatility may be disadvantageous to investors and other users if it reflects managerial manipulation. For this reason, this hypothesis aimed to detect, among the effects of their differences, the level of volatility introduced into firms using IFRS in the US market. Consequently, we examined the following tests.

#### TEST 1: Financial statement effects

This test aimed to detect any financial effects following acceptance of IFRS for use in the US. The following logistic regression model was used:

$$RR_{i,t} = a_0 + a_1 \text{Size}_{i,t} + a_2 \text{Investment}_{i,t} + a_3 \text{Growth}_{i,t} + a_4 \text{Profitability}_{i,t} + a_5 \text{Liquidity}_{i,t} + a_6 \text{Leverage}_{i,t} + e_{i,t} \quad (5)$$

where  $RR_{i,t}$  is a dummy variable indicating the year of the reported numbers, equalling 0 for the year before the acceptance and 1 after; for other variables, see **Appendix, Table A2**;  $e_{i,t}$  is the error term.

#### TEST 2: Income volatility in accounting measures

This second statement-effects test focused on ratios (**Appendix, Table A2**), seeking to detect any volatility following the introduction of IFRS in the US. Possible income volatilities were detected through analysis of variance, using an *F*-test for standard deviation (Snedecor & Cochran, 1989), and more specifically Levene's (1960) test.

### **H3: Under IFRS, firms listed on US markets tend to exhibit less earnings management.**

This hypothesis focused on whether adoption of the new standards has eliminated the need for earnings management in the US, as it has in Europe. Objective and reliable information contributes not only to the efficient and cost-effective functioning of the capital market, but also to information symmetry, which in turn helps companies achieve improved performance. Earnings management should be unknown for firms adopting IFRS in the US, as the US legislative en-

vironment seems ideal for the new standards. These hypotheses might produce interesting results, as most foreign companies preferred to follow IFRS after the SEC's decision, while many more firms wanted to switch to IFRS. We focused on the following tests.

#### TEST 1: Volatility

The first test of this hypothesis used an analysis of variance ( $F$ -test) to detect volatility of change in net profits to total assets ( $\Delta NP/TA$ ) and the volatility of change in net profits to the volatility of change in cash flows from operating activities ( $\Delta NP/\Delta OCF$ ). As the literature links the volatility of a measure with its accuracy, it was expected that under IFRS firms would exhibit greater volatility in the above measures.

#### TEST 2: Accruals performance

This second earnings-management test focused on accruals performance and consisted of the following sub-tests.

1) Following a Pearson correlation between discretionary accruals (DAC) and operating cash flows (OCF) for the year before and after acceptance of IFRS in the US (2007), the research sought to detect any indications of decreased use of accruals. A negative correlation would imply that companies might be increasing their accruals in case of low cash flows, leading to earnings management.

2) In addition to the quantity of accruals highlighted by most studies, the quality of accruals is often used to test combined models (Jeter & Shivakumar, 1999). The next sub-test focused on this quality measure, testing operating cash flows (OCF) separately so as to increase the position of estimates. To this end, the following model was estimated, as suggested by Wysocki (2004).

$$\Delta WC_{i,t} = \alpha_0 + \alpha_1 OCF_{i,t} + e_{i,t} \quad (6)$$

where  $\Delta WC_{i,t}$  is the change in working capital scaled by total sales; and  $OCF_{i,t}$  is the operating cash flow for firm  $i$  in fiscal year  $t$ , scaled by total sales.

A higher R-squared for the model under IFRS compared with that under US GAAP would reflect high earnings quality and lower potential for income smoothing under IFRS. A low R-squared value for all results is attributable to the absence of more independent variables from the model. However, I preferred not to add additional independents, which would have increased the power of R-squared but may have decreased the estimation of the accruals' quality.

3) Finally, in this third accruals sub-test, the next ordinary least squares (OLS) regression was run to examine the relationship between discretionary accruals, profitability, leverage and size ratios.

$$DAC_{i,t} = a_0 + a_1 \text{Profitability}_{i,t} + a_2 \text{Leverage}_{i,t} + a_3 \text{Size}_{i,t} + e_{i,t} \quad (7)$$

where  $DAC_{i,t}$  is discretionary accruals estimated using the cross-sectional Jones (1991) model; other variables are as described in Appendix, Table A2; and  $e_{i,t}$  is the error term.

#### TEST 3: Small positive profits and large-scale native losses

The third test concentrated on small positive profits (SPP) and large-scale native losses (LNL), as these measures indicate a possible earnings management case.



1) It is a common target for firms with small losses to manage their numbers in order to convert these small accounting losses into small positive profits (SPP) (Burgstahler & Dichev, 1997; Leuz et al., 2003). For this reason, the following logistic regression model was used.

$$\begin{aligned} \text{RR}_{i,t} = & a_0 + a_1\text{Size}_{i,t} + a_2\text{Investment}_{i,t} + a_3\text{Growth}_{i,t} + a_4\text{Profitability}_{i,t} \\ & + a_5\text{Liquidity}_{i,t} + a_6\text{Leverage}_{i,t} + a_7\text{SPP}_{i,t} + e_{i,t} \end{aligned} \quad (8)$$

where  $\text{RR}_{i,t}$  equals 0 for the first examination year and 1 for the second;  $\text{SPP}_{i,t}$  is a dummy for SPP, equalling 1 if the net profit scaled by total assets is between 0 and 0.01, and 0 in all other cases; for other variables, see **Appendix, Table A2**;  $e_{i,t}$  is the error term. A negative coefficient of  $\text{SPP}_{i,t}$  would indicate less earnings management, as it would denote that under IFRS, SPP firms have decreased.

2) The LNL test deals with the time at which large-scale losses are recognised. Although higher-quality standards may provide investors with more timely and accurate information, most firms tend to postpone large accounting losses to future years (Ball et al., 2000). Thus, earlier loss recognition is a top priority for both IFRS and US GAAP. The following logistic regression was run (Lang et al., 2003, 2005), similar to the previous one.

$$\begin{aligned} \text{RR}_{i,t} = & a_0 + a_1\text{Size}_{i,t} + a_2\text{Investment}_{i,t} + a_3\text{Growth}_{i,t} + a_4\text{Profitability}_{i,t} \\ & + a_5\text{Liquidity}_{i,t} + a_6\text{Leverage}_{i,t} + a_7\text{LNL}_{i,t} + e_{i,t} \end{aligned} \quad (9)$$

where  $\text{RR}_{i,t}$  equals 0 for the first examination year and 1 for the second;  $\text{LNL}_{i,t}$  is a dummy variable indicating loss recognition, taking a value of 1 if net profit scaled by total assets is less than  $-0.20$  and 0 in all the other cases; the remaining independent variables are as defined in the previous Equation (8). A positive coefficient of  $\text{LNL}_{i,t}$  would indicate less earnings management, as it would denote that under IFRS, firms have given more timely notice of large-scale losses.

### 3.2. Research Design

To ascertain these hypotheses, we involved quantitative research design. Based on secondary numerical data and performing accurate statistical models, we managed to test three hypotheses concerning the performance of IFRS in the US. This design tends to generate data that could be collected and expressed in the numeric form, ready to be analysed and presented statistically (Backman, 1998). As it follows, a formalised structure, along with all its assumptions, it seems perfect for the scope of the study to answer the research questions and to examine its hypotheses, assessing this way the effectiveness of IFRS. Within this context and based on a high level of reliable numeric data and statistic processing, we intended to focus on verifiable facts, leading to conclusions which are generally replicated in a data-driven process (Hambrick, 2007).

## 4. Sample Selection and Descriptive Statistics

### 4.1. Data Sample

Regarding the comparison between IFRS and US GAAP, we examined compa-

nies that were not American but had shares listed on the US stock markets (NYSE, NASDAQ). We focused only on these foreign-listed firms which used to follow US GAAP but had transitioned to IFRS after the SEC granted permission to do so. Thus, 216 firms were detected and examined from 2006 to 2008. Financial firms had been excluded. We settled on these time frames because we aimed to capture IFRS performance surrounding this specific event. This would reduce bias by examining long-term IFRS performance. That timeframe was therefore essential. For the scope of our analysis, we needed raw and compiled data that would provide or could be transformed into numerical information for statistical analysis (Kervin, 1999). For this reason, we focused on databases such as Amadeus and Screener, but since they did not provide all the data needed, we searched separately for each firm's announcements, annual reports and statements to economic websites such as Bloomberg, MarketWatch, Morningstar, Factiva and LexisNexis.

For the main data analysis, we performed several parametric statistics, such as Pearson's correlation coefficient, binary logistic regression analysis, and ordinary least squares (OLS) regression analysis. In addition, independent sample *F*-tests and *t*-tests were performed to test the accuracy of the standard deviation and significance of the mean respectively, to contribute to the comparability of the index across values (Pallant, 2005). Each test described in the previous chapter, used for analysing specific value categories according to the needs of each hypothesis. All these tests were assessed according to the relative significance of the estimated coefficients (*p*-value < 0.01, two-tailed), and additional parameters were also measured. The parameters for logistic regressions were determined based on the maximum likelihood method, while for the OLS regression, a White test was performed, focusing on the correlation coefficients among the test variables and the R-squared measure. Finally, the project considered the assumptions of linearity, normality, homogeneity and independence.

## 4.2. Descriptive Statistics

**Table A3** in **Appendix** reports the descriptive statistics of the sample. These provide a better understanding of the particularity of the dataset, and will assist in explaining the main analysis and results. The SEC's decision to allow non-US firms to publish their accounting figures using IFRS was highly important. The descriptive statistics (**Table A3**) reflect that under IFRS, although companies' size ratios (SALESHA) decreased, they exhibited better investment (DIVSH), growth (MVBV), profitability (EPS), liquidity (CUR, QUI) and leverage (DEBT) ratios. However, 2008 was a crucial year for global stock markets because the crisis effects started to be reflected in firms' balance sheets. Thus, the results give some first indications that companies did not succeed in maintaining their previous performance. Indeed, under the second year of IFRS adoption, they show a decrease in all the above measures. Since this outcome is a result of the difficult global environment, these statistics are particularly interesting.

## 5. Empirical Results

The analysis present in this chapter, reveal interesting and contemporary results into the performance of IFRS in the US, aiming to discover how IFRS responded to a different legislative environment. The following **Table 1** displays our key findings.

### 5.1. Results for H1

The introduction of IFRS in the US posed a greater challenge than their launch in Europe. In this case, they did not replace previous accounting regimes, but had to compete with US GAAP in the same market. Thus, we aimed to consider whether IFRS and US GAAP are as different as many consider them to be in practice. Despite the small sample, since few companies chose to reconcile their accounting values under both regimes, the outcomes indicate that following IFRS adoption in the US, the variation between them decreased. Indeed, the mean differences in Net Income (NI) and EPS were significantly lower than their mean for 2006 (**Appendix, Table A4**). As previously stated, the lower the mean of a measurement, the greater the convergence.

On the other hand, differences in assets (NA, RONA) increased for the first year. It seems that, as asset calculations are based on long-term procedures, and in many cases are affected by national laws, more time is needed to eliminate any dissimilarities. This is why relevant studies identify tangible assets as a significant factor in the incomparability between IFRS and US GAAP. However, apart from continued good earnings performance (EPS), there was an impressive decrease in the mean of both NA and RONA variables in 2008 compared with 2007. This signals that assets might further converge over time, and that the SEC's decision was an appropriate starting point for greater collaboration between these two regimes. It seems, therefore, that in these two years, firms usually had higher points of convergence compared with 2006, supporting H1.

### 5.2. Results for H2

In the previous section, we focused only on the level of convergence. Although we found signs that these two standards cooperated better, this does not mean that the introduction of IFRS in the US had no effect. In addition, as few previous

**Table 1.** Key findings.

<u>Hypothesis</u>	<u>Result</u>	<u>Findings</u>
H1	Holds	Findings indicate a decrease of variation between IFRS and US GAAP after SEC's decision to allow IFRS in the US for foreign firms
H2	Holds	IFRS performed more volatile ratios in relation to size (NAVSH), growth (PEG, DIVSHG) and leverage (CLSFU, IGEAR)
H3	Holds	There is a strong indicator that under IFRS, firms tended to preform less earnings management techniques

studies have straightforwardly compared IFRS with US GAAP, this study aimed, through these tests, to contribute to the current concerns of investors and analysts that IFRS will not succeed in the US. The results (**Appendix, Table A5/Panel A**) suggest that firms under IFRS displayed higher liquidity (CUR, QUI, CFSH) and also sustained lower leverage ratios (ETL, TLSFU) for their first year, indicating that both the market and companies were deterred from increasing their borrowing. In addition, under IFRS, firms were lower in size as they displayed negative measures (SALETAS, LNMV). This result was unexpected, as previous research has found that IFRS tends to privilege larger companies (Tarca, 2004).

On the other hand, profitability (PLOWB, ROSC) was higher for firms under IFRS than had been the case under US GAAP, even though convergence of earnings figures was detected in the previous hypothesis. It seems that the difference between the two standards in this field is too large to alleviate in just a year. Besides, most research detects a significant increase in earnings in the first year of adoption of IFRS (Moya et al., 2005). The outcomes of the second implementation year seem to support the initial findings and expectations (**Table A5/Panel B**). Leverage ratios (DEBT) were still negative, but size measures had become positive, meaning that larger firms performed better in the second year of IFRS (LNMV). However, investment (DIVCOV), growth (MVBV, PEG), profitability (PLOWB, OPM, NPM), liquidity (CUR, QUI) and leverage (DEBT) were negative compared with the previous year. This may have been a result of the turbulent conditions that prevailed in the market as a result of the economic crisis, which arose in that year.

Overall, the first indications from IFRS implementation are more encouraging than suggested by the literature, while the underperformance of some investment and profitability measures might have been anticipated due to transition effects and the volatile conditions. For this reason, the results of the next test are important. All studies that have examined the volatility of measures under IFRS attribute this performance to their fair value direction, but in this case the reactions are even more interesting, as US GAAP also has a fair value orientation. However, the results (**Appendix, Table A6**) indicate that firms under IFRS tended to exhibit more volatile investment measures (DIVCOV, PE, HOLTA), as well as higher volatility in profitability (PLOWB, NPM, EPS), liquidity (CUR, CASH, QUI, CFSH) and leverage (TLSFU, IGEAR) ratios.

Although such volatility may affect market performance, as it may deter traditional investors, the literature suggests that more variable measures may denote less earnings smoothing (Leuz et al., 2003; Lang et al., 2003). Thus, the results indicate that it is easier for companies and safer for investors if foreign firms do not reconcile with US GAAP but keep their original standards. Similarly, the outcomes for 2008 indicate that, after two years of adoption, IFRS was still more volatile in relation to size (NAVSH), growth (PEG, DIVSHG) and leverage (CLSFU, IGEAR) ratios. In general, this hypothesis delivers a first indication that IFRS performed better than expected in the US. However, this does not mean that they

did not have significant effects on accounting statements. Indeed, the outcomes tend to prove that H2 holds, which may curb scepticism regarding the introduction of IFRS in the US.

### 5.3. Results for H3

The research aimed to examine additional issues following the introduction of IFRS in the US by focusing on earnings management, the basic concern of all accounting standards. The results of the first test indicate early signs of less earnings management following the adoption of IFRS. More specifically, firms under IFRS exhibited higher volatility in net profit change ( $\Delta NP/TA$ ) and higher volatility in the change in net profit to the change in operating cash flows ( $\Delta NP/\Delta NCF$ ) compared with US GAAP (**Appendix, Table A7/Panel A**). This increase in the standard deviation of the above variables signals a decreased need for earnings management. The second test aimed to determine the correlation between accruals and cash flows from operating activities. The results (**Appendix, Table A7/Panel B, Test 2a**) reveal a positive correlation between accruals and cash flows in the first year of implementation, indicating that firms with low cash flows exhibited low accruals. It seems, therefore, that IFRS performed better than in similar cases in other countries, and better than US GAAP (which displayed a negative correlation in 2006). Nevertheless, the results for the following year (2008) were less encouraging. The correlation between accruals and cash flows was again negative, meaning that IFRS adopters in US may have managed their earnings using accruals. This was definitely a negative downturn, but it may have been justified, as in 2008 the effects of the crisis started to appear. However, whether attributable to the crisis or other factors, the results were even worse, given not only that next Test 2b displayed a decline in accruals quality for 2008, but also that US GAAP outperformed IFRS.

For this reason, the research was taken a step further to compare accruals with leverage, size and profitability ratios. Panel C (Test 2c) presents the results. During 2006, firms using US GAAP had a negative relationship with size ratios (SALETAS) and a positive correlation with profitability (OPM, NPM) and leverage (ROCE, CGEAR). It is thus obvious that under US GAAP, large firms and companies with low profitability exhibited low accruals. However, the significant positive relationship between accruals and leverage indicates that firms with debt issues may have increased their accruals to present a different image and avoid the effects of a possible debt violation. Firms under IFRS presented the same picture as under US GAAP, for both years of implementation. Indeed, there was a negative relationship between accruals and size (NAVSH, RESSFU, SALESHA) and a positive relationship with profitability measures (OPM, NPM). The only exception was in leverage ratios where, contrarily to US GAAP, firms presented a negative correspondence (DEBT) under IFRS. It seems, therefore, that IFRS managed to prevent firms with high borrowing from implementing earnings management procedures, although this may simply have been an effect of the reduced

leverage measures during the IFRS implementation identified in tests for H2. In both cases, IFRS seem to have had an advantage over US GAAP in accurately interpreting accounting measures.

Finally, Panel D presents the results of two equally important and significant problems. As previously explained, SPP and LNL are indicative of earnings management, and IFRS managed to deal with these successfully. Indeed, the results indicate a decrease in SPP firms during the first two years of official adoption, while at the same time, for both years again, the outcomes reveal an increase in firms with LNL compared with US GAAP. This is a strong indicator that under IFRS, these firms tended not to manage their accounting measures, but presented their small or large losses in a timely manner. All these outcomes confirm that H3 is valid. Even in cases where IFRS seemed not to exhibit the expected results, their adoption proved to have the potential to prevent cases of earnings management.

This confirms that, when an accurate accounting system meets strong investor protection laws (Koumanakos et al., 2005), earnings management techniques are eliminated. Overall, concerning this set of hypotheses, it seems that, although IFRS did not always perform better than US GAAP, they managed to earn investors' trust, balance performance during the two years examined, and interest many companies from Asia, Canada, Brazil, and even the US, to consider adopting them. Given that the decision to allow their use also enables the convergence process, and that the results reveal that in some cases IFRS perform better than US GAAP and vice versa, perhaps a combination of the two is the solution to eliminating their drawbacks for accounting.

## 6. Conclusion

Convergence between IFRS and US GAAP is the final step on a path fraught with difficulties. Especially nowadays, many consider it to be useless, as with the globalisation of financial markets, investors are familiar with both IFRS and US GAAP, so it is easier for them to analyse and accept both of these dominant regimes, especially after aligning many of their financials. Nevertheless, as already mentioned, the literature suggests that local US firms listed on the US stock market display higher earnings quality than foreign firms that are also listed on the US markets (Lang et al., 2006; Leuz, 2006). This is attributed to weaker protection laws and regulations for these cross-listed companies. Of course, these studies were conducted before the use of IFRS was allowed in the US, so they focused on financials that firms needed to reconcile with US GAAP. It seems, therefore, that during the reconciliation process, many firms engaged in earnings management, as a change in an accounting measure is always an easy method for smoothing a company's financials.

However, in this study, although we did not compare US firms with foreign companies, our results give sufficient indications that the findings of previous research no longer hold. Indeed, IFRS seemed to perform without serious impli-

cations in the US market as, apart from typical adoption effects such as volatile measures, it helped companies to perform better than they had under US GAAP. Contrary to previous studies, our results show that under IFRS, foreign firms seemed to take advantage of better US market enforcement and regulation. Thus, they performed better and with fewer effects than in other countries during their first transition in Europe, while they kept a high level of accurate accounting interpretation. Combined with the results of the literature, we conclude that responsible IFRS authorities should consider the US market as an appropriate environment for IFRS, and should proceed with necessary improvements, even before any convergence process. This may be a solution to the harmonisation problems detected in examining many of my hypotheses.

### Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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## Appendices

**Table A1.** Summary of key differences and impacts between IFRS and US GAAP.

	US GAAP	IFRS	Impact
<b>Inventory Valuation</b>	Permit LIFO, FIFO, weighted average cost, or specific identification. Inventory carried at lower of cost or market.	Permits FIFO or weighted average cost; LIFO not permitted. Inventory carried at lower of cost or net realizable value.	Companies that use LIFO must revalue inventory, which could result in major tax liabilities due to the IRS's LIFO conformity rule.
<b>Asset Impairment</b>	Two-step impairment.	Single-step impairment.	Write-downs are more likely under IFRS.
<b>Goodwill</b>	Until recently, required capitalizing goodwill and amortizing it over a period not to exceed 40 years. The goodwill must be reviewed for impairment each year.	Require capitalizing the goodwill and amortizing it over a period not to exceed 20 years, along with an annual test for impairment. IFRS permits the charging of goodwill to owners' equity in the year of acquisition.	Additional differences in the impairment testing methodologies could create further variability in the timing and extent of recognized impairment losses.
<b>Asset Valuation</b>	Assets can be written down, but not written up. PP&E is valued at historical cost.	Allows upward revaluation when an active market exists for intangibles; allows revaluation of PP&E to fair value.	Book values are likely to increase under IFRS. This upward revision would also result in additional depreciation expense.
<b>Depreciation</b>	Methods allowed: straight-line, units of production, or accelerated methods (sum of digits or declining balance). Component depreciation allowed but not commonly used.	Allows straight-line, units of production, and both accelerated methods. Component depreciation required when asset components have different benefit patterns.	Assets with different components will have differing depreciation schedules, which may increase or decrease assets and revenue.
<b>Contingencies</b>	Contingent liabilities must be disclosed.	Can limit disclosure of contingent liabilities if severely prejudicial to an entity's position.	May result in fewer disclosures.
<b>Debt Covenants</b>	Permits curing debt covenant violations after fiscal year end.	Debt covenant violations must be cured by fiscal year end.	Debt covenants may need to be amended, resulting in related transaction costs.
<b>Research &amp; Development</b>	R&D costs must be expensed under U.S. GAAP.	Allows capitalization of R&D costs if certain criteria are met.	Development costs will be deferred and amortized.
<b>Entity Consolidation</b>	Consolidation is based on who has the controlling financial interest. Prefer a risks-and-rewards model	Consolidation is based on which entity has the power to control. Prefer a control model. Some entities have to be shown separately under IFRS.	Companies are likely to consolidate more entities.
<b>Securitization</b>	Allows certain securitized assets and liabilities to remain off a corporation's books.	IFRS requires most securitized assets and liabilities to be placed on the balance sheet.	May result in very different balance sheet values.
<b>Financial Instrument Valuation</b>	Fair value based on a negotiated price between a willing buyer and seller; not based on entry price.	Several fair value measurements. Fair value generally seen as the price at which an asset could be exchanged.	Financial assets and liabilities will be measured differently.
<b>Statement of Income</b>	Extraordinary items shown below the net income.	Extraordinary items are not segregated in the income statement.	Under IFRS an entity can present expenses based on their nature or their function.

## Continued

<b>Revenue Recognition</b>	Provides very specific general and industry guidance about what constitutes revenue, how revenue should be measured, and the effect of timing on recognition.	Not specific about the timing and measurement of recognition; lacks industry-specific guidance.	Revenues are likely to increase with less detailed guidance.
<b>Earning-per-Share</b>	U.S. GAAP averages the individual interim period incremental shares.	IFRS does not average the individual interim period calculations	This difference could result in different denominators being utilized in the diluted earnings-per-share (EPS) year-to-date period calculation.
<b>Deferred income taxes</b>	Require recognition of deferred income taxes on a comprehensive basis for all temporary differences and require the use of tax rates that reflect future tax rates and laws.	Allow managers not to recognize deferred assets/liabilities if the book/tax difference is not expected to reverse in the foreseeable future. Also allow managers to choose whether or not to adjust deferred amounts for changes in tax rates and laws.	Companies reporting under IFRS generally will have greater volatility in their deferred tax accounts over the life of the awards due to the related adjustments for stock price movements in each reporting period. Companies reporting under US GAAP could have greater volatility upon exercise arising from the variation between the estimated deferred taxes recognized and the actual tax deductions realized.
<b>Foreign exchange adjustments</b>	Foreign exchange gains and losses on forward contracts and hedges are recognized in net income or a component of equity in the period in which they occur. The United States requires the use of the current exchange rate when translating goodwill and fair value adjustments on foreign acquisitions.	Do not specify an accounting method. IFRS permit a choice between current and historical exchange rates.	The treatment of foreign exchange gains and losses on available-for-sale debt securities will create more income statement volatility under IFRS.
<b>Pensions</b>	Require the use of the accrued-benefit method and current market-based assumptions. They require recognition of a minimum pension liability for under funded plans.	Permit the use of both accrued-benefit and projected benefit valuation methods and require the use of long-term assumptions. They have no requirement to recognize any liability for under funded plans.	May result in an increased benefit obligation under IFRS.

Source: PricewaterhouseCoopers LLP and KPMG.

**Table A2.** Applied ratios.

The research capture the aspects of firms using the following ratios			
1. Market Value-SIZE		2. Investement	
<u>SALESHA</u>	Sales per share	<u>DIVSH</u>	Dividend per share
<u>NAVSH</u>	Net Asset Value per share	<u>DIVYI</u>	Dividend yield (Div per share/Share price)
<u>SALETAS</u>	Turnover/Total Assets	<u>DIVCOV</u>	Dividend Cover (Net profit/Dividend)
<u>RESTAS</u>	Reserves/Total Assets	<u>PE</u>	P/E
<u>RESSFU</u>	Res/Shareholders Funds	<u>HOLTA</u>	Holdings/Total Assets
<u>LNMV</u>	Natural Algorithm of MV		
3. Growth		4. Profitability	

## Continued

<u>MVBV</u>	Market to Book Value	<u>PLOWB</u>	Plowback Ratio (Retained Profit/Operating Profit)
<u>EPSG</u>	Earnings per Share Growth	<u>OPM</u>	Operating Profit Margin (Oper profit/Sales)
<u>PEG</u>	PE Ratio/Annual EPS growth	<u>NPM</u>	Net Profit Margin (Net profit/Sales)
<u>DIVSHG</u>	Dividend per Share Growth	<u>ROSC</u>	(Profit after tax/Equity + Reserves)
		<u>EPS</u>	EPS
		<u>ROCE</u>	(PBIT/Equity + Reserves + Lt loans)
<b>5. Liquidity</b>		<b>6. Leverage</b>	
<u>CUR</u>	Current Ratio	<u>DEBT</u>	Debtor Turnover (Sales/Debtors)
<u>CASH</u>	Cash Ratio	<u>ETL</u>	Equity/Total Liabilities
<u>QUI</u>	Quick Ratio	<u>TLSFU</u>	Total Liabilities/Shareholders Funds
<u>CFSH</u>	Operating Cash Flow per share [(Oper profit + Depreciation)/No of shares]	<u>CGEAR</u>	TL/Capital Employed-Intangibles + Short-term Liabilities
<u>CFM</u>	Cash Flow Margin (Earnings + Dep/Sales)	<u>CLSFU</u>	Current Liabilities/Shareholders Funds
<u>WCR</u>	Working Capital Ratio (Sales/Working Capital)	<u>INTCOV</u>	Operating Profit/Interest Charge
<u>STOCKT</u>	Stock Turnover (Cost of sales/Stock)	<u>IGEAR</u>	Interest Charge/Operating Profit
		<u>DEBTE</u>	Debt/Equity
		<u>DSFU</u>	Debt/Shareholders Funds

Table A3. Descriptive statistics.

	<u>IFRS in US</u>						<u>Pair-wise t-tests for equality of means</u>		
	<u>2006 - US GAAP</u>		<u>2007 - IFRS</u>		<u>2008 - IFRS</u>		2006 vs 2007	2006 vs 2008	2007 vs 2008
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation			
<b>Test Variables</b>									
$\Delta NP/\Delta OCF$	<b>1.2398</b>	5.2268	<b>0.2605</b>	8.2668	<b>0.7054</b>	13.4514		*	*
Accruals	-0.0163	0.0523	-0.0188	0.0489	-0.0271	0.0632			
OCF	<b>-0.2489</b>	3.3118	<b>0.1247</b>	0.6612	<b>0.0965</b>	0.4082	*	*	
LNL	<b>0.0392</b>	0.1946	<b>0.0294</b>	0.1694	0.0392	0.1946	*		
SPP	0.0637	0.2449	0.1029	0.3046	0.1324	0.3397			
<b>Control variables</b>									
<i>Size</i>									
SALESHA	<b>6.3755</b>	6.6614	<b>5.1657</b>	4.6842	<b>5.7634</b>	4.9065	**	**	*
NAVSH	3.8700	3.7502	3.7282	3.5341	4.1245	4.4827			
SALETAS	0.7526	0.4408	0.7442	0.4642	0.7900	0.4733			
RESTAS	-0.0448	0.9438	-0.0262	0.9782	-0.0448	1.0343			
RESSFU	0.1007	1.3726	<b>-0.0115</b>	1.4462	<b>0.1724</b>	1.5306			*
<i>Investment</i>									
DIVSH	<b>0.3291</b>	0.5008	<b>0.4118</b>	0.5419	0.3835	0.5274	*		
DIVYI	<b>0.1047</b>	0.1561	<b>0.0140</b>	0.0360	<b>0.0287</b>	0.0673	***	***	***
DIVCOV	<b>1.6246</b>	1.7349	<b>2.0997</b>	4.5990	<b>0.9954</b>	2.0745		***	***

## Continued

PE	0.3630	0.6833	0.3513	0.9337	0.2494	1.9770			
HOLTA	<b>0.0129</b>	0.0149	<b>0.0190</b>	0.0213	<b>0.0182</b>	0.0200	***	***	
<i>Growth</i>									
MVBV	<b>1.3805</b>	7.5271	<b>3.9436</b>	5.2949	<b>3.1402</b>	5.8878	***	**	*
<i>Profitability</i>									
PLOWB	<b>1.6989</b>	2.2698	<b>2.7776</b>	5.6659	<b>1.6249</b>	5.1562	**		**
OPM	<b>0.1177</b>	0.1636	<b>0.1093</b>	0.1829	<b>0.0571</b>	0.1939		***	***
NPM	<b>0.0927</b>	0.1394	<b>0.0802</b>	0.1983	<b>0.0365</b>	0.1522		***	**
ROSC	0.1799	1.2195	0.1777	0.5806	0.0636	1.1529			
EPS	<b>1.0483</b>	1.4914	<b>1.2400</b>	1.9173	<b>1.0355</b>	2.5095	*	*	*
ROCE	0.1515	0.4402	0.1458	0.5388	0.1232	0.4102			
<i>Liquidity</i>									
CUR	<b>0.9069</b>	0.5862	<b>2.0026</b>	3.5788	<b>1.2742</b>	0.6746	***	***	***
CASH	<b>0.3619</b>	0.3014	<b>0.3858</b>	0.3577	<b>0.5268</b>	0.4727		***	***
QUI	<b>3.9965</b>	4.3084	<b>6.0238</b>	8.2109	<b>3.6424</b>	3.6913	***		***
CFSH	<b>1.3684</b>	1.6741	<b>1.9886</b>	2.6352	<b>1.8856</b>	2.9137	***	**	
CFM	<b>0.1527</b>	0.1842	<b>0.1468</b>	0.2283	<b>0.0948</b>	0.2026		***	**
WCR	<b>1.6138</b>	4.0302	0.3467	2.5336	<b>0.0200</b>	2.1134		***	
STOCKT	3.3925	2.4596	3.4070	2.6225	3.2502	2.3826			
<i>Leverage</i>									
DEBT	<b>4.6150</b>	2.3493	<b>5.2159</b>	2.8533	<b>4.7356</b>	2.5511	**		*
ETL	<b>1.1936</b>	1.3568	<b>0.6404</b>	0.4906	<b>0.5879</b>	0.4668	***	***	
TLSFU	1.5389	2.2998	1.8722	6.0808	1.6348	4.3461			
CGEAR	1.5915	5.4155	1.5070	5.5188	1.8397	6.8371			
CLSFU	0.7739	1.2277	0.8321	1.9380	0.7938	5.9079			
INTCOV	5.9204	11.2331	<b>6.4715</b>	12.6248	<b>4.5755</b>	11.9053			*
IGEAR	0.1356	0.2294	0.1536	0.3995	0.1388	3.2133			
DEBTE	<b>0.4320</b>	0.4711	<b>0.5755</b>	1.1903	<b>0.6784</b>	1.3479	*	**	
DSFU	0.5124	0.8900	0.4848	0.7564	0.5259	1.3144			

(\*), (\*\*), (\*\*\*) indicate statistically significant factors at 10%, 5% and 1% (two-tailed) level respectively.

**Table A4.** Results of H1.

Test Variables	<u>Convergency test</u>						<u>Pair-wise t-tests for equality of means</u>		
	<u>2006</u>		<u>2007</u>		<u>2008</u>		<u>2006</u>	<u>2006</u>	<u>2007</u>
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	vs 2007	vs 2008	vs 2008
DIFF(NI)	<b>0.1199</b>	0.1143	<b>0.0701</b>	0.0711	0.0820	0.1336	*		
DIFF(NA)	<b>0.1799</b>	0.2255	<b>0.3495</b>	0.4318	<b>0.1565</b>	0.1949	*		**
DIFF(RONA)	<b>0.1178</b>	0.2131	<b>0.4477</b>	0.9542	<b>0.1318</b>	0.2480	*		*
DIFF(EPS)	<b>0.4680</b>	0.5143	<b>0.2395</b>	0.2471	<b>0.2227</b>	0.2351	*	**	

(\*), (\*\*), (\*\*\*) indicate statistically significant factors at 10%, 5% and 1% (two-tailed) level respectively.

**Table A5.** H2/Test 1: Financial statement effects.

<b>Panel A: Logistic Regression 2006-2007</b>				<b>Panel B: Logistic Regression 2007-2008</b>			
<i>Dependent variable</i>		year dummy		<i>Dependent variable</i>		year dummy	
<i>Cases Included in Analysis</i>		393		<i>Cases Included in Analysis</i>		405	
<i>Missing Cases</i>		15		<i>Missing Cases</i>		3	
<i>Total</i>		408		<i>Total</i>		408	
<i>Accuracy Rate</i>		51.40%		<i>Accuracy Rate</i>		50.10%	
<b>Variables</b>	<b>Coefficients</b>	<b>Sig.</b>	<b>Exp(B)</b>	<b>Variables</b>	<b>Coefficients</b>	<b>Sig.</b>	<b>Exp(B)</b>
SALETAS	<b>-1.104</b> (0.402)	***	0.332	LNMV	<b>0.301</b> (0.035)	*	1.352
LNMV	<b>-0.540</b> (0.066)	***	0.583	DIVCOV	<b>-0.083</b> (0.045)	*	0.92
DIVSH	<b>0.782</b> (0.394)	**	2.186	MVBV	<b>-0.057</b> (0.026)	**	0.945
MVBV	<b>0.262</b> (0.054)	***	1.3	PEG	<b>-0.119</b> (0.069)	*	0.888
PEG	<b>-0.087</b> (0.052)	*	0.917	PLOWB	<b>-0.058</b> (0.025)	**	0.944
DIVSHG	<b>-1.702</b> (0.691)	***	0.182	OPM	<b>-1.672</b> (0.733)	**	0.188
PLOWB	<b>0.147</b> (0.043)	***	1.159	CUR	<b>-0.230</b> (0.100)	**	0.795
ROSC	<b>0.652</b> (0.243)	***	1.92	CASH	<b>1.002</b> (0.327)	***	2.723
CUR	<b>1.619</b> (0.371)	***	5.046	QUI	<b>-0.109</b> (0.028)	***	0.896
QUI	<b>0.124</b> (0.041)	***	1.132	DEBT	<b>-0.117</b> (0.050)	**	0.89
CFSH	<b>0.250</b> (0.106)	**	1.284	Constant	<b>-0.282</b> (0.355)		0.754
WCR	<b>-0.171</b> (0.053)	***	0.843				
DEBT	<b>0.275</b> (0.079)	***	1.316				
ETL	<b>-2.066</b> (0.444)	***	0.127				
DSFU	<b>-0.414</b> (0.233)	*	0.661				
Constant	<b>1.580</b> (0.672)	**	4.857				

(\*), (\*\*), (\*\*\*) indicate statistically significant factors at 10%, 5% and 1% (two-tailed) level respectively.

**Table A6.** H2/Test 2: Volatility in income statement and balance sheet values.

Variables	Panel A						Panel B	
	2006		2007		2008		Pair-wise <i>F</i> -test for equality of variances	
	US GAAP		IFRS		IFRS		2006-2007	2007-2008
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation		
<i>Size</i>								
SALESHA	6.37551	<b>6.66143</b>	5.16566	<b>4.68424</b>	5.76340	4.90646	***	
NAVSH	3.87002	3.75021	3.72820	<b>3.53414</b>	4.12446	<b>4.48268</b>		**
SALETAS	0.75259	0.44080	0.74420	0.46421	0.79002	0.47327		
RESTAS	-0.04482	0.94384	-0.02624	0.97822	-0.04482	1.03433		
RESSFU	0.10074	1.37256	-0.01145	1.44616	0.17240	1.53060		
<i>Investment</i>								
DIVSH	0.32906	0.50077	0.41181	0.54194	0.38348	0.52744		
DIVYI	0.10469	<b>0.15613</b>	0.01403	<b>0.03605</b>	0.02872	<b>0.06733</b>	**	***
DIVCOV	1.62463	<b>1.73485</b>	2.09973	<b>4.59897</b>	0.99537	<b>2.07454</b>	***	***
PE	0.36297	<b>0.68327</b>	0.35130	<b>0.93371</b>	0.24937	1.97702	*	
HOLTA	0.01289	<b>0.01495</b>	0.01905	<b>0.02132</b>	0.01817	0.01997	***	
<i>Growth</i>								
MVBV	1.38051	7.52705	3.94362	5.29489	3.14018	5.88780		
EPSG	0.29078	1.44912	0.28594	5.33395	-0.24138	3.12616		
PEG	1.26812	<b>4.81105</b>	0.12099	<b>1.45390</b>	-0.28179	<b>2.18778</b>	***	**
DIVSHG	0.11515	0.22666	0.02533	<b>0.26382</b>	0.03042	<b>0.30685</b>		*
<i>Profitability</i>								
PLOWB	1.69894	<b>2.26980</b>	2.77757	<b>5.66592</b>	1.62486	5.15622	***	
OPM	0.11767	0.16357	0.10926	0.18289	0.05706	0.19389		
NPM	0.09267	<b>0.13937</b>	0.08020	<b>0.19833</b>	0.03654	<b>0.15217</b>	**	*
ROSC	0.17994	1.21950	0.17771	0.58060	0.06361	1.15292		
EPS	1.04832	<b>1.49137</b>	1.24003	<b>1.91733</b>	1.03546	<b>2.50946</b>	***	*
ROCE	0.15146	0.44016	0.14583	0.53882	0.12318	0.41018		
<i>Liquidity</i>								
CUR	0.90687	<b>0.58619</b>	2.00257	<b>3.57877</b>	1.27420	<b>0.67458</b>	***	***
CASH	0.36189	<b>0.30140</b>	0.38582	<b>0.35767</b>	0.52682	<b>0.47266</b>	**	***
QUI	3.99649	<b>4.30838</b>	6.02380	<b>8.21090</b>	3.64236	<b>3.69135</b>	***	***
CFSH	1.36842	<b>1.67405</b>	1.98856	<b>2.63516</b>	1.88562	2.91371	***	
CFM	0.15268	0.18418	0.14678	0.22833	0.09483	0.20265		
WCR	1.61378	<b>4.03024</b>	0.34670	<b>2.53363</b>	0.01998	2.11339	***	
STOCKT	3.39249	2.45957	3.40696	<b>2.62246</b>	3.25017	<b>2.38259</b>		*



## Continued

## Leverage

DEBT	4.61497	2.34932	5.21586	2.85328	4.73557	2.55109		
ETL	1.19364	<b>1.35684</b>	0.64038	<b>0.49062</b>	0.58790	0.46682	***	
TLSFU	1.53894	<b>2.29977</b>	1.87220	<b>6.08082</b>	1.63482	4.34613	**	
CGEAR	1.59147	5.41552	1.50701	5.51884	1.83969	6.83706		
CLSFU	0.77387	1.22769	0.83213	<b>1.93798</b>	0.79379	<b>5.90788</b>		**
INTCOV	5.92040	11.23310	6.47149	12.62482	4.57547	11.90530		
IGEAR	0.13560	<b>0.22935</b>	0.15359	<b>0.39948</b>	0.13881	<b>3.21325</b>	***	**
DEBTE	0.43196	<b>0.47109</b>	0.57554	<b>1.19027</b>	0.67840	1.34788	***	
DSFU	0.51244	0.88999	0.48485	<b>0.75645</b>	0.52587	<b>1.31439</b>		***

(\*), (\*\*), (\*\*\*) indicate statistically significant factors at 10%, 5% and 1% (two-tailed) level respectively.

Table A7. H3 results.

<b>Panel A: Test 1—Earnings Volatility</b>							<b>Pair-wise <i>F</i>-tests for equality of variance</b>	
Test Variables	<b>2006 - US GAAP</b>		<b>2007 - IFRS</b>		<b>2008 - IFRS</b>		2006 vs 2007	2007 vs 2008
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation		
$\Delta(\text{NP}/\text{TA})$	0.0988	<b>1.2036</b>	-0.0677	<b>2.3198</b>	0.7559	<b>14.2594</b>	*	**
$\Delta(\text{NP}/\text{OCF})$	1.2398	<b>5.2268</b>	0.2605	<b>8.2668</b>	0.7054	<b>13.4514</b>	*	*
Sample size	186		188		200			

  

<b>Panel B: Accruals and Quality</b>						
<b>Test 2a: Accruals-OCF</b>						
	<b>2006</b>	<b>Sig</b>	<b>2007</b>	<b>Sig</b>	<b>2008</b>	<b>Sig</b>
Pearson Correlation of ACCR-OCF	<b>-0.504</b>	***	<b>0.125</b>	*	<b>-0.278</b>	***
Sample size	197		197		203	

  

<b>Test 2b: Earnings Quality</b>						
Test Variables	<b>2006 - US GAAP</b>		<b>2007 - IFRS</b>		<b>2008 - IFRS</b>	
	Coefficients	Sig.	Coefficients	Sig.	Coefficients	Sig.
$R^2$ adj.	<b>0.181</b>		<b>0.288</b>		<b>0.156</b>	
F test	44.198	***	80.109	***	38.262	***
OCF	-0.285	***	2.314	***	4.343	***
	(0.403)		(0.259)		(0.702)	
Sample size	197		197		203	

  

<b>Panel C: Test 2c—OLS Regression of Accruals on Firm Financial Measures</b>									
Variables	<b>2006 - US GAAP</b>			<b>2007 - IFRS</b>			<b>2008 - IFRS</b>		
	Coefficients	Sig.		Variables	Coefficients	Sig.	Variables	Coefficients	Sig.
SALETAS	<b>-0.007</b>	**		NAVSH	<b>-0.001</b>	*	SALESHA	<b>-0.001</b>	**
	(0.004)				(0.000)			(0.000)	

## Continued

RESTAS	<b>-0.003</b> (0.002)	*	SALETAS	<b>-0.01</b> (0.003)	***	SALETAS	<b>-0.021</b> (0.003)	***
LNMV	<b>0.001</b> (0.000)	*	RESTAS	<b>-0.006</b> (0.001)	***	PLOWB	<b>0.001</b> (0.000)	**
OPM	<b>0.19</b> (0.018)	***	RESSFU	<b>-0.002</b> (0.001)	**	OPM	<b>0.362</b> (0.021)	***
NPM	<b>0.425</b> (0.028)	***	OPM	<b>0.118</b> (0.021)	***	NPM	<b>0.095</b> (0.020)	***
ROCE	<b>0.006</b> (0.003)	*	NPM	<b>0.215</b> (0.028)	***	ROSC	<b>0.004</b> (0.001)	***
CGEAR	<b>0.001</b> (0.000)	***	ROSC	<b>0.006</b> (0.003)	**	ROCE	<b>0.009</b> (0.003)	***
INTCOV	<b>0.001</b> (0.000)	**	EPS	<b>0.018</b> (0.002)	***	DEBT	<b>-0.001</b> (0.000)	**
Constant	-0.005 (0.005)		DEBT	<b>-0.002</b> (0.000)	***	Constant	0.007 (0.004)	*
			CLSFU	<b>-0.003</b> (0.001)	***			
			IGEAR	<b>-0.007</b> (0.003)	*			
			Constant	0.024 (0.004)	***			
$R^2$ adj.	0.787		$R^2$ adj.	0.756		$R^2$ adj.	0.803	
Sample size	170		Sample size	175		Sample size	184	

**Panel D: Test 3****a) Logistic Regression (SPP)**

<u>2006-2007</u>			<u>2006-2008</u>		
<i>Cases Included in Analysis</i>	393		<i>Cases Included in Analysis</i>	394	
<i>Accuracy Rate</i>	51.40%		<i>Accuracy Rate</i>	51.50%	
Variable	Coefficients	Sig.	Variable	Coefficients	Sig.
SPP	<b>-2.130</b> (0.870)	**	SPP	<b>-1.146</b> (0.565)	**

**b) Logistic Regression (LNL)**

<u>2006-2007</u>			<u>2006-2008</u>		
<i>Cases Included in Analysis</i>	393		<i>Cases Included in Analysis</i>	394	
<i>Accuracy Rate</i>	51.40%		<i>Accuracy Rate</i>	51.50%	
Variable	Coefficients	Sig.	Variable	Coefficients	Sig.
LNL	<b>1.722</b> (0.631)	***	LNL	<b>1.614</b> (0.623)	**

(\*), (\*\*), (\*\*\*) indicate statistically significant factors at 10%, 5% and 1% (two-tailed) level respectively.