IFRS ADOPTION IN SPAIN AND THE UNITED KINGDOM: EFFECTS ON ACCOUNTING NUMBERS AND RELEVANCE.

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IFRS ADOPTION IN SPAIN AND THE UK

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ABSTRACT

This paper examines the quantitative impact of mandatory IFRS adoption on financial reporting issued by first-time adopters. It analyses whether relevance of financial information is higher under IFRS than the information provided in financial statements prepared under local GAAP when investors have to make decisions in the capital markets. Both studies comparing results in Spain and in the United Kingdom, whose accounting systems have been traditionally considered in opposite groups.

The results of the research reveal that the quantitative impact is significant in both countries and, against we expected, it is higher in the United Kingdom. We also observe that IFRS have affected negatively to the relevance of financial reporting in both countries, although this effect has only been significant in Spain.

Keywords: IFRS, impact, relevance

1. INTRODUCTION

The harmonisation of the national accounting systems is one of the main international accounting processes and it has been an issue of great importance for accounting research since many years. This harmonisation process enhances the comparability of financial statements across countries, making them more useful for investors and other users. Although international and regional institutions made considerable efforts, since 1970, to harmonize accounting rules in different countries, those progresses were not successful enough to achieve the true accounting harmonisation.

The European Union's (EU) concern for the need to move towards international comparability resulted in the approval of Regulation 1606/2002. This regulation made mandatory for groups to prepare their consolidated financial statements in accordance with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) and accepted by the EU where any of their affiliates are listed on any European stock market, with effect from 2005.

Even though every EU member states had to apply the same accounting Directives, accounting research has shown that different accounting systems have been coexisting in Europe. The research on accounting systems has traditionally differentiated between the Anglo Saxon accounting model and the European continental one[i]. For this reason, the simultaneous adoption of new common accounting standards by different countries to obtain

comparable financial information raises the question of how this change affects the financial statements issued by companies in each country.

The purpose of this paper is to assess the quantitative impact of mandatory IFRS adoption on financial reporting issued by first-time adopters and to analyse whether IFRS make financial information more relevant for decision making in the capital markets.

We implement our analyses in Spain and the United Kingdom, whose accounting systems have been traditionally classified in opposite groups. While the United Kingdom has been considered as an important member of the Anglo Saxon accounting model, Spain has traditionally belonged to the European continental one.

Another reason to select these two countries is because some recent research findings has shown that the effect of IFRS application depends on how they are implemented and the level of enforcement and reporting incentives in each country (Daske et al., 2008). In this sense, enforcement in Spain has been found lower than in the United Kingdom [Leuz et al. (2003); Hope (2003) and La Porta et al. (2006)] and it would be interesting to see if differences in the level of enforcement can explain different effects of the mandatory IFRS application.

So, the first objective of this paper is to explore what has been the effect of the first mandatory application of IFRS on the economic and financial

position shown by financial information of first-time adopters from Spain and the United Kingdom.

We expected the impact of the new standards *versus* previous local Generally Accepted Accounting Principles (GAAP) to be different in Spain and the United Kingdom. Moreover, because of IFRS have been historically considered close to the English GAAP, we expected this effect to be higher on Spanish firms. Our findings reveal that the impact of the first application of IFRS has been different in Spain and the United Kingdom, but unexpectedly, it has been higher in the United Kingdom.

To explain these unexpected results, we take two different stands and it could be interesting to go into them in depth in future research. Firstly, according to a recent debate in the literature about accounting models, we might believe that the United Kingdom is not so close to the Anglo-Saxon accounting system and IFRS as it had been traditionally considered [Alexander and Archer (2000), D'Arcy (2001) and Lewis and Salter (2006)]. Secondly, according to Daske et al. (2008), we may expect first mandatory IFRS reporting to have a smaller effect in countries with weak enforcement regimes or where firms have poor reporting incentives to apply IFRS, and Spain displays lower degree of enforcement than the United Kingdom.

Another key question raised after the adoption of IFRS is whether the new standards will improve the usefulness of financial reporting. To be useful, according to IASB Framework, information must be understandable, reliable,

comparable and relevant. In this sense, our second objective focuses on relevance, which is one of the main qualitative characteristics of financial reporting.

Financial reporting is relevant when it influences the economic decisions of users, such as investors, employees, lenders, suppliers, customers or other agents. Among them, we focus on investors and analyse whether relevance of financial information is higher applying IFRS than local GAAP when investors have to make decisions in the capital markets of Spain and the United Kingdom.

We expected the relevance of financial reporting, measured with the gap between market value and book value, to increase under IFRS in both countries. In contrast, the results obtained show that the relevance of financial reporting decreases in both countries when IFRS are adopted, although the decline is only significant in Spain.

We expect our results to be of interest to academics involved in guiding and researching progress with international accounting harmonisation, and to the Spanish and English regulatory and supervisory authorities, since the study provides insight into the results of implementing IFRS. Our research may also be relevant to international regulators and institutions involved in the process (e.g. the European Commission, EFRAG, IASB and the securities markets), since the results provide examples of how firms required to apply

IFRS have approached the process in two countries with different starting accounting models.

The remainder of the paper is organized as follows. The next section presents previous literature in the field. Section 3 describes the sample, variables analysed, hypotheses to study and methodology. Section 4 deals with the results of the impact of IFRS on financial statements of Spanish and English firms and addresses the second objective, which concerns the impact of IFRS on the relevance of financial information. Finally, we discuss the main conclusions.

2. LITERATURE REVIEW

Much attention has been given in the academic and professional accounting literature to accounting harmonization since many years ago. Recently, this research have focused on IFRS; how they influence capital markets, if they improve accounting quality, comparability and/or transparency, economic consequences of their voluntary and mandatory implementation, and so on. Some years ago, most papers related to IFRS studied topics linked with voluntary adoption, why some firms adopted IFRS voluntarily, what were the effects of this adoption in accounting quality and comparability, their effects in capital markets, and so on.

Lots of papers about voluntary IFRS adoption effects are related to the fact that some countries were allowed to choose between IFRS and US

GAAP for financial reporting purposes. In this context, we could cite some papers such as Daske (2006), Weißenberger et al. (2004), Bartov et al. (2005), Van der Meulen et al. (2007) or Beckman et al. (2007).

Apart from those studies, there are many papers assessing determinants and consequences of voluntary IFRS adoption. For example, Hope et al. (2006) study what institutional factors influence countries' decisions to voluntarily adopt IFRS. They find that countries with weaker investor protection mechanisms and jurisdictions that are perceived to provide better access to their domestic capital markets are more likely to adopt IFRS. Gassen and Sellhorn (2006) analyse the determinants of voluntary IFRS adoption by publicly traded German firms during the period 1998-2004; then, they document significant differences in terms of earnings quality and finally analyse information asymmetry differences between IFRS and German-GAAP firms. Cuijpers and Buijink (2005) examine the determinants and consequences of voluntary adoption of non-local GAAP by firms listed in the EU. They find these firms are more likely to be listed on a US exchange, have more geographically dispersed operations, they are domiciled in a country with lower quality financial reporting and where IAS is explicitly allowed as an alternative to local GAAP. They also study whether non-local GAAP adopters have lower levels of information asymmetry, examining analyst following, cost of equity capital, and uncertainty among analysts and investors.

Most of research addressing consequences of voluntary IFRS adoption focus on effects of this application on accounting quality. Van Tendeloo and Vanstraelen (2005) address the question of whether the adoption of IFRS is associated with lower earnings management. They analyse German companies that have adopted IFRS compared to firms reporting under German GAAP. Their results suggest that the adoption of IFRS cannot be associated with lower earnings management. In the same way, Barth et al. (2008) examine whether application of IFRS is associated with higher accounting quality and find that firms from 21 countries applying them evidence less earnings management, more timely loss recognition, and more value relevance of accounting amounts than do matched sample firms applying non-U.S. domestic standards.

Hung and Subramanyam (2007) examine the effects of the adoption of IFRS on the financial statements reported by firms that applied Continental-style accounting systems. Their study is based on a sample of German firms and they find that total assets, book value of equity and the variability of book value and income, are significantly higher under IFRS than under German GAAP. In addition, book value and income are no more value relevant under IFRS and they find weak evidence suggesting that IFRS income exhibits greater conditional conservatism than German GAAP.

Finally, Daske et al. (2007) examine the economic consequences of the heterogeneity in the IFRS adoption. They classify firms into "label" and

"serious" adopters and analyse whether capital markets respond to differences in adoption quality, using proxies for market liquidity and the cost of capital. They find that effects of voluntary IFRS reporting are generally modest, comparing to other forms of commitment such as cross-listing in the U.S.

The introduction of a uniform accounting regime is expected to ensure greater comparability and transparency of financial reporting around the world. However, recent research has questioned the quality of financial statements prepared under IFRS standards, particularly in the presence of weak enforcement mechanisms and adverse reporting incentives (Ball et al., 2003).

In this sense, recent research has begun to focus on mandatory adoption of IFRS by first-time adopters, just as the paper published by Jermakovich and Gornik-Tomaszewski (2006), who examine implementation of IFRS by European Union companies. The paper provides insight into the IFRS adoption process based on a questionnaire sent to EU-listed companies in 2004. Grudnitsky and Aubert (2008) also study this mandatory adoption and they report the results of the impact and importance of mandatory adoption of IFRS on European Union firms. They determine the impact of mandatory adoption of IFRS across fifteen countries identifying significant differences in return on assets for firms computed under IFRS and local standards.

Some research assess the effects of IFRS on qualitative characteristics of financial reporting. For example, Beuselinck et al. (2007) investigate the comparability of accounting earnings for 14 EU countries in the period 1990-2005. They show that accruals measurement is affected by the business cycle stage and firm specific reporting incentives which arise from the equity capital market, debt financing and labor markets and these are intensified by a country's institutional framework. Their results also suggest that the mandatory introduction of IFRS in 2005 did not produced the expected improvement in earnings comparability across Europe. Horton et al. (2008) examine the effects of mandatory IFRS reporting on firms' information environment in sixteen European countries considering how IFRS adoption affects analysts forecast accuracy. They find that, during the mandatory transition period to IFRS, the largest improvement in the information environment happens for firms that had already voluntarily adopted IFRS earlier and non-financial firms mandatorily adopting IFRS. And Christensen et al. (2008) evaluate the impact of incentives on accounting quality changes around IFRS adoption examining earnings management and timely loss recognition. While existing literature documents accounting quality improvements following IFRS adoption, they find that improvements are confined to firms with incentives to adopt.

Finally, the most important issue in current research is to assess economic consequences of mandatory IFRS adoption. Current research study effects on,

for example, capital markets, as Armstrong et al. (2007) and Daske et al. (2008) and effects on analysts' forecasts, such as Byard et al. (2008) and Bae et al. (2008)

Armstrong et al. (2007) examine the European stock market reaction to sixteen events associated with the adoption of IFRS in Europe analysing whether investors expect net benefits or net costs from IFRS adoption. Their findings suggest European equity investors expect net benefits from IFRS adoption associated with convergence and increased information quality, although the net benefits are smaller in countries where enforcement of IFRS might be less rigorous.

Daske et al. (2008) assess the economic consequences of mandatory IFRS reporting in 26 countries. They analyse the effects on market liquidity, cost of capital and Tobin's q and find that market liquidity increases around the time of the introduction of IFRS, firms' cost of capital decrease and equity valuations increase. Nevertheless, the capital-market benefits occur in countries where firms have incentives to be transparent and where legal enforcement is strong and they are most pronounced for firms that voluntarily switch to IFRS.

Byard et al. (2008) examine the change in the errors in analysts' earnings forecasts for EU publicly-traded companies following mandatory adoption of IFRS. Using a constant analyst-firm sample they document that this

mandatory adoption resulted in a decrease in analysts' absolute forecast errors that is greater for firms domiciled in countries whose domestic GAAP is relatively more different from IFRS and firms domiciled in countries with better law enforcement.

Bae et al. (2008) investigate the relation between differences in accounting standards across countries and foreign analyst following and forecast accuracy. They develop two measures of differences in generally accepted accounting principles and examine their impact on foreign analysts. They find that the extent to which GAAP differs between two countries is negatively related to both foreign analyst following and forecast accuracy. So, their results suggest that GAAP differences are associated with economic costs for financial analysts.

3. RESEARCH DESIGN

3.1. Selection of the sample

The sample consists of listed groups traded on the *Madrid Stock Exchange General Index (IGBM)* and the *Financial Times Stock Exchange Index 100 (FTSE 100). Madrid Stock Exchange General Index (IGBM)* is a capitalization-weighted index that measures the performance of a selected number of Continuous Market stocks; it is the principal index for the Madrid Stock Exchange. The *Financial Times Stock Exchange Index 100 (FTSE 100)* is a share index of the 100 most highly capitalised UK companies listed on the London Stock Exchange. The study concentrates in these countries

because their accounting systems have been considered quite different, as we have explained in a previous section.

Firms providing financial services such as financial institutions, holding companies and insurance firms have been excluded, due to the specialized financial statements prevalent in these sectors. So, the final sample consists of 74 firms listed on *FTSE 100* and 100 firms listed on *IGBM*.

To evaluate the impact of IFRS on accounting figures we need comparable data; so, we have focused our study on fiscal year 2004. Firms' financial information is only available under both the prevailing local standards and the IFRS accepted by the EU for this year, 2004. Therefore, we use financial information that is perfectly comparable for each company.

IFRS 1 "First time adoption of IFRS" requires the first set of IFRS-based accounts to include comparative figures for the balance sheet, income statement, cash flow statement and notes based on IFRSs. Thus, financial statements in 2005 include comparative figures of 2004 which have been elaborated under international standards. So, the study is based on 2004 balance sheet and income statement figures prepared under local and international standards. The former are extracted from the 2004 Annual Report and the latter from the comparative figures reported in 2005.

These data have been hand-collected from the annual report published in the corporate websites of each company listed in each stock index, IGBM and FTSE 100. Courtenay and Keller (1994) and García Lara et al. (2006) show

that the results of empirical research may change significantly depending on the database chosen due to differences in data contained in them. Moreover, it is difficult to find databases providing both sets of accounts (IFRS and Local GAAP). Those reasons are why we prefer working with our own hand-collected dataset.

3.2. Definition of variables

The analysis of the impact of IFRS implementation refers to figures contained in the balance sheet and the income statement, as well as key financial ratios, as follows:

- Balance Sheet (fixed assets, current assets, total assets, equity, long term liabilities and short term liabilities);
- Income statement (operating income and net income);
- Financial ratios (current ratio, solvency, indebtedness, return on assets per operating income and return on equity per net income).

Table 1 provides the definition of figures and indicators used in the study. In total, 13 variables are measured based on the local standards and IFRS. Descriptive statistics are included in Appendix 1.

[Table 1 about here]

3.3. Hypothesis and methodology

The first objective of our study is to analyse the impact of IFRS on financial reporting issued by companies in Spain and the United Kingdom. We test for the existence of significant differences in the values resulting from the application of local or international standards for each variable in each country.

H_{01}: *There are no significant differences in the value taken by accounting figures and financial ratios under local GAAP and IFRS.*

In this way it is possible to identify what has been the quantitative impact of the application of IFRS on key figures and financial ratios in companies that are listed in London Stock Exchange and Madrid Stock Exchange. For this purpose, we compare variables for the same firms in the same period, but under different conditions. This means we work with related samples, to which we apply non-parametric Wilcoxon signed-rank test, after checking no variable follows a normal distribution[ii] (Appendix 2-Panels 1 and 2).

Then, we make a comparative analysis of the impact of IFRS in Spain and the United Kingdom to study in which country it has been higher. For that, we use the relative impact on accounting numbers due to the application of international standards. It is calculated as the percentage change in the value of accounting figures and financial ratios following the implementation of the new standards (expression [1]).

$$RELATIVE\ IMPACT = \frac{IFRS\ Value - Local\ GAAP\ Value}{\left|Local\ GAAP\ Value\right|} \qquad [1]$$

Following that, we test the next hypothesis:

H_{02}: *There are no significant differences in the relative impact of IFRS on value taken by accounting figures and financial ratios in the United Kingdom and Spain.*

After verifying that the series of relative impact do not fulfil normality conditions (Appendix 2-Panels 3 and 4), we go on to apply the Mann-Whitney U test grouping by country.

Apart from comparing the impact of the first application of IFRS in accounting figures and financial ratios, the study analyses what have been the effects produced by this first adoption of IFRS on the relevance of financial reporting, assessing the impact of IFRS on the difference between the book and market value of firms. We first evaluate for each country if book value differs significantly from market value using both standards, local GAAP and IFRS. To do that we apply non-parametric Wilcoxon signed-rank test, after checking any variable follow a normal distribution (Appendix 2-Panels 5 and 6), and test the next hypothesis by country:

H_{03}: *There are no significant differences in the Book Values (per local GAAP and IFRS) and Market Value of firms.*

Book Value is measured by total equity under local standards or IFRS and Market Value is measured as the figure of market capitalization obtained from Thomson Financial database.

We then analyse the gap between book and market value to establish whether it differs depending on the measurement of book value under local or international standards. To this end, we use the absolute values for differences between book value (per local GAAP and IFRS) and market value:

$gap_{spainlocal} = |Book_{spainlocal} - Market_{spain}|$ $gap_{spainifrs} = |Book_{spainifrs} - Market_{spain}|$

$gap_{uklocal} = |Book_{uklocal} - Market_{uk}|$ $gap_{ukifrs} = |Book_{ukifrs} - Market_{uk}|$

We test next hypothesis tested applying the Wilcoxon signed-rank test given that variables are no normal (Appendix 2-Panels 5 and 6):

H_{04}: There are no significant differences in the $gap_{spainlocal}$ ($gap_{uklocal}$) *and* $gap_{spainifrs}$ (gap_{ukifrs})

3.4. Sensitivity Analysis

After having obtained some results concerning the effects in accounting numbers due to the mandatory IFRS application in the United Kingdom and Spain, we evaluate whether those results might be related to some corporate characteristics of these firms, such as firm size, international activity and sector of operations. To do that, we build different sub-samples for each of the three variables and then we reply the same analysis to each one of them. We want to observe if these results are consistent with global results or not and whether we can established some behaviour pattern explaining changes in accounting numbers after IFRS application.

Firm size is measured by total assets figure and each sub-sample is made on what is the quartile size where the firms are situated (Table 2)

[Table 2 about here]

As a proxy of internationality we use the proportion of foreign sales to total sales (both data obtained from Thomson Financial database), and each sub-sample is made on what the quartile is where the firms are situated (Table 3).

[Table 3 about here]

Sector classification is based on SIC code classification and companies are grouped in two subsamples: industrial companies and commercial and services companies (Table 4).

[Table 4 about here]

4. RESULTS

4.1. Differences in financial reporting under local GAAP and IFRS

As we have explained previously, our first aim is to compare what has been the effect of mandatory IFRS adoption in accounting numbers issued by first-time adopters in the United Kingdom and Spain. Results obtained related to this issue are explained in this section.

H_{01}: There are no significant differences in the value taken by accounting figures and financial ratios under local GAAP and IFRS.

The hypothesis H_{01} is tested for Spain and for the United Kingdom using the Wilcoxon signed-ranks test. The results are presented in tables 5 (Spain) and 6 (United Kingdom).

[Table 5 about here]

In Spain, this hypothesis is rejected for eight variables at a maximum error level of 10%. Specifically, five balance sheet items and three financial ratios display significant differences depending on whether Spanish or international standards are applied. Balance sheet items showing significant differences are fixed assets, current assets, total assets (at 1%), long-term liabilities (at 5%) and short-term liabilities (at 10%). Figures contained in the income statement are not significantly different applying either local or international standards. Among the financial ratios, significant differences are observed in current ratio, solvency (at 1%) and indebtedness (at 5%), but return ratios are not affected by this change in accounting standards in Spain.

Based on the number of positive and negative ranks, as well as the sum of ranks of each sign provided by the Wilcoxon test, we may determine the sign of the variations experienced by variables analysed. Particularly, if we focus on the variables generating significant variations as a result of the change from Spanish to international standards, we conclude that the financial statements of Spanish firms adopting IFRS show:

- Increases in fixed and total assets, long term liabilities, short term liabilities and indebtedness.
- Decreases in current assets, current ratio and solvency.

In summary, IFRS application for Spanish first-time adopters causes a higher value on assets and liabilities and a worse financial position referred to liquidity, solvency and indebtedness.

[Table 6 about here]

As far as the United Kingdom is concerned, the hypothesis proposed is rejected for eleven of the variables analysed, at a maximum error level of 10%. Results confirm that all balance sheet items are statistically different applying local GAAP or IFRS at the 1% level, except equity, which also displays significant differences, but at 5%. Differences in income statement figures are significant for operating income and net income, both at 1%. Finally, among financial ratios, solvency, indebtedness and return on equity also show significant differences at the error level of 1%

In accordance with previous results and based on ranks provided by Wilcoxon test, we may conclude that the financial statements of the United Kingdom firms adopting IFRS reflect:

- Increases in fixed and total assets, long term liabilities, short term liabilities, operating income, net income, indebtedness and return on equity.

- Decreases in current assets, equity, and solvency.

To sum up, firms in the United Kingdom reflect, after IFRS application, higher value on assets and liabilities, lower equity and higher income. As a consequence their financial statements display worse financial position, referred to solvency and indebtedness, but better profitability.

The hypothesis H_{02} is tested using Mann-Whitney U test:

H_{02}: There are no significant differences in the relative impact of IFRS on value taken by accounting figures and financial ratios in the United Kingdom and Spain.

The results obtained (Table 7) reject this hypothesis for ten variables at a maximum error level of 10%.

[Table 7 about here]

The relative impact of IFRS has been statistically different in Spain and the United Kingdom on fixed assets, current assets, long-term and short-term liabilities; on operating and net income and on financial ratios measuring solvency, indebtedness, return on assets and return on equity. Only three variables (total assets, equity and current ratio) do not display significant differences in the relative impact caused by the first application of IFRS in Spanish firms and UK firms.

Based on mean rank provided by the Mann-Whitney test our results determine that the relative impact has been higher in the United Kingdom for six variables: fixed assets, long-term liabilities, operating and net income, and return on assets and equity. In contrast, the relative impact on current assets, short-term liabilities, solvency and indebtedness has been higher in Spain.

On the basis of the results obtained for Spain and the United Kingdom testing H_{01} and H_{02} it is possible to affirm that the effects of IFRS on financial reporting have been more relevant for first-time adopters listed in the United Kingdom than those listed in Spain. A greater number of variables reflect significant differences under local GAAP and IFRS (in Spain, income items and return ratios are not statistically different) and the relative impact of IFRS in accounting figures and ratios has been higher in the United Kingdom in most of the variables analysed.

Although these results are surprising because UK GAAP have always been considered closer to IFRS than Spanish GAAP, we can find in previous literature some explanations for them. On the one hand, our findings might reveal that the accounting standards of the United Kingdom are not so close to IFRS as it has been considered over time. In this sense, Lewis and Salter (2006), as well as Alexander and Archer (2000) and D'Arcy (2001), find a European accounting model that clearly includes the United Kingdom and a US-influenced model including companies reporting under IFRS.

On the other hand, Spain displays lower degree of enforcement than the UK and, according to Daske et al. (2008), we may expect first application of IFRS to have smaller impact in countries with weak enforcement. So, differences in the impact of IFRS on Spanish firms and UK firms may also be due to the way on which firms have applied IFRS at the first time, because IFRS 1 "First time adoption of IFRS" contains numerous exceptions which have been applied by firms in a different way. In this sense, it will be interesting to investigate about the reasons for these results in the future.

4.2. Sensitivity analysis for differences in accounting numbers

Apart from results obtained from the total sample, we assess if they are consistent with results found in sub-samples. For that, the hypothesis H_{01}: *There are no significant differences in the value taken by accounting figures and financial ratios under local GAAP and IFRS,* is tested using Wilcoxon signed-ranks test for the subsamples obtained according to the firm size, to the firm activities (industrial or commercial and services) and based on the proportion of foreign sales respect to total sales.

Firm size

Appendix 3 presents Wilcoxon results for each subsample where it is possible to observe that the smallest and biggest firms are the least affected by the application of IFRS both in the UK and in Spain. These results may be due

to, on the one hand, economic operations of small firms, which are less complicated and perhaps less affected by the change; and on the other hand, the biggest firms could have been applying accounting policies closer to IFRS before the mandatory change.

In more detail, in Spain, only long term liabilities, solvency and indebtedness ratios show significant differences due to the change in accounting standards in firms in the first quartile, while no significant differences are displayed by accounting figures and ratios in the biggest firms (in the fourth quartile). We also observe that income items and return ratios are not affected by the change in accounting standards in Spain irrespective of the firm size.

In the United Kingdom, six variables reflect significant differences in the smallest firms (fixed and total assets, long term liabilities, operating and net income and return on equity), another six in the biggest firms (fixed and current assets, long term liabilities, net income, current ratio and return on equity); and some variables show significant differences irrespective of firm size, such as fixed assets, long term liabilities or net income.

Internationality

Our findings reveal that the effect of IFRS on accounting figures and ratios is less significant in firms with higher proportion of foreign sales respect to total sales. In these firms (fourth quartile) we find significant differences in the value taken under local GAAP and IFRS only in two and three variables in

Spain and in the UK, respectively. The explanation of this result may be because the more international and the bigger a firm is, the closer the accounting policies could have been to IFRS before the mandatory change.

In Spain, eight variables behaved in a different way depending on the foreign sales, while in the United Kingdom only three variables behaved in the same way irrespective of foreign sales proportion (Long term liabilities, current ratio and return on assets).

Economic activity

The differentiation between industrial and commercial or services activities is not relevant to the impact of IFRS on the financial reporting in the United Kingdom. Commercial and services subsample show significant differences for the same variables that the total sample, and only two items (equity and operating income) differentiate between results in industrial sub-sample and in total sample.

In Spain the results are a bit different. Both subsamples present differences respect to the total sample. Moreover, there are differences between industrial and commercial and services firms. In the subsample of industrial firms eight variables show significant differences under local standards and IFRS, while in the subsample of commercial and services activities five variables do it.

Variables with different behaviour depending on the firm activities are long term liabilities, net income, current ratio, solvency and indebtedness. It may be due to the different financial structure of the firms in each subsample

and to the different nature of the activities carried out by them. It is possible that the accounting issues of industrial activities have been more affected by the accounting change in Spain.

4.3. Impact of IFRS on the relevance of financial reporting

Effects produced by the adoption of IFRS on the relevance of financial reporting are discussed in this section, in which we examine the impact of IFRS on the difference between the book and market value of firms. This issue is particularly relevant because one of the reasons for the adoption of international standards was to ensure the generation of useful information for the stock market, which would imply narrowing the gap between a firm's book and market value.

We began by testing whether market value of Spanish and UK firms differs significantly from book value under local standards and IFRS.

H_{03}: *There are no significant differences in the Book Values (per local GAAP and IFRS) and Market Values of firms.*

Results in Table 8 confirm that market value of firms is statistically different from book value when the latter is calculated with both local standards and IFRS.

[Table 8 about here]

Additionally, when we analyse ranks provided by the Wilcoxon test, it is observed that in both Spain and the UK market value is significantly higher than book value.

Having established that book value differs from market value in a significant way in both countries using either of the two standards, we focus on assessing whether the gap between accounting and market values is significantly different when accounting values are measured in local GAAP with regard to those are obtained applying IFRS.

H_{04}: There are no significant differences in the $gap_{spainlocal}$ ($gap_{uklocal}$) *and* $gap_{spainifrs}$ (gap_{ukifrs})

As it is shown in Table 9, significant differences exist in the Spanish case and the ranks obtained suggest that the difference between accounting and market values are higher when the former are calculated under international standards. On the other hand, although we do not find significant differences in the UK, they are close to be significant, and the gap is bigger after IFRS application.

[Table 9 about here]

In short, our results identify that, after the first mandatory IFRS application, both in Spain and in the United Kingdom there are still important differences between the accounting value in a company and its market value. It confirms, as it was foreseeable, that accounting information, under

international standards, still does not capture all the factors influencing the market value of firms and its value is undervaluate.

Although it has been more significant in Spain, these results also suggest that the application of international standards has contributed to increase the gap between market and book values in a national context. Thus, these results cast doubt one of the main objectives of the financial information prepared under the new international standards, its relevance.

4.4. Sensitivity analysis for differences in the relevance of financial information

In connection with previous results that are referred to the total sample, we can point out, in general, that they are consistent with results obtained in sub-samples defined depending on firm size, internationality and the sector of operations. The same result is obtained in the two countries analysed.

As it can be observed in Appendix 3, the existence of significant differences between accounting and market values persist irrespective of the firm size, the foreign activity of the firm and their sector of activity. These results are the same both in Spain and in the United Kingdom, as well as when they apply local or international standards. These results also corroborate that market value is significantly higher that book value in all cases.

With regard to the effect of the IFRS adoption in the gap between accounting value and market value, we can point out that in most of the cases

analysed the results obtained are the same as in the total sample. More specifically, differences in Spain are as important as in the total sample whereas in the UK they are still not significant.

If we concentrate on Spain, in regard to the firm size, the biggest firms (third and fourth quartiles) show a significant increase in that gap after applying IFRS while this increase is not significant in the smallest ones. Regarding the international activity and the sector of operations, firms with bigger foreign activity have not a significant impact, as well as those companies operating in commercial and services activities.

In the United Kingdom, we only observe significant effects in the gap between accounting value and market value after IFRS application in size variable and, more specifically, in firms situated in the third quartile. In other subsamples, we cannot consider the results obtained are different from the total sample.

5. CONCLUSIONS

First, the paper analyses the quantitative impact of the first application of IFRS on accounting figures and financial ratios of firms listed in Spain and the United Kingdom. Then, we study the effect of IFRS on the relevance of financial reporting in both countries.

We expected the quantitative impact of IFRS to be significant due to differences between local and international standards and that this impact would be higher in Spain because IFRS have always been considered close to Anglo-saxon accounting model and distant from the European continental accounting model. However, the results of our research reveal that the quantitative impact has been significant in both countries and it has been higher in the United Kingdom.

To explain these unexpected results, we take two different stands and it could be interesting to go into them in depth in future research. Firstly, a recent Anglo-Saxon *vs.* Continental accounting model debate has been taken up by some authors who justify that the United Kingdom should not be considered as an Anglo-Saxon system member. First, Alexander and Archer (2000) using logical analysis and D'Arcy (2001) using regulations, suggested an EU group including the UK *vs.* an American-led group, where IFRS was included. Finally, Lewis and Salter (2006), using reported results from 20-F filings, find a European model of accounting that clearly includes the UK and a US-influenced model that includes those companies reporting under IFRS.

Secondly, we should take into account the way on which firms have applied IFRS at the first time, because the exceptions contained in IFRS 1 "First time adoption of IFRS" could be applied by firms in different ways. This issue should be analysed in the future, but we find some empirical results that can point out some evidence. According to Daske et al. (2008) as the

mandatory IFRS application forces many firms to adopt IFRS that would not have done so otherwise, they expect first mandatory IFRS reporting to have a smaller effect in countries with weak enforcement regimes or where firms have poor reporting incentives to apply IFRS. We could connect this suggestion with our results taking into account previous research according to the level of enforcement. In this sense, Hope (2003), Leuz et al. (2003) and LaPorta et al. (2006) find all of them that Spain displays low degree of enforcement and the United Kingdom shows one of the highest enforcement.

These results could suggest that if Spanish firms have displayed lower effects in accounting numbers and financial ratios after the IFRS application is not because the previous standards are closer to IFRS, but due to the way in which Spanish firms have done the transition to the international standards. Therefore, it will be interesting to investigate about those reasons behind our results in the future checking if these differences could be because, although Spanish GAAP are more different from IFRS than UK accounting standards, a low enforcement in Spain may cause a smaller effect after IFRS application, as Daske et al. (2008) suggest.

With respect to the effect of IFRS on financial reporting relevance, we may conclude that IFRS have affected negatively to the relevance of financial reporting in both countries, although this effect has only been significant in Spain and it is consistent with Hung and Subramanyan (2007) because they demonstrate that book value is not more relevant under IFRS in German

companies. Nevertheless, this finding is disturbing because one of the main reasons for the adoption of international standards was to ensure the generation of useful information for the stock market, which would imply narrowing the gap between a firm's book and market value. This objective was not reached the first year of IFRS application and it would be interesting to search the evolution of the gap between market value and book value during some years after of first application.

Our results should be of interest to the institutions involved in implementing the changes necessary to harmonise European and international accounting and may help Spanish and English standard setters to improve the reforming of local standards in order to ensure convergence between them and IFRS for all companies. Users also should benefit from the findings because they highlight the absence of any improvement in relevance after the adoption of IFRS.

APPENDIX

Appendix 1. Descriptive statistics

Panel 1. Descriptive statistics for variables in Spanish firms

Variable under local standards	Min	Max	Mean	St desv
Fixed Assets	1,4788	131114,2370	5427,3091	17225,0041
Current Assets	7,8220	488598,9340	8797,7677	50539,8531
Total Assets	35,2155	619713,1710	14225,0768	66073,7812
Equity	-8,0080	153449,3810	4354,9270	18175,2020
LT Liabilities	0,6490	88148,6527	3208,6669	11766,0268
ST Liabilities	2,9499	395908,3420	6661,4829	40440,9007
Operating Income	-51,6230	41689,0000	1172,1386	5041,1359
Net Income	-156,2340	14056,1230	613,7845	2339,8915
Current ratio	0,3267	7,9175	1,5388	1,0905
Solvency	0,9279	4,6697	1,8411	0,7281
Indebtedness	-13,8767	12,8474	2,0097	2,4320
ROA (OPI)	-0,0454	1,0953	0,0988	0,1628
ROE (NETI)	-0,3900	1,6077	0,1312	0,2014
Variable under IFRS	Min	Max	Mean	St desv
Fixed Assets	4,7660	173537,7830	6104,5684	20722,4068
Current Assets	7,4890	484387,1100	8725,0506	50108,7667
Total Assets	35,5570	657924,8930	14829,6190	69755,1593
Equity	-9,1170	177934,6310	4656,6857	20360,8890
LT Liabilities	0,6770	87520,7739	3490,4062	12731,3059
ST Liabilities	4,5460	395736,7270	6682,5271	40421,9099
Operating Income	-25,6600	21010,9940	874,4911	3110,9931
Net Income	-152,8250	34514,0000	956,9299	4124,7110
Current ratio	0,4119	5,2456	1,4023	0,6990
Solvency	0,9244	4,8042	1,7928	0,6876
Indebtedness	-13,2307	55,9812	2,5907	5,9115
ROA (OPI)	-0,0885	0,3689	0,0736	0,0660
ROE (NETI)	-0,9088	129,2353	1,4224	12,9116

Panel 2. Descriptive statistics for variables in English firms

Variable under local standards	Min	Max	Mean	St desv
Fixed Assets	201,262	173196,227	11.370,665	22579,443
Current Assets	198,284	46896,704	4.335,552	6352,100
Total Assets	867,416	189924,119	15.706,216	26957,661
Equity	198,567	144862,066	6.897,559	17754,691
LT Liabilities	29,040	35668,453	4.729,389	5970,013
ST Liabilities	115,816	47371,706	4.079,269	6465,153
Operating Income	-5830,7921	18531,679	1.290,696	2637,802

Net Income	-10694,2770	11717,935	721,739	2138,073
Current ratio	0,377	4,232	1,2829	0,668
Solvency	1,023	9,655	1,283	1,076
Indebtedness	0,116	43,700	2,598	5,328
ROA (OPI)	-0,031	0,373	0,100	0,078
ROE (NETI)	-0,098	4,114	0,251	0,522
Variable under IFRS	Min	Max	Mean	St desv
Fixed Assets	329,906	195427,2747	12.020,637	24953,718
Current Assets	197,433	45109,0228	4.066,736	6200,925
Total Assets	778,543	208775,2642	16.087,373	28812,759
Equity	-350,330	161191,4049	6.766,176	19534,385
LT Liabilities	31,890	39107,9950	5.488,075	6439,415
ST Liabilities	115,254	46344,6149	3.833,122	6304,231
Operating Income	-214,169	18901,6959	1602,519	2781,264
Net Income	-267,641	12673,0783	1148,085	2002,511
Current ratio	0,125	12,2276	1,411	1,467
Solvency	0,952	9,8055	1,826	1,086
Indebtedness	-20,830	288,8211	5,777	33,517
ROA (OPI)	-0,013	0,376	0,106	0,073
ROE (NETI)	-2,057	19,253	0,484	2,262

Appendix 2. Normality tests

Panel 1. Normality tests for variables in Spanish firms

	Kolmogorov-Smirnov		Shapiro-Wilk	
Variable under local standards	Statistic	Sig.	Statistic	Sig.
Fixed Assets	0,3764	0,0000	0,3393	0,0000
Current Assets	0,4426	0,0000	0,1568	0,0000
Total Assets	0,4150	0,0000	0,2047	0,0000
Equity	0,4084	0,0000	0,2407	0,0000
LT Liabilities	0,3926	0,0000	0,2805	0,0000
ST Liabilities	0,4346	0,0000	0,1430	0,0000
Operating Income	0,4408	0,0000	0,2345	0,0000
Net Income	0,4039	0,0000	0,2661	0,0000
Current ratio	0,2061	0,0000	0,6202	0,0000
Solvency	0,2027	0,0000	0,8169	0,0000
Indebtedness	0,2275	0,0000	0,6888	0,0000
ROA (OPI)	0,2765	0,0000	0,5023	0,0000
ROE (NETI)	0,2014	0,0000	0,6492	0,0000

	Kolmogorov-Smirnov		Shapiro-Wilk	
Variable under IFRS	Statistic	Sig.	Statistic	Sig.
Fixed Assets	0,3842	0,0000	0,3107	0,0000
Current Assets	0,4438	0,0000	0,1568	0,0000
Total Assets	0,4160	0,0000	0,2012	0,0000
Equity	0,4264	0,0000	0,2275	0,0000
LT Liabilities	0,3920	0,0000	0,2827	0,0000
ST Liabilities	0,4344	0,0000	0,1433	0,0000
Operating Income	0,4039	0,0000	0,2951	0,0000
Net Income	0,4364	0,0000	0,2384	0,0000
Current ratio	0,1681	0,0000	0,8173	0,0000
Solvency	0,1821	0,0000	0,8159	0,0000
Indebtedness	0,3369	0,0000	0,3251	0,0000
ROA (OPI)	0,1201	0,0012	0,8928	0,0000
ROE (NETI)	0,5064	0,0000	0,0817	0,0000

Panel 2. Normality tests for variables in UK firms

	Kolmogorov-Smirnov		Shapiro-Wilk	
Variable under local standards	Statistic	Sig.	Statistic	Sig.
Fixed Assets	0,3082	0,0000	0,3881	0,0000
Current Assets	0,2493	0,0000	0,5541	0,0000
Total Assets	0,2813	0,0000	0,4244	0,0000
Equity	0,3497	0,0000	0,2816	0,0000
LT Liabilities	0,2356	0,0000	0,6705	0,0000
ST Liabilities	0,2657	0,0000	0,5307	0,0000

Operating Income	0,2848	0,0000	0,5427	0,0000
Net Income	0,3049	0,0000	0,5492	0,0000
Current ratio	0,1076	0,0336	0,8871	0,0000
Solvency	0,2059	0,0000	0,5215	0,0000
Indebtedness	0,3377	0,0000	0,3167	0,0000
ROA (OPI)	0,5166	0,0000	0,1075	0,0000
ROE (NETI)	0,5197	0,0000	0,1133	0,0000

	Kolmogorov-Smirnov		Shapiro-Wilk	
Variable under IFRS	Statistic	Sig.	Statistic	Sig.
Fixed Assets	0,3159	0,0000	0,3611	0,0000
Current Assets	0,2631	0,0000	0,5394	0,0000
Total Assets	0,2895	0,0000	0,4043	0,0000
Equity	0,3678	0,0000	0,2554	0,0000
LT Liabilities	0,2169	0,0000	0,7131	0,0000
ST Liabilities	0,2732	0,0000	0,5098	0,0000
Operating Income	0,2999	0,0000	0,5085	0,0000
Net Income	0,3006	0,0000	0,5298	0,0000
Current ratio	0,2478	0,0000	0,4883	0,0000
Solvency	0,2196	0,0000	0,4825	0,0000
Indebtedness	0,4516	0,0000	0,1397	0,0000
ROA (OPI)	0,4538	0,0000	0,1250	0,0000
ROE (NETI)	0,4201	0,0000	0,2461	0,0000

Panel 3. Normality tests for relative impact variable in Spanish firms

	Kolmogorov-Smirnov		Shapiro-Wilk	
Relative impact on:	Statistic	Sig.	Statistic	Sig.
Fixed Assets	0,1889	0,0000	0,8412	0,0000
Current Assets	0,3472	0,0000	0,5177	0,0000
Total Assets	0,2030	0,0000	0,7721	0,0000
Equity	0,1666	0,0000	0,8988	0,0000
LT Liabilities	0,3230	0,0000	0,3440	0,0000
ST Liabilities	0,3381	0,0000	0,3613	0,0000
Operating Income	0,3264	0,0000	0,5949	0,0000
Net Income	0,5184	0,0000	0,0984	0,0000
Current ratio	0,2509	0,0000	0,7833	0,0000
Solvency	0,1577	0,0001	0,8125	0,0000
Indebtedness	0,1943	0,0000	0,6544	0,0000
ROA (OPI)	0,2920	0,0000	0,4805	0,0000
ROE (NETI)	0,5185	0,0000	0,1097	0,0000

Panel 4. Normality tests for relative impact variable in UK firms

	Kolmogorov-Smirnov		Shapiro-Wilk	
Relative impact on:	Statistic	Sig.	Statistic	Sig.

Fixed Assets	0,2745	0,0000	0,5227	0,0000
Current Assets	0,2387	0,0000	0,7346	0,0000
Total Assets	0,2976	0,0000	0,6395	0,0000
Equity	0,3333	0,0000	0,4654	0,0000
LT Liabilities	0,3684	0,0000	0,2530	0,0000
ST Liabilities	0,2352	0,0000	0,7839	0,0000
Operating Income	0,3790	0,0000	0,1909	0,0000
Net Income	0,3380	0,0000	0,2979	0,0000
Current ratio	0,3770	0,0000	0,2275	0,0000
Solvency	0,3691	0,0000	0,9230	0,0003
Indebtedness	0,4462	0,0000	0,1538	0,0000
ROA (OPI)	0,3717	0,0000	0,1931	0,0000
ROE (NETI)	0,3557	0,0000	0,3440	0,0000

Panel 5. Normality test for market variables in Spanish firms

	Kolmogorov-Smirnov		Shapiro-Wilk	
	Statistic	Sig.	Statistic	Sig.
$BOOK_{Spainlocal}$	,4219	,0000	,2001	,0000
$BOOK_{Spainifrs}$	,4353	,0000	,1777	,0000
$MARKET_{Spain}$	,3493	,0000	,3985	,0000
$Abs(BOOK_{Spainlocal}\text{-}Market_{Spain})$	,3988	,0000	,2643	,0000
$Abs(BOOK_{Spainifrs}\text{-}Market_{Spain})$	,4008	,0000	,2543	,0000

Panel 6. Normality test for market variables in UK firms

	Kolmogorov-Smirnov		Shapiro-Wilk	
	Statistic	Sig.	Statistic	Sig.
$BOOK_{uklocal}$	,3490	,0000	,2919	,0000
$BOOK_{ukifrs}$	,3693	,0000	,2635	,0000
$MARKET_{uk}$	,2857	,0000	,4704	,0000
$Abs(BOOK_{uklocal}\text{-}Market_{uk})$	,3038	,0000	,4689	,0000
$Abs(BOOK_{ukifrs}\text{-}Market_{uk})$	,2962	,0000	,4850	,0000

Appendix 3. Sensitivity analysis

Panel 1. Results of Wilcoxon signed rank test for Spain (Z-Statistic)

Accounting figures and financial ratios				
SIZE	*Quartile 1*	*Quartile 2*	*Quartile 3*	*Quartile 4*
Fixed Assets	-1,3050	-3,0808*	-2,9463*	-1,5471
Current Assets	-0,9429	-1,4599	-2,9194*	-1,1435
Total Assets	-1,4000	-2,5965*	-1,6279	-0,6861
Equity	-0,6054	-0,7130	-1,5202	-0,6861
LT Liabilities	-1,6571***	-1,7893***	-0,9552	-1,3050
ST Liabilities	-1,1254	-0,8286	-0,9714	-0,9429
Operating Income	-0,4000	-0,0404	-0,2287	-1,5471
Net Income	-1,3857	-1,0628	-0,9283	-1,1974
Current ratio	-1,0897	-1,8700***	-2,5965*	-0,7399
Solvency	-2,0853**	-0,8207	-1,6548***	-0,9552
Indebtedness	-1,8866***	-0,4978	-2,0315**	-0,7668
ROA (OPI)	-0,3363	-0,3363	-0,8745	-0,5516
ROE (NETI)	-0,1211	-0,1480	-1,0359	-0,6861
INTERNATIONALITY	*Quartile 1*	*Quartile 2*	*Quartile 3*	*Quartile 4*
Fixed Assets	-2,3146**	-1,6547***	-2,4303**	-1,9132***
Current Assets	-2,2938**	-1,8743***	-1,8615***	-0,6722
Total Assets	-0,1207	-1,1376	-0,9825	-2,4303**
Equity	-0,2987	-0,4654	-1,7064***	-1,0342
LT Liabilities	-0,3733	-0,9308	-2,3269**	-0,6722
ST Liabilities	-0,0747	-0,5688	-0,2068	-1,1359
Operating Income	-0,1493	-1,7581***	-1,2927	-1,1376
Net Income	-0,3733	-0,5171	-0,5688	-1,1376
Current ratio	-1,6053	-1,3961	-1,1376	-0,5688
Solvency	-0,6347	-0,9308	-2,4303**	-1,0859
Indebtedness	-0,7467	-1,1893	-2,1718**	-0,0517
ROA (OPI)	-0,1120	-2,1201**	-1,9132***	-1,5513
ROE (NETI)	-0,2613	-0,7239	-0,6722	-0,4137
ECONOMIC ACTIVITY	*Industrial*		*Commercial & Services*	
Fixed Assets	-2,9963*		-3,7508*	
Current Assets	-1,7703***		-3,5379*	
Total Assets	-2,0226**		-2,0088**	
Equity	-1,6109		-0,3276	
LT Liabilities	-3,4080*		-0,2821	
ST Liabilities	-1,5951		-0,9210	
Operating Income	-1,3756		-0,0769	
Net Income	-2,0291**		-0,1474	
Current ratio	-1,2253		-3,5215*	
Solvency	-2,9963*		-0,5405	
Indebtedness	-2,5192**		-0,5569	
ROA (OPI)	-1,1665		-0,0819	
ROE (NETI)	-2,3754**		-1,6707**	
Book Value-Market Value				
SIZE	*Quartile 1*	*Quartile 2*	*Quartile 3*	*Quartile 4*

MV *vs* $B_{localgaap}$	-3,9539*	-3,4251*	-3,9199*	-3,2846*
MV *vs* B_{ifrs}	-3,9844*	-3,0031*	-3,8826*	-3,2846*
$\|B_{ifrs} - MV\| - \|B_{localgaap} - MV\|$	-0,5779	-0,2110	-2,7626*	-2,3114**
INTERNATIONALITY	*Quartile 1*	*Quartile 2*	*Quartile 3*	*Quartile 4*
MV *vs* $B_{localgaap}$	-2,9701*	-2,5558**	-3,5162*	-3,2330*
MV *vs* B_{ifrs}	-2,8304*	-2,4422**	-3,5162*	-3,2330*
$\|B_{ifrs} - MV\| - \|B_{localgaap} - MV\|$	-1,7122***	-2,2718**	-1,7064***	-1,1614
ECONOMIC ACTIVITY	*Industrial*		*Commercial & Services*	
MV *vs* $B_{localgaap}$	-6,4782*		-3,6192*	
MV *vs* B_{ifrs}	-6,2868*		-3,5430*	
$\|B_{ifrs} - MV\| - \|B_{localgaap} - MV\|$	-2,5692**		-1,1048	

*: significant at 1%; **: significant at 5%; ***: significant at 10%

Panel 2. Results of Wilcoxon signed rank test for the United Kingdom (Z-Statistic)

Accounting figures and financial ratios				
SIZE	*Quartile 1*	*Quartile 2*	*Quartile 3*	*Quartile 4*
Fixed Assets	-3,1791*	-3,5058*	-2,9832*	-1,8914***
Current Assets	-1,6097	-3,0060*	-2,1557**	-3,5816*
Total Assets	-2,2133**	-2,5477**	-2,6783*	-1,5025
Equity	-1,2073	-2,1557**	-2,6133*	-0,7244
LT Liabilities	-2,9377*	-3,7236*	-3,7236*	-1,7707***
ST Liabilities	-1,4890	-2,5912*	-2,4170**	-1,6097
Operating Income	-2,3343**	-1,1976	-0,6533	-1,1541
Net Income	-2,6560*	-2,5041**	-2,1993**	-1,9316***
Current ratio	-0,3219	-1,6767***	-0,0653	-2,3340**
Solvency	-0,1610	-3,3316*	-3,2445*	-1,5292
Indebtedness	-0,9658	-2,1993**	-3,4623*	-1,3682
ROA (OPI)	-1,3280	-0,7186	-0,2831	-0,8451
ROE (NETI)	-2,6962*	-1,5025	-3,1574*	-1,8511***
INTERNATIONALITY	*Quartile 1*	*Quartile 2*	*Quartile 3*	*Quartile 4*
Fixed Assets	-3,3611*	-2,3286**	-2,7830*	-1,3631
Current Assets	-1,4996	-3,4078*	-2,1015**	-2,4990**
Total Assets	-2,6371*	-1,9311***	-2,6694*	-0,9087
Equity	-2,8440*	-0,7384	-0,3408	-0,6816
LT Liabilities	-3,4645*	-1,8743***	-3,4078*	-1,7607***
ST Liabilities	-3,1542*	-0,6248	-2,0447**	-2,4990**
Operating Income	-1,5513	-1,7607***	-0,8237	-0,4080
Net Income	-1,6030	-2,6694*	-1,6471	-1,0791
Current ratio	-1,1376	-0,3976	0,0000	-0,1704
Solvency	-3,4128*	-1,4767	-1,8175***	-1,0223
Indebtedness	-3,4645*	-1,0223	-1,9311***	-1,0223
ROA (OPI)	-0,1034	-1,6471	-0,2272	-0,5112
ROE (NETI)	-2,4303**	-2,5558**	-1,0223	-1,4199
ECONOMIC ACTIVITY	*Industrial*		*Commercial & Services*	
Fixed Assets	-4,5642*		-2,9843*	
Current Assets	-5,0054*		-2,0445**	
Total Assets	-3,7847*		-2,3813**	
Equity	-1,2410		-2,8827*	

LT Liabilities	-4,3488*		-4,1780*	
ST Liabilities	-3,1488*		-2,2731**	
Operating Income	-1,4604		-2,3747**	
Net Income	-3,1898*		-2,8319*	
Current ratio	-0,8615		-0,2413	
Solvency	-2,5949*		-4,0764*	
Indebtedness	-2,4000**		-4,2542*	
ROA (OPI)	-0,5333		-1,4604	
ROE (NETI)	-2,8718*		-3,5684*	
Book Value-Market Value				
SIZE	*Quartile 1*	*Quartile 2*	*Quartile 3*	*Quartile 4*
MV *vs* $B_{localgaap}$	-3,8230*	-2,4990**	-3,4645*	-2,9832*
MV *vs* B_{ifrs}	-3,8230*	-2,6126*	-3,5162*	-3,0267*
$\|B_{ifrs} - MV\|$ - $\|B_{localgaap} - MV\|$	-1,2073	-0,2272	-2,8957*	-1,0234
INTERNATIONALITY	*Quartile 1*	*Quartile 2*	*Quartile 3*	*Quartile 4*
MV *vs* $B_{localgaap}$	-2,7406*	-3,0670*	-2,6694*	-2,7262*
MV *vs* B_{ifrs}	-2,9474*	-3,3510*	-2,6126*	-3,2374*
$\|B_{ifrs} - MV\|$ - $\|B_{localgaap} - MV\|$	-1,4478	0,0000	-0,5112	-0,8519
ECONOMIC ACTIVITY	*Industrial*		*Commercial & Services*	
MV *vs* $B_{localgaap}$	-5,0353*		-3,3499*	
MV *vs* B_{ifrs}	-5,1681*		-3,7804*	
$\|B_{ifrs} - MV\|$ - $\|B_{localgaap} - MV\|$	-1,4731		-0,7399	

*: significant at 1%; **: significant at 5%; ***: significant at 10

NOTES:

[i] See literature concerning accounting systems, such as, Nair and Frank (1980), Salter (1991), Nobes (1992) or Jarne (1997).

ii We use the Kolmogorov-Smirnov (with Liliierfors significance correction) and Shapiro-Wilks tests to check the normality hypothesis for the different variables.

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TABLES

Table 1. Accounting figures and financial ratios

FIGURES	**DEFINITION**
FIXED ASSETS	Intangible assets + Property, plant and equipment + Long-term investments + Goodwill
CURRENT ASSETS	Inventories + Debtors + Cash
TOTAL ASSETS	Fixed assets + Current assets (as defined above)
EQUITY	Funds contributed by shareholders + Retained earnings + Other reserves + Net income + Minority interest + Deferred income
LONG TERM LIABILITIES	Long-term creditors + Long-term provisions
SHORT TERM LIABILITIES	Short-term creditors + Short-term provisions
OPI (Operating income)	Operating income – Operating expenses
NETI (Net income)	OPI (as defined above) + Financial income – Financial expenses + Extraordinary income – Extraordinary expenses - Taxes
RATIOS	**DEFINITION**
CURRENT RATIO	Current assets/Short-term liabilities
SOLVENCY	Total assets/Total liabilities
INDEBTEDNESS	Total liabilities/Equity
ROA (OPI)	Operating income/Total assets
ROE (NETI)	Net income/Equity

Table 2. Sub-samples according to the firm size

SIZE	SPAIN		UK	
	Firms	Court point (Thousands €)	Firms	Court point (Thousands €)
First quartile	25	230,378	19	5079,710
Second quartile	25	818,155	18	9103,538
Third quartile	25	3452,007	18	16071,803
Fourth quartile	25	----------	19	----------

Table 3. Sub-samples according to the firm internationality

INTERNATIONALITY	SPAIN		UK	
	Firms	Court point (%)	Firms	Court point (%)
First quartile	25	0.00	19	0.90
Second quartile	25	10.30	18	48.00
Third quartile	25	36.50	18	81.20
Fourth quartile	25	----------	19	----------

Table 4. Sub-samples according to the sector of operations

SPAIN	(firms)	SECTOR OF OPERATIONS (SIC CODE)	UK	(firms)
Industrial	2	Mining	9	Industrial
47	10	Construction	2	33
	35	Manufacturing	22	
	18	Transportation, Communications, Electric, Gas and Sanitary Services	15	
Commercial,	5	Wholesale Trade	1	Commercial,
Services	2	Retail Trade	10	Services
	13	Finance, Insurance and real state	10	
53	15	Services	5	41
	0	Public Administration	0	

Table 5. Results of Wilcoxon signed rank test for H_{01} in Spain

VARIABLE	Z-Statistic
Fixed Assets	-4,6142*
Current Assets	-3,470*
Total Assets	-2,7398*
Equity	-1,1518
LT Liabilities	-2,5165**
ST Liabilities	-1,8081***
Operating Income	-1,1762
Net Income	-1,5506
Current Ratio	-3,2457*
Solvency	-2,8263*
Indebtedness	-2,3827**
ROA (OPI)	-1,0280
ROE (NETI)	-0,7014

*: significant at 1%; **: significant at 5%; ***: significant at 10%

Table 6. Results of Wilcoxon signed rank test for H_{01} in the United Kingdom

VARIABLE	Z-Statistic
Fixed Assets	-5,6431*
Current Assets	-5,3739*
Total Assets	-4,4943*
Equity	-2,4727**
LT Liabilities	-5,9125*
ST Liabilities	-3,9246*
Operating Income	-2,6306*
Net Income	-4,1886*
Current Ratio	-0,5468
Solvency	-4,3394*
Indebtedness	-4,3286*
ROA (OPI)	-1,3549
ROE (NETI)	-4,3448*

*: significant at 1%; **: significant at 5%; ***: significant at 10%

Table 7. Results of Mann-Whitney U test for H_{02}

VARIABLE	Z-Statistic
Fixed Assets	-2,1765**
Current Assets	-3,8553*
Total Assets	-1,5570
Equity	-1,1994
LT Liabilities	-3,3728*
ST Liabilities	-6,0274*
Operating Income	-2,2694**
Net Income	-3,9482*
Current Ratio	-1,4033
Solvency	-2,4627**
Indebtedness	-2,2770**
ROA (OPI)	-1,7990***
ROE (NETI)	-3,8234*

*: significant at 1%; **: significant at 5%; ***: significant at 10%

Table 8. Results of Wilcoxon test comparing Book value *vs* Market value

	SPAIN		UK
	Z Statistic		Z Statistic
$MV_{vs}\ B_{localgaap}$	-7.064*		-6.123*
$MV_{vs}\ B_{ifrs}$	-6.856*		-6.459*

*: significant at 1%; **: significant at 5%; ***: significant at 10%

Table 9. Results of Wilcoxon test comparing

|Book Value (ifrs) – Market value| *vs* |Book Value (local gaap) – Market value|

	SPAIN		UK
	Z Statistic		Z Statistic
$\|B_{ifrs} - MV\|$ *vs* $\|B_{localgaap} - MV\|$	-3,030*		-1,607

*: significant at 1%; **: significant at 5%; ***: significant at 10%