# EPS DIFFERENCES USING DIFFERENT EARNINGS MEASUREMENT METHODS EVIDENCE FROM SPAIN

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**ABSTRACT**

*This paper examines how EPS differs when calculated using two different measures of income: net income and comprehensive income. To examine how the measures differ in practice Spanish companies listed on the IBEX-35, during the period 2004-2008 are examined. This period covers a time of serious financial crisis. The Wilcoxon Signed-Rank Test was used to identify differences. The results show statistically significant differences in EPS depending upon calculation method for three of the years studied. Results in 2008 are specifically noteworthy. The evidence suggests a new dimension in fundamental analysis.*

**JEL:** G00, G01, M41

**KEYWORDS:** Earnings per Share, comprehensive income, net income, international accounting, Spanish companies, IBEX-35

## INTRODUCTION

The Financial Accounting Standards Board (FASB) was a pioneer in incorporating comprehensive income into its Conceptual Framework (Statement of Financial Accounting Concepts (SFAC 3, 1980; replaced by SFAC 6, 1985, par. 70). This concept of business performance (Feltham and Ohlson 1995, Brief y Peasnell 1996, Linsmeier *et al*. 1997, Mattessich 2002, Newberry 2003, Cauwenberge y Beelde 2007 and Sousa 2009a, among others), has been incorporated into the main accounting standard (Statement of Financial Accounting Standard (SFAS 130) of the FASB, International Accounting Standard (IAS 1) of the International Accounting Standards Board (IASB) and Australian Accounting Standards Board (AASB 101) of the AASB, among others).

In IAS 33 (2003) of the IASB, in addition to regulating the assessment and disclosure of traditional Basic Earnings per Share and Diluted Earnings per Share, the door was left open for companies to disclose in their financial statements the impact of other figures from their Statement of Comprehensive Income regarding the weighted average of ordinary shares outstanding.

Comprehensive income as described above, adding to net income items of expense and income which according to the corresponding standards should be recognised directly in equity. Said items include, among others, changes in fair value of financial instruments classified as available for sale, cash flow hedges, differences in foreign currency exchange and changes in fair value of tangible and intangible fixed assets, if the companies should opt for this evaluation criterion. Therefore we have a business performance which much better represents the reality of the market than traditional net income.

Within this framework of international financial information, our research aims to evaluate empirically the impact of comprehensive income on Earnings per Share (EPS) as opposed to the same ratio determined according to the more traditional net income. We analyze a select group of companies listed on the Madrid Stock Exchange of the IBEX-35 for the period 2004 through 2008, thus incorporating both economically booming and crises years. In addition to the analysis of descriptive statistics and the results obtained using box plots, we use the Wilcoxon Signed-Rank Test due to normality issues in the data.

This study sheds light on an area that has been investigated very little and is of particular interest in light of paragraph B102 of the Basis for Conclusions for IAS 1 (2007). This paragraph states that the IASB, in the discussion period to which said standard refers, received suggestions regarding what may be included in the main body of financial statements along with other alternative measures that differ from that found in traditional Earnings per Share.

This paper has to do with traditional Earnings per Share calculated according to traditional net income. We propose other alternatives for calculating net income, such as determining the ratio in accordance with comprehensive income (Cauwenberge y Beelde 2007 and Sousa and Carro 2009c). This practice is something the IASB has not ruled out and may reconsider within the framework of the current Financial Statements Presentation. It may elect to integrate it into the Memorandum of Understanding (MoU), which is being developed in conjunction with the FASB.

We anticipate that Earnings per Share calculated in accordance with comprehensive income impacts in statistically different from the more traditional net income. The findings show that in particular in 2008, a significant difference between the two measures. The empirical evidence, as well as suggesting a new tool for fundamental analysis, is of particular interest to investors and analysts. The evidence here suggests that comprehensive net income and the associated earnings per share is worthy of prominent and relative disclosure in the main body of the Statement of Comprehensive Income regulated by IAS 1 reviewed in 2007.

The paper is organized as follows. Section 2 provides the conceptual foundations of comprehensive income. Literature Review is described in Section 3 and Data and Methodology are explained in Section 4. Section 5 provides analysis and interpretations of the empirical findings and Section 5 concludes the paper.

## CONCEPTUAL FOUNDATIONS OF COMPREHENSIVE INCOME

In order to provide theoretical backing to our research we must define the essential foundations on which comprehensive income is based. The FASB was the pioneering standard-setter regarding incorporating the concept of comprehensive income in the SFAC 3 (1980), replaced by SFAC 6 (1985). This concept is defined in paragraph 70 as "the change in equity of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. It includes all changes in equity during a period except those resulting from investments by owners and distributions to owners".

This concept is close to the concept of income set forth by the British Nobel Prize award winner Hicks (1939: 172): "A man's (*sic*) income is the maximum value which he can consume during a period and still expect to be as well off at the end of the period as he was at the beginning".

According to Alexander (1950: 15), if we transfer this economic concept to Accounting, the profit of a business corporation can be defined as the amount of dividends that a company can distribute to shareholders without diminishing the capital invested, that is, remaining at the same level of wellbeing at the end of the year as it was at the beginning.

This definition leads us to clean surplus theory (Brief and Peasnell 1996, Felthan and Ohlson 1995, Beale y Davey 2000 and Mattessich 2002, among others), pursuant to which corporate performance captures relevant events from the value point of view, and is determined comparing the book value of equity at the end of a financial year with that registered at the beginning of the period, without shareholder's operations.

In short, as noted by Linsmeier *et al.* (1997) and Sousa (2009a), the adoption of comprehensive income is an important event in Accounting as is the economic concept of income advocated by authors of the Classical Normative-Deductive School (MacNeal 1939, Edwards and Bell 1961, Alexander 1950, Moonitz 1961 and Spouse and Moonitz 1962, among others). It is important to note that, comprehensive income is not conceived as a sole and unquestionable *a priori* magnitude as these authors suggested, but rather devised to satisfy the needs of the users, particularly of investors, given that it contributes to the efficient functioning of the market and to usefulness of the accounting information for market valuation (Mora 2004: 10).

## LITERATURE REVIEW

There have been a series of descriptive studies (Beale and Davey 1997, Luecke and Meeting 1998, Bhamornsiri and Wiggins 2001, Mazza and Porco 2004 quoted in Hunton *et al*. 2006 and Pandit *et al*. 2006, among others) on comprehensive income. There is also a body of research orientated towards capital markets (Cheng *et al*. 1993, Dhaliwal *et al*. 1999, O' Hanlon and Pope 1999, Cahan *et al.* 2000, Wang *et al*. 2003 and Hodder *et al*. 2006, among others). Other studies have analyzed comprehensive income compared with net income from different angles (Sousa 2008 and 2009b, Sousa and Carro 2009a, 2009b and 2010). Still other researchers have focused on studying the impact on analysts and investors of the way in which comprehensive income is presented (Hirst and Hopkins 1998, Maines and McDaniel 2000, and Hunton *et al*. 2006).

Apart from the pioneering work of Sousa and Carro (2009c), there are no studies that have taken into account the impact of comprehensive income with regard to Earnings per Share, in particular, in the context of a serious economic crisis. This paper examines whether Earnings per Share calculated according to comprehensive income impacts is significantly different from EPS calculated by traditional net income. We examine our contentions using a sample of companies listed on the IBEX-35 during the period 2004-2008, paying special attention to 2008 because of the serious economic crisis.

As previously indicated, our research is of particular interest since in the Basis for Conclusions of IAS 1 (2007) reference is made to the fact that the IASB received suggestions regarding what may be included in the main body of financial statements along with other alternative measures regarding earnings per share. This is noteworthy given that traditional Earnings per Share calculated pursuant to net income is not the most relevant indicator for financial analysts (Cauwenberge and Beelde, 2007. We propose other alternatives to calculate EPS, such as based on comprehensive income.
We also analyze the impact of comprehensive income on other relevant ratios for fundamental analysis such as the Price to Earnings Ratio.

We are aware of the analytical limitations that arise from any ratio which draws on information of annual accounts presented by companies, due to the accounting policies followed by these companies. However, the idea of considering comprehensive income as a much broader indicator of business performance than traditional net income, incorporates a new analytical perspective with regard to the performance of economic entities.

## DATA AND METHODOLOGY

In order to conduct our research we start with information disclosed in the Annual Consolidated Statements of the Spanish companies listed on the IBEX-35 in accordance with the International Financial Reporting Standards (IFRS) of the IASB. We analyze firms for the years 2005, 2006, 2007 and 2008. We also including data from 2004 as comparative information in the Annual Consolidated Statements of 2005. Data were obtained from the National Commission for the Spanish Stock Exchange (CNMV in Spanish) website and the websites of the listed companies.

By considering the period between 2004 and 2008, a boom period as well as a year of recession are considered. This allows us to assess the extent to which comprehensive income impacts Earnings per Share in extremely diverse economic and financial circumstances. It is important to note that the majority of corporate groups did not disclose comprehensive income in accordance with the principles of IAS 1 (2003), in particular those who opted to apply the Statement of Changes in Net Equity, with which we constructed the comprehensive income variable based on items that comprise it.

This study is limited to companies listed on the IBEX-35 (*Iberia Index*), a capitalisation weighted index, employed by "Bolsas y Mercados Españoles" (BME), which is the principle index of reference for the Spanish stock market, and comprises 35 companies with the most liquidity in the market.

Among others, the index includes, Telefónica, Banco Santander Central Hispano, Banco Bilbao Vizcaya Argentaria, Repsol and Endesa; large Spanish corporations with a global presence, particularly in Latin-America. On the other hand, the two Banks are included in The Banker's Top 25 World Banks 2010.

From January 1, 2005 all listed companies of the European Union are obliged to disclose their consolidated financial statements in accordance with the IFRS of the IASB, to which the current convergence of financial information models must be added not only on a European scale but on a world scale. The fact that we use a sample of 35 listed Spanish companies with the most liquidity means that our work addresses current issues and is of international interest. It also suggests further lines of investigation with respect to companies listed on other stock markets.

Consider the variable of Earnings per Share according to net income in each year *t*, bearing in mind the regulatory stipulations of IAS 33 (2003). The variable naturally coincides with that disclosed in the Annual Consolidated Statements when the standard's criteria are applied.

$$\text{Earnings per Share (t) (Net Income) [EPS-NI]} = \frac{\text{Net income attributable to the ordinary shareholders of the parent company } (t)}{\text{Weighted average number of ordinary shares outstanding } (t)}$$

We also need to define the new variable of Earnings per Share, incorporated into our research, calculated according to comprehensive income.

$$\text{Earnings per Share (t) (Comprehensive Income) [EPS-CI]} = \frac{\text{Comprehensive income attributable to the ordinary shareholders of the parent company } (t)}{\text{Weighted average number of ordinary shares outstanding } (t)}$$

Net income and comprehensive income, in both mathematical expressions, have been determined with the incorporation of continuing operations. Discontinued operations which appears to a very small among firms in the sample was not included.

Bear in mind that the numerator and denominator in both expressions respectively, have been adjusted in order to comply with the corresponding stipulations established in IAS 33. Moreover we have not considered Diluted Earnings per Share since the vast majority of the business groups only disclosed Basic Earnings per Share. With these measurements in place, the following null hypothesis is tested:

$H_o1$ Earnings per Share determined in accordance with Net Income (EPS-NI) is not significantly different from the same ratio calculated according to Comprehensive Income (EPS-CI) for each of the years in the period 2004-2008.

$$\theta_{EPS-NI\,2004} = \theta_{EPS-CI\,2004}$$
$$\theta_{EPS-NI\,2005} = \theta_{EPS-CI\,2005}$$
$$\theta_{EPS-NI\,2006} = \theta_{EPS-CI\,2006}$$
$$\theta_{EPS-NI\,2007} = \theta_{EPS-CI\,2007}$$
$$\theta_{EPS-NI\,2008} = \theta_{EPS-CI\,2008}$$

$H_1 1$ Alternative hypothesis: $\theta_{EPS-NI} \neq \theta_{EPS-CI}$ for at least a year *k*.

In order to test this hypothesis and its corresponding alternative hypothesis the the Student's T-test for paired samples would be suitable. However as we show in Table 1, using the Kolmogorov-Smirnov sample test, the normal null hypothesis is rejected in four out of the five years studied. Not adapting the data to a Gaussian distribution for the majority of years studied, in order to obtain the contrast we adopt the alternative non-parametric tool, the Wilcoxon-Signed Rank Tests, with a confidence level of 95%, for which the significance level is $p < 0.05$. The test contrasts the null hypothesis that the medians of the two samples are equal. Applying this to our investigation allows us to establish whether Earnings per Share determined according to comprehensive income differs significantly to that calculated according to net income.

Table 1: Kolmogorov-Smirnov Test for a sample

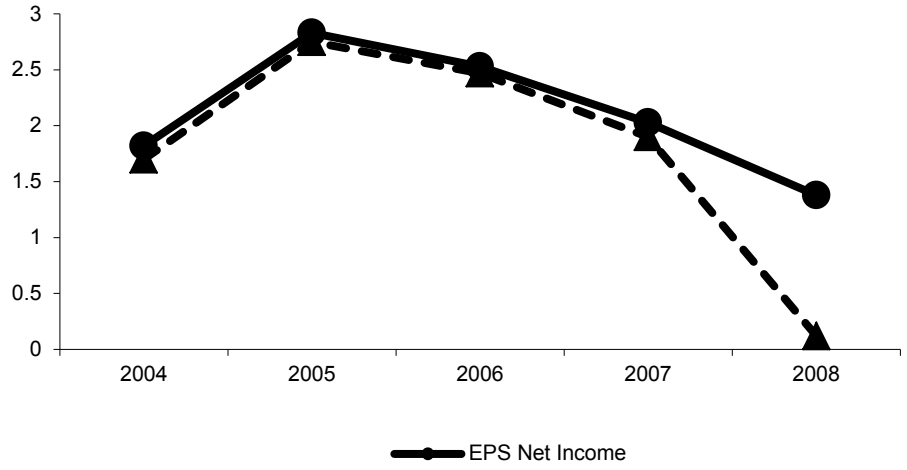
| | | EPS-CI-2004 –EPS-NI-2004 | EPS-CI-2005 –EPS-NI-2005 | EPS-CI-2006 –EPS-NI-2006 | EPS-CI-2007 –EPS-NI-2007 | EPS-CI-2008 –EPS-NI-2008 |
|---|---|---|---|---|---|---|
| **N** | | 35 | 35 | 35 | 35 | 35 |
| **Normal parameters** [a] | **Average** | -0.12 | -0.08 | -0.06 | -0.13 | -1.26 |
| | **Standard Deviation** | 0.92 | 2.16 | 0.40 | 0.66 | 2.55 |
| **Most extreme differences** | **Absolute** | 0.37 | 0.41 | 0.19 | 0.25 | 0.35 |
| | **Positive** | 0.25 | 0.26 | 0.15 | 0.25 | 0.27 |
| | **Negative** | -0.37 | -0.41 | -0.19 | -0.17 | -0.35 |
| **Kolmogorov-Smirnov Z** | | 2.16 | 2.45 | 1.11 | 1.49 | 2.07 |
| **Asymp. Sig. (2-sided)** | | 0.00 ** | 0.00 ** | 0.17 | 0.02 ** | 0.00 ** |

[a] The contrast distribution is the Standard. *This test contrasts the normality of variables formed by the differential between EPS-CI and EPS-NI of the years 2004-2008 for the companies listed on the IBEX-35.*Source: Compiled by author, from the Database and SPSS v. 17.0.

## RESULTS

Figure 1 shows the profile of EPS calculated according to net income and comprehensive income, and in Table 2 the descriptive statistics associated to the comparison variables.

Figure 1: EPS-CI and EPS-NI




*This figure shows the EPS-CI and EPS-NI average for the period 2004-2008 for companies listed on the IBEX-35. Earnings per Share Value (EPS-CI and EPS-NI) expressed in Euros.* Source: Compiled by author, from the Database and SPSS v. 17.0.

For the sample as a whole, in all years studied, Earnings per Share determined according to comprehensive income is less than that calculated according to net income. No large differences were found for the years 2004, 2005, 2006 and 2007. However, in the year 2008, Earnings per Share calculated according to comprehensive income fell spectacularly compared to the same ratio calculated according to net income

Table 2: Descriptive Statistics

| Variable | N | Average | Standard Deviation | Minimum | First Quartile | Median | Third Quartile | Maximum |
|---|---|---|---|---|---|---|---|---|
| **EPS-NI-2004** | 35 | 1.82 | 4.09 | -0.05 | 0.64 | 1.00 | 1.33 | 24.79 |
| **EPS-CI-2004** | 35 | 1.70 | 3.26 | -0.07 | 0.57 | 1.01 | 1.51 | 19.64 |
| **EPS-NI-2005** | 35 | 2.83 | 7.36 | 0.07 | 0.73 | 1.18 | 2.44 | 44.10 |
| **EPS-CI-2005** | 35 | 2.75 | 5.42 | -0.05 | 0.79 | 1.28 | 2.56 | 31.97 |
| **EPS-NI-2006** | 35 | 2.53 | 4.16 | 0.06 | 0.82 | 1.29 | 2.09 | 22.06 |
| **EPS-CI-2006** | 35 | 2.47 | 4.30 | 0.06 | 0.69 | 1.33 | 1.70 | 22.26 |
| **EPS-NI-2007** | 35 | 2.03 | 2.72 | 0.05 | 0.90 | 1.33 | 2.14 | 15.66 |
| **EPS-CI-2007** | 35 | 1.90 | 2.45 | -0.34 | 0.77 | 1.17 | 2.00 | 13.41 |
| **EPS-NI-2008** | 35 | 1.38 | 2.19 | -6.04 | 0.56 | 1.14 | 2.12 | 7.48 |
| **EPS-CI-2008** | 35 | 0.12 | 3.04 | -14.60 | -0.17 | 0.49 | 1.28 | 5.84 |

*This table shows the descriptive statistics of the EPS-CI and EPS-NI average for the period 2004-2008 for companies listed on the IBEX-35. Earnings per Share Value (EPS-CI and EPS-NI) expressed in Euros.* Source: Compiled by author, from the Database and SPSS v. 17.0.

The explanation for this substantial difference in 2008 is the strong negative impact on the results of certain new items of business groups incorporated in comprehensive income including changes in fair value of financial instruments classified as available for sale, cash flow hedge adjustments, the 2008 financial crises and negative differences in foreign currency conversion due to fluctuations in the exchange rate of the Euro and the Dollar.

In Table 3, we study how EPS calculated according to comprehensive income tangibly impacts a business relative to EPS calculated according to net income. For this we rely on the analysis of extreme and outlier values obtained from box plot diagrams, taking the differential of both ratios as the test variable.

Table 3: Extreme Values and Outliers

| Listed Companies | Sector | Period 2004-2008 | | | | | Average 2004-2008 |
|---|---|---|---|---|---|---|---|
| | | 2004 | 2005 | 2006 | 2007 | 2008 | |
| Abengoa | Basic Materials | -0.23 | 0.45 | -1.00* | 1.44* | 3.05o | 0.74 |
| Acerinox | Basic Materials | -0.16 | 0.51 | -0.67o | -0.58 | -0.05 | -0.19 |
| Acciona | Basic Materials | -0.02 | 2.67* | 0.20 | -2.25* | -12.00* | -2.28 |
| Actividades Construcción y Servicios | Basic Materials | -0.13 | 0.26 | -0.24 | 2.01* | 5.08* | 1.40 |
| Bankinter | Financial and Property Services | 0.47* | 0.02 | -0.10 | -0.14 | -0.09 | 0.07 |
| Criteria Caixacorp | Financial and Property Services | 0.36o | 0.33 | -0.13 | 0.22 | -0.88 | -0.02 |
| Endesa | Oil and Energy | 0.04 | 0.69 | -0.47o | 0.05 | -0.93 | -0.12 |
| Ferrovial | Basic Materials | 0.00 | 0.40 | 0.90* | 1.23o | -8.56* | -1.21 |
| Fomento Construcciones y Contratas | Basic Materials | -0.05 | -0.09 | 0.48o | -0.62 | 2.48o | 0.44 |
| Gas Natural | Oil and Energy | 0.01 | 0.96o | -0.47o | -0.17 | -0.49 | -0.03 |
| Iberdrola Renovables | Oil and Energy | 0.85* | 0.15 | 0.44 o | -0.19 | 0.01 | 0.24 |
| Obrascón Huarte Laín | Basic Materials | -0.23* | 0.20 | -0.82* | -0.51 | -3.13o | -0.90 |
| Repsol | Oil and Energy | -0.31o | 0.87o | 0.86* | -0.87o | 0.30 | 0.17 |
| Sacyr Vallehermoso | Basic Materials | 0.78 * | -0.25 | -0.56o | 0.43 | 0.87 | 0.25 |
| Técnicas Reunidas | Basic Materials | -5.15* | -12.12* | 0.37o | 0.13 | -0.49 | -3.45 |
| Telecinco | Technology and | 0.73* | 0.00 | 0.00 | 0.10 | 0.00 | 0.17 |
| Unión Fenosa | Oil and Energy | 0.27o | 1.11o | 0.62o | 0.09 | -0.43 | 0.33 |

*This table shows extreme values ( * ) and outliers ( ○ ) for the companies listed on the IBEX-35 regarding the differential between the EPS-CI and the EPS-NI in the period 2004-2008. Expressed in Euros.* Source: Compiled by author, from the Database and SPSS v. 17.0.

Extreme values are those greater than 3 times the length of the box from the top or bottom edge of the box. The length of the box is the inter-quartile range; and outlier values correspond to values between 1, 5 and 3 lengths of the box from the top or bottom edge of the box. A considerable number of listed companies, almost half of the sample, show extreme or outlier values in one or several of the years studied, in some cases showing a spectacular difference. This shows that the EPS calculation method has a marked effect on companies of different sectors.

Next, a comparative analysis is carried out using the Wilcoxon-Signed Rank Test. Table 4 shows notable differences between average ranks and the sum of the ranks of the ratios that are the object of this study. Of particular interest is the year 2008 which suffered a severe economic crisis.

These notable differences between the positive and negative ranges upon comparing both ratios, as set out in Table 5, lead to statistically significant differences for the years 2005, 2007 and 2008, being $p < 0.05$, which lead us to reject the null hypothesis $H_o1$ and consequently accept its alternative hypothesis $H_o1$.

Based on the empirical evidence we can say that the listed companies as a whole, of the IBEX-35, for the years 2005, 2007 and 2008, the Earnings per Share calculated according to comprehensive income is different in a statistically significant from that calculated according to net income. These results are largely in line with the results produced from the work by Sousa and Carro (2009c), in which statistically significant differences were found between both ratios for the years 2004-2007. Our study considered the select group of companies listed on the IBEX-35 instead of a sample of all Spanish companies listed on the Stock Exchange of Madrid as was the case in the study by the earlier authors, thus providing additional empirical evidence regarding the crisis effect with the inclusion of the year 2008.

Table 4: Wilcoxon Signed-Rank Test

| | | N | Average Ranks | Sum of Ranks |
|---|---|---|---|---|
| | **Negative Ranks.** | 13[a] | 20.23 | 263.00 |
| **EPS-NI-2004** | **Positive Ranks** | 21[b] | 15.81 | 332.00 |
| **EPS-CI-2004** | **Ties.** | 1[c] | | |
| | **Total** | 35 | | |
| | **Negative Ranks** | 25[d] | 18.96 | 474.00 |
| **EPS-NI-2005** | **Positive Ranks** | 9[e] | 13.44 | 121.00 |
| **EPS-CI-2005** | **Ties.** | 1[f] | | |
| | **Total** | 35 | | |
| | **Negative Ranks** | 18[g] | 14.39 | 259.00 |
| **EPS-NI-2006** | **Positive Ranks** | 16[h] | 21.00 | 336.00 |
| **EPS-CI-2006** | **Ties.** | 1[i] | | |
| | **Total** | 35 | | |
| | **Negative Ranks** | 10[j] | 16.50 | 165.00 |
| **EPS-NI-2007** | **Positive Ranks** | 24[k] | 17.92 | 430.00 |
| **EPS-CI-2007** | **Ties.** | 1[l] | | |
| | **Total** | 35 | | |
| | **Negative Ranks** | 8[m] | 8.25 | 66.00 |
| **EPS-NI-2008** | **Positive Ranks** | 26[n] | 20.35 | 529.00 |
| **EPS-CI-2008** | **Ties.** | 1[o] | | |
| | **Total** | 35 | | |

*This table shows the ranks of the comparison of the EPS-NI with the EPS-CI for the companies listed on the IBEX-35 in the years 2004-2008. Source: Compiled by author, from the Database and SPSS v. 17.0.*
*a. EPS-NI-2004 < EPS -CI-2004 ; b. EPS-NI-2004 > EPS-CI-2004; c. EPS-NI-2004 = EPS-CI-2004; d. EPS-NI-2005 < EPS-CI-2005; e. EPS-NI-2005 > EPS-CI-2005; f. EPS-NI-2005 = EPS-CI-2005;*
*g. EPS-NI-2006 < EPS-CI-2006; h. EPS-NI-2006 > EPS-CI-2006; i. EPS-NI-2006 = EPS-CI-2006; j. EPS-NI-2007 < EPS-CI-2007; k. EPS-NI-2007 > EPS-CI-2007; l. EPS-NI-2007 = EPS-CI-2007;*
*m. EPS-NI-2008 < EPS-CI-2008; n. EPS-NI-2008 > EPS-CI-2008; o. EPS-NI-2008 = EPS-CI-2008.*

Table 5**:** Contrast statistics of the Wilcoxon Signed-Rank Test

| | **EPS-NI-2004 EPS-CI-2004** | **EPS -NI-2005 EPS -CI-2005** | **EPS -NI-2006 EPS -CI-2006** | **EPS -NI-2007 EPS -CI-2007** | **EPS -NI-2008 EPS -CI-2008** |
|---|---|---|---|---|---|
| **Z** | -0.590 [a] | -3.018 [b] | -0.658 [a] | -2.265 [a] | -3.958 [a] |
| **Asymp. Sig. (2-sided)** | 0.555 | 0.003 ** | 0.510 | 0.023 ** | 0.000 ** |

*This table shows the contrast statistics of the Wilcoxon Signed-Rank Test in the comparison of the EPS-NI with the EPS-CI of the period 2004-2008 for companies listed on the IBEX-35. Source: Compiled by author, from the Database and SPSS v. 17.0.*
*a. Based on negative ranks.*
*b. Based on positive ranks.*

Therefore, taking into account the empirical evidence uncovered by our research, together with that produced by the above-mentioned study, we confirm that within the analytical framework of Earnings per Share there is an impact or effect on comprehensive income compared to net income, owing to the fact that the first better represents the reality of the markets. This is because as previously stated, comprehensive income, compared to the more traditional net income, essentially incorporates into income changes the fair value of financial instruments classified as available for sale, cash flow hedges adjustments and differences in the conversion of foreign currencies.

We also wanted to consider that if an all inclusive measure of income is adopted, as in the case of comprehensive income, then the reality of the market may have an impact on a ratio for fundamental analysis, such as a Earnings per Share ratio, especially in the context of a severe economic crises.

However if a much more restrictive measure of company performance is adopted, as in the case of traditional net income, then we are less aware of the impact of the market on income. This way an all inclusive concept of income represents information which more relevant to the user, in particular for investors.

## CONCLUDING COMMENTS

This paper studies the impact of Earnings per Share calculated according to comprehensive income compared to that determined by the more traditional net income for the period 2004-2008, of the companies listed on the IBEX-35 in accordance with the regulatory stipulations of IAS 1 (1993, reviewed in 2003 and 2007) and IAS 33 (2003) of the IASB.

Based on the evidence here there is a statistically significant impact on Earnings per Share calculated according to comprehensive income compared to that calculated according to net income with respect to the sample as a whole and for the years 2005, 2007 and 2008. Moreover, there was spectacular deterioration in the year 2008 considering comprehensive income compared to the more traditional net income. This finding is due to the marked negative effects of the present crisis on comprehensive income. Most notable changes in fair value of financial instruments classified as available for sale, cash flow hedges adjustments or differences in the conversion of foreign currencies.

The empirical findings of our research, although limited to a select sample of the thirty-five companies listed on the IBEX-35 of the Madrid Stock Exchange, represent a point of reference for investors and analysts, as well as for economists in the undertaking of their professional activity. This holds particularly true with respect to the economic and financial analyses of companies from a perspective that better represents the market reality as is the case with comprehensive income. This places it further from the principles of historical cost and the prudence upon which traditional income have been sustained.

This way of conceptualizing traditional business performance departs from traditional thinking that has prevailed in models of financial reporting throughout the 20$^{th}$ century. Most notably are differences in orientated towards accountability and control, which requires a change in mentality with regard to how company performance is understood.

Finally we consider that even taking into account the limitations of the ratios produced from accounting information, such as those under research herein, the results of our paper represent a contribution to the debate which is stirring regarding appropriate Financial Statements Presentation. This is based on the statistical evidence provided not only justifying the inclusion in the Notes of Earnings per Share calculated according to comprehensive income, but also its disclosure in a much more prominent and relevant way in the main body of the Statement of Comprehensive Income.

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